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Archanaeum Ltd

HORNSEY POLICE STATION, LONDON

Overheating Assessment

Revision A

Independent, multidisciplinary engineering
and environmental consultants

HORNSEY POLICE STATION, LONDON

Overheating Assessment

Document Reference: MB/VL/P22-2562/08 Rev A

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Date: September 2024

DOCUMENT AND QUALITY CONTROL

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Revision A April 2025	Mirza Baig, NDEA, OCDEA, MSc, BEng, Energy and Sustainability Consultant	Sunanda Swain, Technical Director, Sustainability	Sunanda Swain, Technical Director, Sustainability	Updated as per the comments received.

HORNSEY POLICE STATION, LONDON
Overheating Assessment
Design Stage
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EXECUTIVE SUMMARY

Create Consulting Engineers Ltd has been commissioned to update the overheating report (Ref: P2-2562) to comply with the London Borough of Haringey's post-planning requirements, as specified in Section 27 of the Schedule of Appendix in the Section 106 Agreement. This report pertains to the proposed residential-led development at Hornsey Police Station, located within the constituency of Hornsey and Wood Green, London.

The overheating assessment has been carried out in accordance with TM49: Design Summer Years for London 2014 as stipulated by the GLA (Greater London Authority). This study has also been completed in accordance with TM59: Design Methodology for the assessment of overheating risk in homes and will use the overheating guidelines set out in TM52: The limits of Thermal Comfort: Avoiding Overheating in European Buildings 2013 (the latest guidance from the Chartered Institute of Building Services Engineers (CIBSE) for overheating in non-air-conditioned European buildings).

The overheating risk assessments have been carried out using TM59 with the latest DSY weather files. Passing the overheating criteria for the 2020s, high emissions, 50th percentile scenario is necessary using the most suitable DSY1 file for the site location. While other files like DSY2 and DSY3, which represent more extreme conditions, can be used to test designs further, passing against these files is not mandatory for TM59. IES VE (Integrated Environmental Solutions Virtual Environment), a dynamic thermal modelling software tool, has been used to predict the temperatures of the living spaces inside the scheme.

The overheating modelling results of the proposed new-build and refurbished dwellings, both houses and flats, with the proposed overheating mitigation strategy, demonstrate that the measures achieve compliance with the DSY1 weather data file.

A summary of the overheating results for the residential development is presented in the table below.

Design Weather Scenario	Total Number of Assessed Spaces	Total Number of Rooms Pass Overheating Criteria	Total Number of Rooms fail Overheating Criteria
Habitual Rooms			
DSY1_2020H50	105	105	00

Design Weather Scenario	Total Number of Assessed Corridors	Total Number of Corridors Pass Overheating Criteria	Total Number of Corridors fail Overheating Criteria
Communal Corridors			
DSY1_2020H50	04	04	00

The proposed mitigation measures for overheating align with the cooling hierarchy specified in the London Plan (2021), Policy SI4. Compliance with the overheating criteria has been achieved by incorporating key design features and measures, as detailed in the table below.

Key Measure	Dwellings effected by noise and/or security issues	Communal Corridors
Solar Glazing Control	Optimized g-value: - For all south-facing windows, g = 0.25. - For all north-facing windows, g = 0.52.	
External Shading	Balconies, external blinds, and internal Venetian blinds will be installed to reduce solar gain in all bedrooms and south-facing kitchen-living spaces, which are particularly prone to overheating.	No
Natural Ventilation	Due to the high noise levels during the day and nighttime, occupants are constrained from using windows and balcony doors.	
Mechanical Ventilation	Enhanced ventilation when the internal temperature exceeds the external temperature and exceeds 22°C. The mechanical ventilation with heat recovery (MVHR) system, along with the TD Silent extract fan, is installed in the bedrooms that are prone to overheating.	N/A
Green Infrastructure	Proposed green roof, landscaping, and trees will help reduce the urban heat island effect.	

The proposed overheating mitigation strategy incorporates both passive and active measures, including cross ventilation, low-g-value glazing, external blinds, internal Venetian blinds, MVHR, and extract fans. These measures ensure that all habitable spaces within the development comply with overheating requirements for current (DSY1_2020H50), extreme (DSY2_2020H50, DSY3_2020H50), and future weather scenarios (DSY1_2050H50, DSY1_2080H50) without relying on active cooling.

1.0 INTRODUCTION

- 1.1 Create Consulting Engineers Ltd has been commissioned by Archanaeum Ltd to prepare an overheating analysis to support a post planning condition for the proposed development at Hornsey Police Station, London.
- 1.2 The proposal comprises the development of the construction of a new residential development and refurbishment of 29 units in the form of houses and flats.
- 1.3 This report demonstrates how temperatures reached inside the building were predicted using dynamic simulation modelling and whether these results comply with guidance contained with the London Plan, TM49, TM52, and TM59.

Objectives:

- 1.4 This Overheating Report is for Design Stage 4 and aims to meet the London Borough of Haringey's post-planning requirements as outlined in Section 27 of the Schedule of Appendix in the Section 106 document. It updates the Overheating Assessment Report (ref: P22-2562) submitted in July 2023. The update includes:
- **Updated Modelling:** Units will be modelled using CIBSE TM59 guidelines and CIBSE TM49 London Weather Centre data for DSY1-3 (2020s), DSY1 2050s, and 2080s, under high emissions scenarios.
 - **External Blinds:** Clarification on which windows will have external shutters installed.
 - **Cooling Hierarchy Compliance:** Demonstration that the DSY1 2020s scenario meets the mandatory pass criteria, following the Cooling Hierarchy with External Blinds, and compliance with Building Regulations Part O, ensuring risks related to crime, noise, and air quality are properly addressed.
 - **Future Weather Mitigation:** Modelling of mitigation measures to pass future weather scenarios, specifying which measures will be implemented before occupation and which will be part of a retrofit plan.
 - **Design Integration:** Confirmation that retrofit measures can be integrated into the design.
 - **Responsibility for Mitigation:** Identification of the party responsible for managing overheating risks once the development is occupied.

2.0 MODEL INFORMATION

Dynamic Thermal Analysis Software

- 2.1 The thermal model was produced using IES VE version 2023, a full dynamic simulation modelling software capable of performing simulations for large and complex buildings. IES VE can produce accurate predictions of internal temperatures to allow designers to make decisions on cooling and ventilation strategies.

Site Location and Description

- 2.2 The Site is located to the south of Harold Road in constituency of Hornsey and Wood Green, London. Please refer to the Site Location plan below for details (Figure 2.1).



Figure 2.1: Site Location Plan (Source: Archanaeum Ltd)



Figure 2.2: Proposed site plan (source: Archanaeum Ltd)

2.3 This report details information gathered from consultation with the design team.

Unit Sampling and Layouts

2.4 A sample of buildings have been selected for the study. This sample represents those buildings that are deemed most at risk of overheating. This risk was analysed based on the following criteria:

- Those with large glazing areas
- Those on the topmost floor
- Those having less shading
- Those having large, sun-facing windows
- Those having a single aspect
- Those with limited opening windows

2.5 Based on the above assessment criteria, it has been decided that all houses and flats from all three blocks to be assessed.

2.6 The software generated images of the site, below, show the location of the selected, assessed spaces within the development.

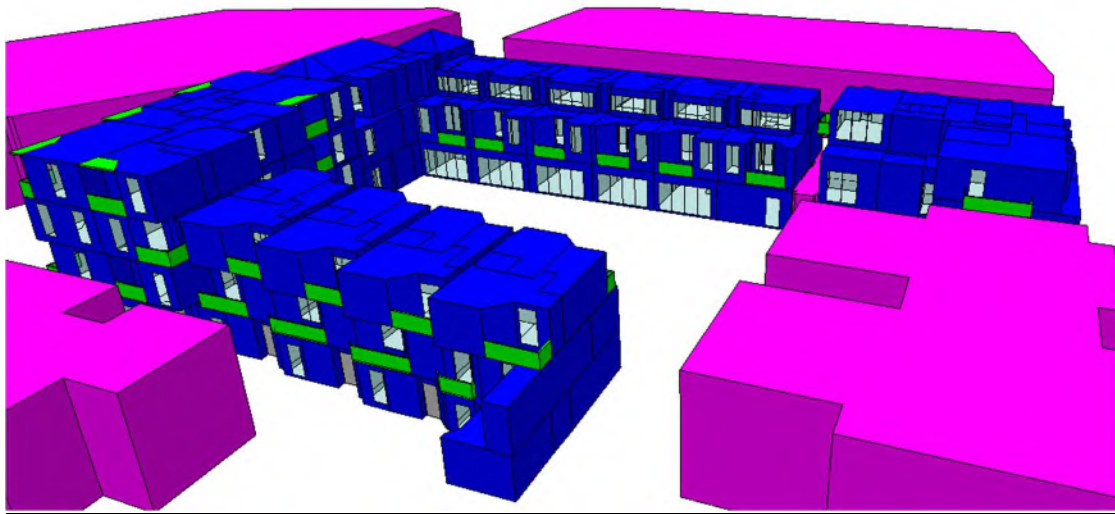


Figure 2.3: IES VE generated model, north-west view (blue areas represent modelled spaces)

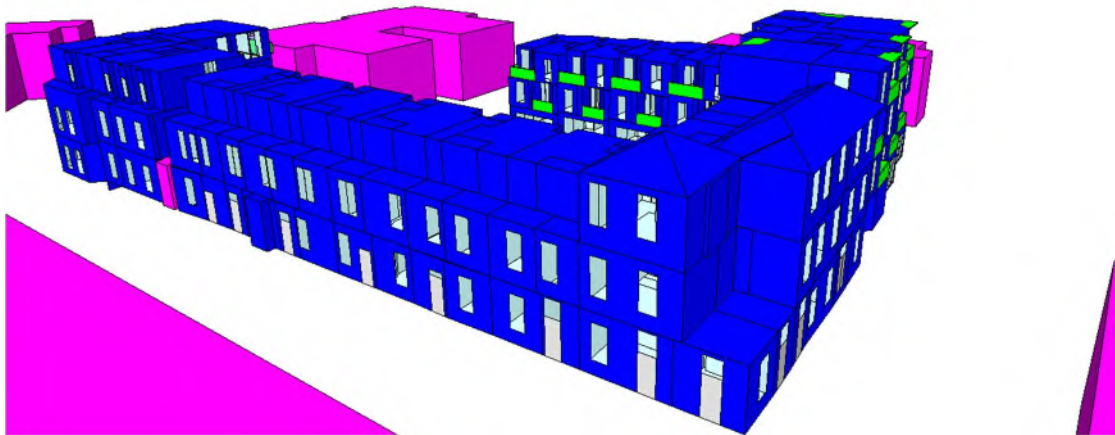


Figure 2.4: IES VE generated model, south-east view (blue areas represent modelled spaces)

GLA Requirements and CIBSE TM49: Design Summer Years for London

- 2.7 The GLA (Greater London Authority) requires that the overheating assessment be carried out in accordance with TM49 which advises that weather data should be selected based on an appropriate level of risk and probability for the building which can be established through informed discussion between the design team, client and the other stakeholders involved in the project.

- 2.8 The GLA goes on to state that overheating modelling should be conducted using three design weather years. These weather years are as follows:

- DSY1 for 2020s, high emissions, 50% percentile scenario
- DSY2 - 1989: a moderately warm summer (current design year for London)
- DSY3 - 2003: a year with a very intense single warm spell

CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings

- 2.9 TM52, released in July 2013, sets out to identify the many different factors that affect thermal comfort and uses these to define a new set of criteria for measuring unacceptable levels of overheating. Until the release of TM52, the standard approach was to use CIBSE Guide A, which was based on not exceeding a single limiting temperature:

- 25°C for >5% of occupied hours
- 28°C for >1% of occupied hours

- 2.10 TM52 uses an adaptive approach for building occupant comfort. The adaptive approach to thermal comfort is based on the findings of field surveys in workplaces and other building types. It is now accepted as the standard approach to specifying target temperatures in non-air conditioned buildings where indoor conditions are less easy to control.

- 2.11 TM52 uses three criteria to predict whether a building will over-heat. Two out of three criteria must be met in order for a building to be deemed as not overheating. The three criteria are:

- Threshold temperature exceeded $\nless 3\%$ of occupied hours per year
- Daily weighted exceedance (degree hours) $\nless 6$
- Temperature $\nless$ upper limit

CIBSE TM59: Design methodology for the assessment of overheating risk in homes

- 2.12 In April 2017, CIBSE released TM59 which defines a peer reviewed methodology for the assessment of overheating risk in residential developments.

- 2.13 Whilst not currently stipulated in any legislation, it is suggested by CIBSE that this methodology be used to ensure a standardised approach to model generation and reporting for the assessment of overheating. The method suggested somewhat differs from the previous approach in that it specifies many of the inputs used to perform the analysis, whereas previously, these inputs have been based on the design team's assumptions of how the building is likely to be used. The methodology has been proven on a number of case study projects in London and is thought to give a better overall picture of the comfort that can be expected within a residential development.

Overheating Criteria

- 2.14 In accordance with TM59, all domestic spaces (kitchens, living rooms, bedrooms, bathrooms, and halls) should be included in the assessment. Bathrooms and halls do not, however, have to pass any criteria to be compliant but are still included in the assessment.
- 2.15 The criteria for TM59, for naturally ventilated dwellings, are as follows:
- *“For living rooms, kitchens and bedrooms: the number of hours during which ΔT is greater than or equal to one degree (K) during the period May to September inclusive shall not be more than 3% of occupied hours.” This is CIBSE TM52 Criterion 1.*
 - *“For bedrooms only: The operative temperature in the bedroom from 22:00 – 07:00 shall not exceed 26°C for more than 1% of annual hours” (i.e. 33 hours and over is a failure).*
- 2.16 TM59 also requires that where an operative temperature of 28°C occurs within a corridor for more than 3% of total annual hours, this should be flagged as a significant risk. If any such occurrences exist, these will be flagged in Section 3 of this report.
- 2.17 Corridors are defined as any public areas from which apartments are accessed.
- 2.18 The non-domestic spaces within the development will be assessed against TM52. TM52 has three criteria, two of which must be passed to reach compliance:
- Criterion 1: Hours of Exceedance
 - The number of hours during which ΔT is greater than or equal to one degree (K) during the period May to September inclusive shall not be more than 3% of occupied hours.
 - Criterion 2: Daily Weighted Exceedance
 - The weighted exceedance shall be less than or equal to 6 in any one day. This criteria deals with the severity of overheating within any one day and is a function of both magnitude and duration.
 - Criterion 3: Upper Limit Temperature
 - The value of ΔT shall not exceed 4K. This criteria sets an absolute limit for the indoor operative temperature.

Construction Elements and Thermal Mass

- 2.19 All construction elements/materials in the model have been created according to information agreed with the client and the design team. The following U-Values and design parameters have been used:

Building Element/Characteristic	Part L1, 2021 Reference Values for Notional Building	Proposed values
External Wall - U value (W/m ² K)	0.26	New Built- 0.18 Refurb - 0.18
Ground/Exposed upper floor	0.18	0.07
Roof - U value (W/m ² K)	0.16	0.07
Windows - U value (W/m ² K)	1.60	1.20 (For all South, East, West- facing windows g= 0.25) (For all North facing windows g= 0.52)
Doors - U value (W/m ² K)	1.60	0.98

Table 2.1: Construction Element Information

- 2.20 Thermal mass calculations have also been included in the model as they are automatically calculated by IES VE. The thermal mass is incorporated into the construction on the basis of the elements/materials information calculated by IES VE.

Ventilation Strategy

- 2.21 It is proposed that all houses and flats within the three blocks (A, B, and C) of the Hornsey Police Station will be equipped with Vent-Axia Sentinel Plus B system. These mechanical ventilation with heat recovery (MVHR) systems, which include a summer bypass feature, are designed to retain heat during the winter months and efficiently release excess heat during the summer, ensuring optimal thermal comfort and energy efficiency throughout the year.
- 2.22 According to TM59 requirements, internal doors of bedrooms are assumed to be left open during the daytime and closed at night. Living rooms are proposed to remain open both day and night to enhance air movement and reduce the risks of overheating.
- 2.23 Due to concerns regarding noise, mechanical ventilation is proposed as the preferred option since natural ventilation is not feasible in this scenario.
- 2.24 According to the occupancy profiles specified by TM59, it is required that all bedrooms remain occupied at 75% throughout the day. Due to confirmed noise-related issues outlined in the 20858/Noise Assessment Report by Sprat+Hamer, natural ventilation through windows at all dwellings within Hornsey Police Station is restricted. As a result, all windows across the blocks have been modelled as closed.
- 2.25 Details of the infiltration rates and ventilation rate to be found in Appendix A.

Plans and Elevations

- 2.26 All plans and elevations have been taken from files received 01/08/2024 from Archanaeum.

Weather files and Thermal Comfort Category

- 2.27 As specified in Section 27 of the Schedule in the Appendix of the Section 106 Agreement, the London Borough of Haringey mandates that overheating modelling must be conducted using both current and future design weather years. These weather years are defined as follows:

- DSY1 for 2020s, high emissions, 50% percentile scenario (London Weather Centre)
- DSY2 for 2020s, high emissions, 50% percentile scenario (London Weather Centre)
- DSY3 for 2020s, high emissions, 50% percentile scenario (London Weather Centre)
- DSY1 for 2050s: high emission, 50% percentile scenario (London Weather Centre)
- DSY1 for 2080s: high emission, 50% percentile scenario (London Weather Centre)

- 2.28 The thermal comfort category defined for this project is: Category II, as defined by TM52 Table 2.

- 2.29 The summer (elevated) air speed ms^{-1} for the calculation of TM52 used in this report is 0.15.

Occupancy and Gain Profiles

- 2.30 All occupancy and gain profiles for domestic spaces have been modelled according to TM59.

- 2.31 The TM59 prescribed weekly profiles for occupancy, heating and internal gains have been used.

Exposure Type

- 2.32 The model has been set up to 'semi-exposed wall' type for the purposes of determining wind pressure coefficient as per IES VE guidance.

Modelling Assumptions

- 2.33 To complete the modelling and to achieve robust and meaningful results, certain assumptions had to be made. These, along with the information detailed in section 2, form the basis of the overheating analysis carried out for the development.

- Trees and Adjacent buildings were modelled to mitigate risk of overheating.

3.0 RESULTS OF THE ASSESSMENT

- 3.1 The TM59 methodology necessitates that units meet the overheating criteria using the DSY1 weather file. While other files, including the more extreme DSY2 and DSY3 files, can be utilized to further assess designs, achieving a pass against these alternative weather files is not obligatory for TM59 compliance.
- 3.2 The overheating assessment is carried out based on the Haringey's key Overheating planning application requirements.

Results- Baseline Scenario

- 3.3 During the baseline scenario, all blocks are tested with closed windows and no mechanical ventilation provided.

Opening Type
■ XTRN0012 (Internal Door KD)
■ XTRN0015 (Internal Door Bed)
■ XTRN0020 (Windows/Doors Closed)

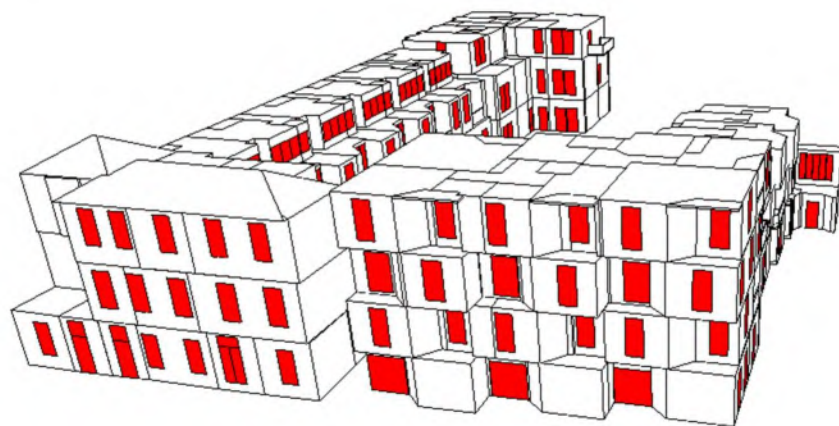


Figure 3.1: Baseline Model- East Elevation

Opening Type
 ■ XTRN0012 (Internal Door KD)
 ■ XTRN0015 (Internal Door Bed)
 ■ XTRN0020 (Windows/Doors Closed)

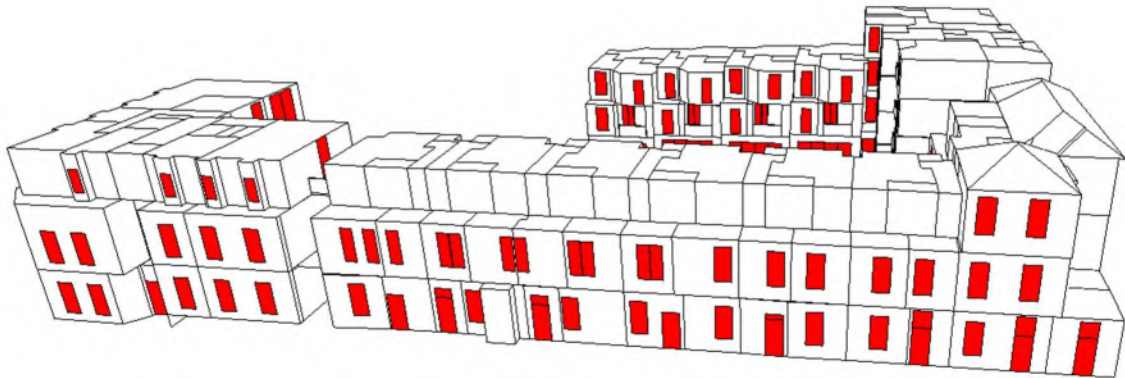


Figure 3.2: South Elevation

- 3.4 As part of the passive design strategy, windows facing the southeast and west will be equipped with low-emissivity glass featuring a g-value of 0.25. For detailed model images illustrating the application of this g-value to the windows, please refer to Appendix B.
- 3.5 The proposed design of the development was tested by initially assessing the modelled dwellings. Due to the high noise levels, the windows are modelled to remain closed during both day and night, limiting natural ventilation. The modelling results are summarized in the table below and are presented in full in Appendix C.

Design Weather Scenario	Total Number of Assessed Spaces	Total Number of Rooms Pass Overheating Criteria	Total Number of Rooms fail Overheating Criteria
Habitual Rooms			
DSY1_2020H50	105	00	105

Design Weather Scenario	Total Number of Assessed Corridors	Total Number of Corridors Pass Overheating Criteria	Total Number of Corridors fail Overheating Criteria
Communal Corridors			
DSY1_2020H50	04	00	04

Table 3.1: Results DSY1- Baseline

- 3.6 During the analysis, it was observed that a majority of the occupied spaces fail the Overheating assessment due to high internal heat gains and solar gains, as indicated in the graph below from IES.

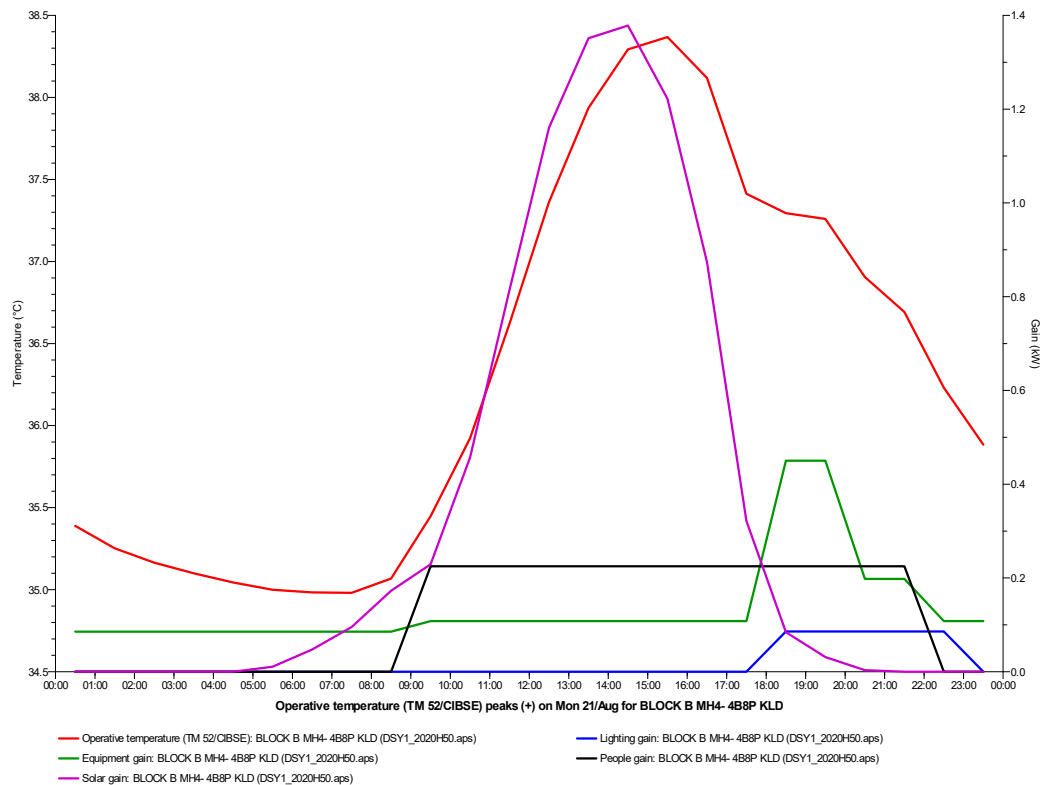


Figure 3.3: Peak Day Internal Gains Kitchen Living Dining -MH4 Block B (DSY1_2020H50)

Results- Baseline + Mitigation Strategy 1

- 3.7 In the baseline scenario, a significant number of occupied spaces failed to meet the overheating criteria due to excessive internal and solar gains. To mitigate this, external blinds were initially proposed for all bedroom windows as part of the overheating mitigation strategy submitted at the planning stage. The primary objective was to reduce the risk of overheating caused by solar gains.
- 3.8 However, following further review, the design team confirmed that due to design constraints, technical infeasibility, and maintenance concerns, the installation of external blinds on external elevation windows could not be pursued. Please refer to Appendix O for the design team's confirmation of the design constraints and the technical infeasibility of incorporating external blinds into the mitigation strategy.
- 3.9 To remain aligned with the overheating strategy submitted at the planning stage, external blinds will be installed on the internal elevation windows of bedrooms and south-facing kitchen/living rooms, specifically in units MH2, MH3, and MH4. Meanwhile, internal Venetian blinds will be provided for all bedroom windows located on external elevations.
- 3.10 The design team has reviewed external blinds from Waverley Blinds UK and has selected the Warema Cord-Guided External Roller Blind. These blinds use advanced solar-shading technology and offer a high heat reflectance of up to 85% for the selected fabric (Silver Screen®-202ED01 White). This helps to reduce solar heat gain and improve thermal comfort

while still allowing outward visibility. The blinds are engineered for durability, featuring weather-resistant materials and motorized operation for user convenience. The fixing mechanism includes high-strength, corrosion-resistant brackets, ensuring secure attachment to various building façades. Additionally, these blinds provide excellent thermal insulation and are available in a diverse array of customizable colours and finishes, allowing them to seamlessly integrate with the building's aesthetic. For detailed specifications, refer to Appendix J, which includes the product datasheet for the external blinds.

- 3.11 As an alternative to external blinds for external elevation windows, the design team has selected high-performance, heat-protective internal venetian blinds (Fabric Colour: Cotton; Heat Reflectance: 62%) from Luxaflex UK for all external elevation windows of bedrooms. Detailed information on the fixing mechanisms, specifications, and heat protection for this model is provided in Appendix J. A detailed analysis was conducted to compare solar gains in a typical bedroom, both as a baseline (without Venetian blinds) and with Venetian blinds installed. The findings revealed a significant reduction in solar gains, ranging from 60% to 90%, when Venetian blinds were used, effectively mitigating overheating. Please refer to Table 3.2 and Figures 3.4–3.7 for a detailed analysis and evidence. Given this substantial decrease in solar gains, Venetian blinds were considered an effective and viable alternative to external blinds.

Description	South facing- Bedroom Solar Gain (kW)	North facing- Bedroom Solar Gain (kW)
Baseline Solar Gain	0.52	0.140
Solar Gain with Venetian Blinds	0.16	0.016
Reduction in Solar Gain (%)	69%	89%

Table 3.2: Reduction in Solar Gain with the Use of Venetian Blinds

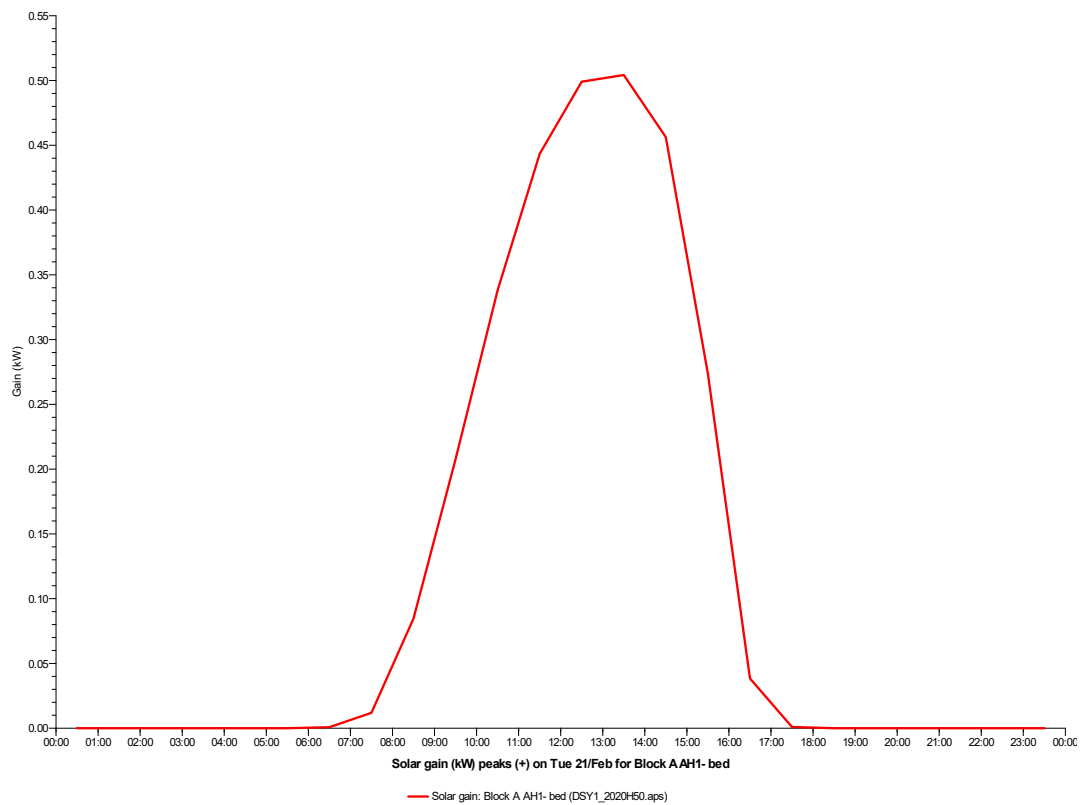


Figure 3.4: Solar Gain without Blinds- AH1 BED

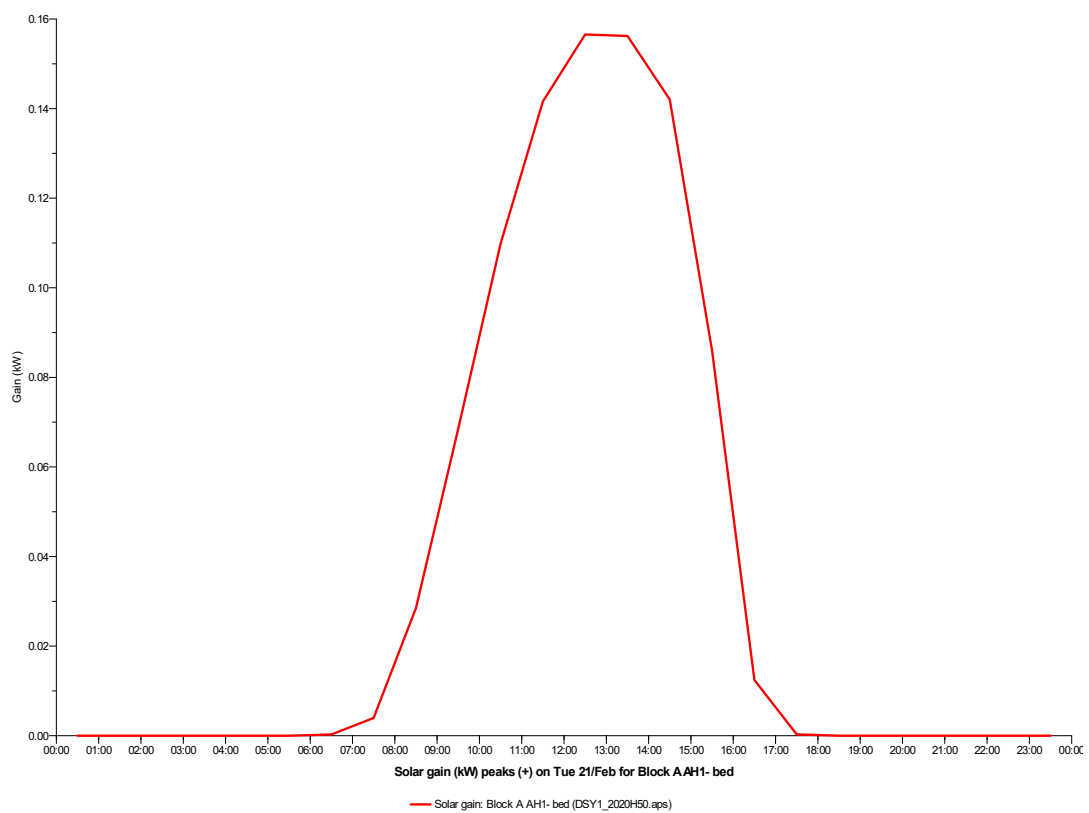


Figure 3.5: Solar Gain with Venetian Blinds- AH1 BED

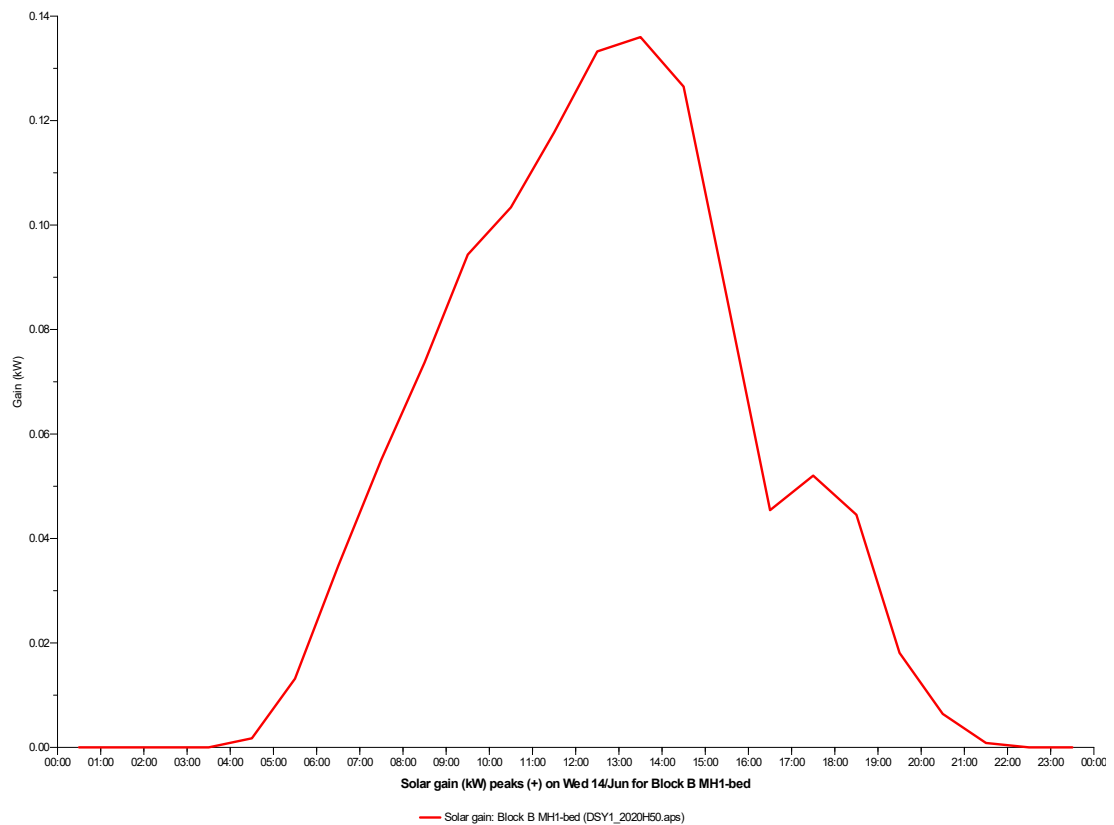


Figure 3.6: Solar Gain without Blinds- MH1 BED

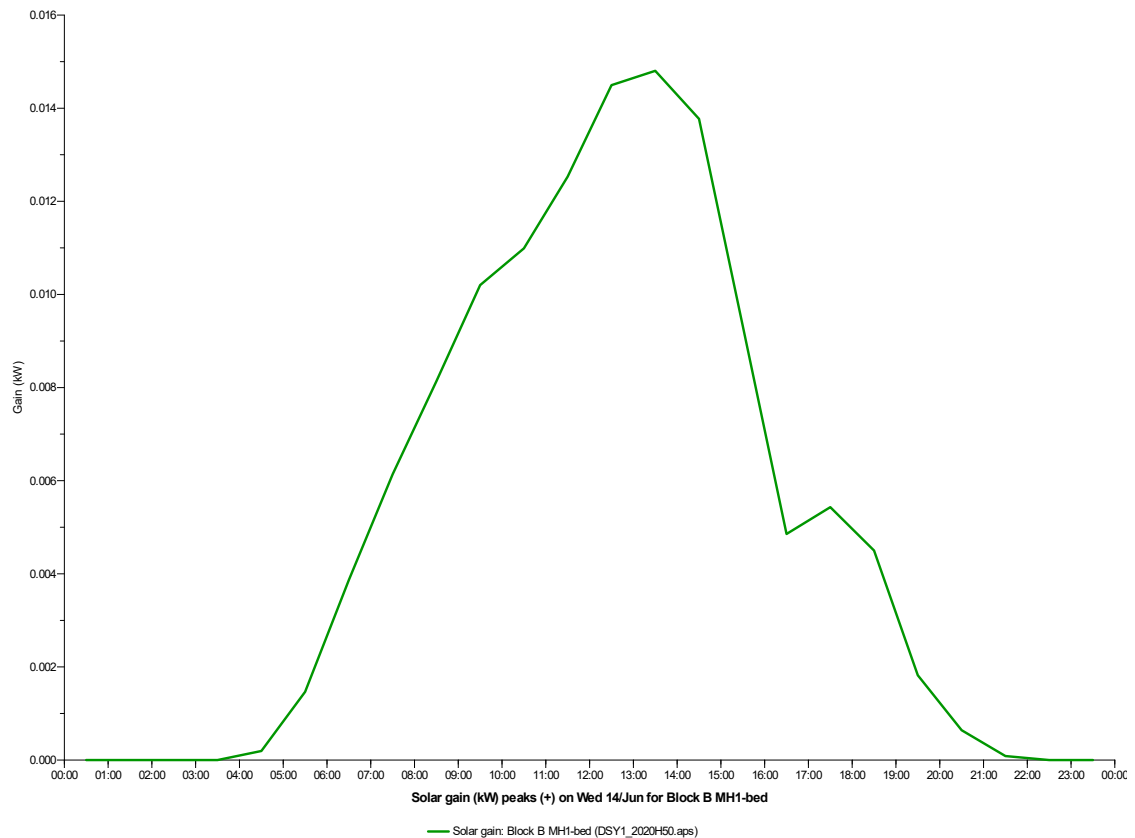


Figure 3.7: Solar Gain with Venetian Blinds- MH1 BED

- 3.12 The owner will be responsible for maintaining both the external blinds and the internal Venetian blinds. For detailed product information, please see Appendix J, which contains the datasheets for both the external and venetian blinds.
- 3.13 The external blinds and internal venetian blinds, specifically assigned to bedrooms and south-facing kitchen/living rooms, particularly MH2, MH3, and MH4, are shown in the images below and elevation plans are provided in Appendix K.



Figure 3.8: Venetian Blinds - (South Elevation)

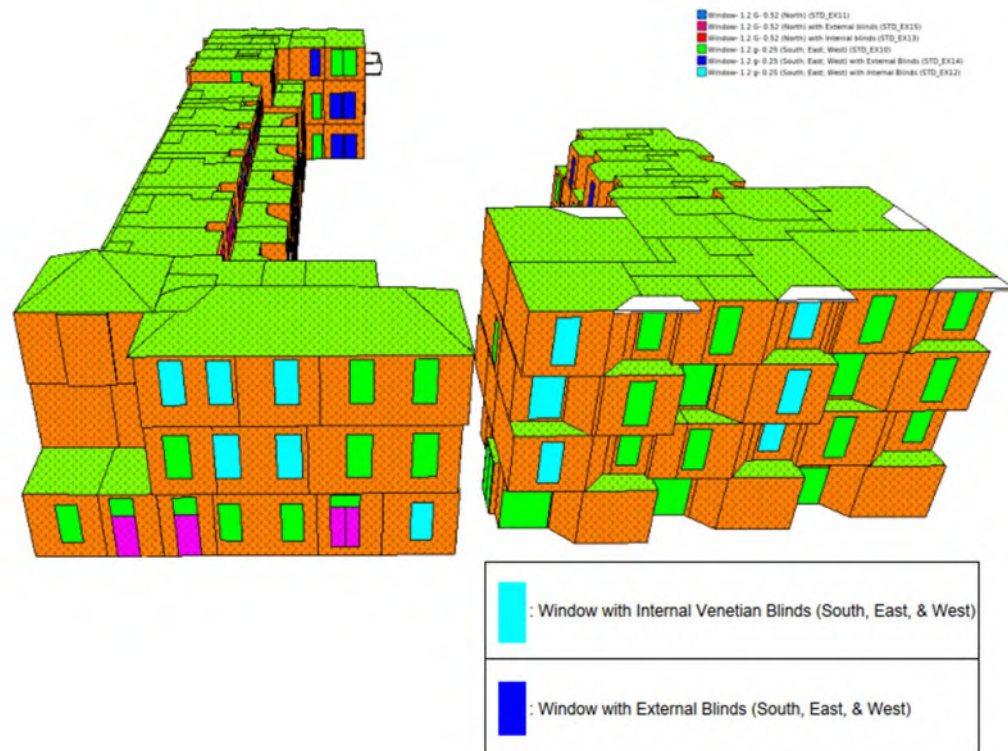


Figure 3.9: Venetian Blinds - (East Elevation)

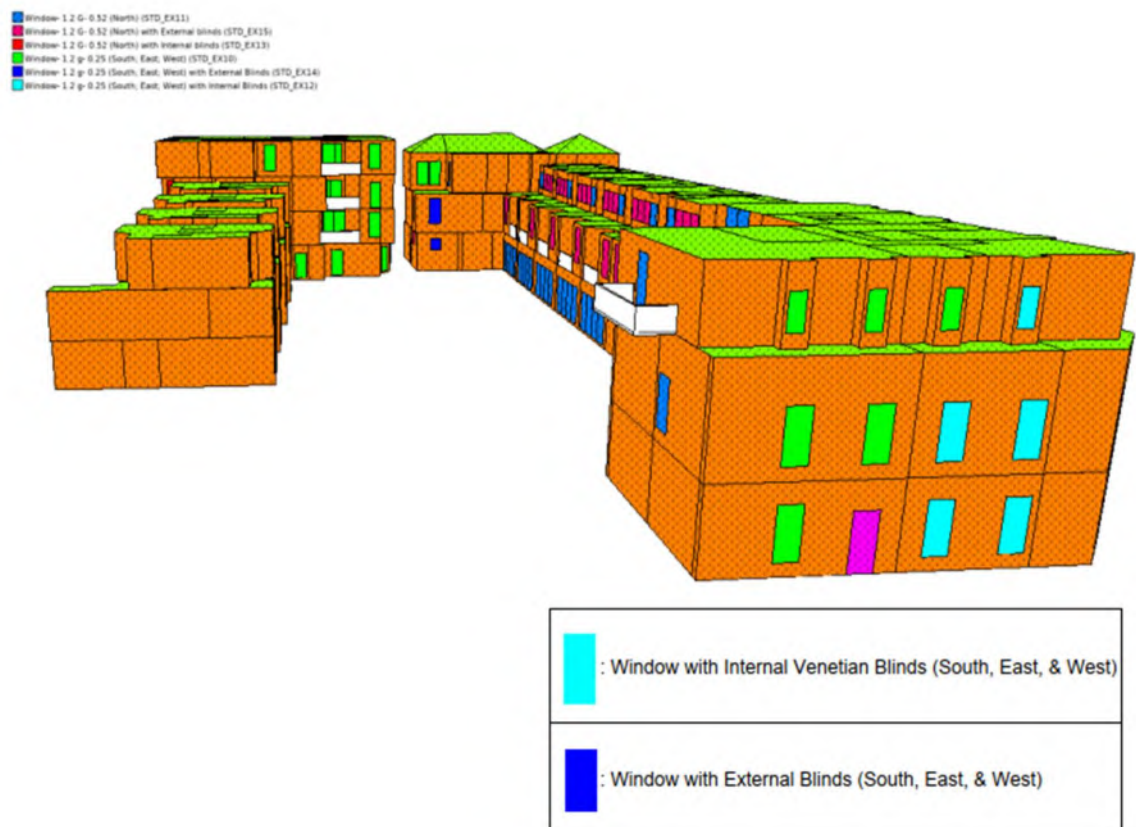


Figure 3.10: Venetian Blinds - (West Elevation)



Figure 3.11: Venetian Blinds - (North Elevation)

3.14 The table below presents the results achieved by implementing the proposed passive strategy of installing external blinds and internal venetian blinds in south-, east-, west-, and north-facing habitable rooms. For detailed results, please refer to Appendix D.

Design Weather Scenario	Total Number of Assessed Spaces	Total Number of Rooms Pass Overheating Criteria	Total Number of Rooms fail Overheating Criteria
Habitual Rooms			
DSY1_2020H50	105	00	105

Design Weather Scenario	Total Number of Assessed Corridors	Total Number of Corridors Pass Overheating Criteria	Total Number of Corridors fail Overheating Criteria
Communal Corridors			
DSY1_2020H50	04	00	04

Table 3.2: Results DSY1- Baseline

Results- Baseline + Mitigation Strategy 2

- 3.15 The proposed development cannot achieve Overheating compliance solely through passive measures. Active solutions, such as mechanical ventilation, are necessary because a significant number of rooms are failing to meet requirements due to inadequate ventilation. This issue arises primarily from the limited effectiveness of natural ventilation, as windows are often kept closed during both day and night to mitigate noise concerns.
- 3.16 Following the recommendations of the Mechanical & Electrical (M&E) design team, the MVHR units for all dwellings in the proposed development will be fitted with Vent-Axia Sentinel Plus B units. These units are capable of delivering an airflow rate of 111 l/s. Detailed product specifications and datasheets can be found in Appendix L.
- 3.17 To address the issue of overheating in certain bedrooms, it has been determined that MVHR alone may not provide sufficient ventilation due to its limited capacity. Therefore, to ensure adequate air exchange and temperature control, TD Silent extract fans will be installed alongside the MVHR system in smaller bedrooms and rooms particularly susceptible to overheating. The rooms where extract fans will be installed are indicated in the plans provided in Appendix N. This combined approach will enhance ventilation efficiency and help maintain a comfortable indoor environment. Detailed product specifications and datasheet for extract fan is available in Appendix M.
- 3.18 The M&E design team has provided detailed drawings that specify the locations of the MVHR units and extract fans, including their respective flow rates and the arrangement of rigid ducting, for two typical dwellings: one house and one flat in Block B. These drawings, referenced in Appendix N, will serve as the standard methodology for all other houses and flats in the project.
- 3.19 Table 3.3 presents the results of modelling the proposed overheating mitigation strategy for the residential development. The strategy includes the implementation of cross ventilation through internal doors and the use of external blinds and venetian blinds to reduce solar heat gain. Additionally, MVHR is employed in all habitable spaces to ensure adequate ventilation while maintaining thermal comfort, and extract fans are installed in small bedrooms and other rooms prone to overheating to further enhance airflow and temperature control.

Design Weather Scenario	Total Number of Assessed Spaces	Total Number of Rooms Pass Overheating Criteria	Total Number of Rooms fail Overheating Criteria
Habitual Rooms			
DSY1_2020H50	105	105	00

Design Weather Scenario	Total Number of Assessed Corridors	Total Number of Corridors Pass Overheating Criteria	Total Number of Corridors fail Overheating Criteria
Communal Corridors			
DSY1_2020H50	04	04	00

Table 3.3: Results DSY1- Baseline + Strategy 2

- 3.20 The overheating modelling results of the proposed strategy demonstrate that all the modelled habitable rooms and corridors pass the overheating criteria with the DSY1 weather data file. The detailed modelling results of the proposed strategy are presented in Appendix E.
- 3.21 The overheating modelling results demonstrate that achieving compliance with DSY2 and DSY3, as well as the more extreme weather files, is more challenging. These weather files represent rarer events occurring only every 7.7 and 11.1 years, respectively. A summary of the modelling results for the DSY2 and DSY3 weather files is provided in Table 3.4 for the reference only. The modelling results for the proposed overheating strategy have been thoroughly analysed using DSY2-3 (2020s) and DSY1 (2050s and 2080s) high emissions, 50th percentile weather files, with the detailed findings presented in Appendices F-I.

Design Weather Scenario	Total Number of Assessed Spaces	Total Number of Rooms Pass Overheating Criteria	Total Number of Rooms fail Overheating Criteria
Habitual Rooms			
DSY2_2020H50	105	105	00
DSY3_2020H50	105	105	00
DSY1_2050H50	105	105	00
DSY1_2080H50	105	105	00
Communal Corridors			
DSY2_2020H50	04	04	00
DSY3_2020H50	04	04	00
DSY1_2050H50	04	04	00
DSY1_2080H50	04	04	00

Table 3.4: Results DSY1- Baseline + Strategy 2

- 3.22 In conclusion, the proposed mitigation strategy (Strategy 2), which includes cross ventilation, low-g-value glazing, external blinds, venetian blinds, MVHR in all habitable spaces, and extract fans in rooms prone to overheating, effectively ensures that the development meets the required thermal comfort and ventilation standards. This approach effectively mitigates the risk of overheating under both current (DSY1_2020H50) and extreme weather conditions (DSY2_2020H50 and DSY3_2020H50). Furthermore, it provides resilience against future climate scenarios, including DSY1_2050H50 and DSY1_2080H50, ensuring long-term compliance and comfort within the development. Therefore, it can be concluded that all habitable rooms within the proposed development meet the overheating criteria for all future and extreme weather scenarios without the need for active cooling.
- 3.23 During extreme weather conditions, it is recommended that occupants be educated on heat-reducing measures, such as keeping windows closed during peak heat hours. Cooling devices, like portable fans, should be used to cool the room. Energy-efficient lighting should be chosen to reduce heat emission from artificial sources. The use of heat-generating appliances should be minimized during peak hours.

Cooling Hierarchy:

- 3.24 The cooling hierarchy has been thoroughly assessed to support the proposal. The proposed strategies align with the requirements of the London Plan (2021) Policy SI4 and the Haringey Local Plan (2017) Policies SP4 and DM21.
- 3.25 **Reduce the amount of heat entering the building:** The proposed development at Hornsey Police Station has been designed in alignment with the cooling hierarchy. Although the site has limitations regarding orientation, several other measures have been integrated to minimize heat gain:
- **Shading:** Shading will be provided by balconies and adjacent buildings. Additionally, external blinds will be installed on the internal elevation windows of the bedrooms and south-facing kitchen/living rooms, particularly in MH2, MH3, and MH4, which are prone to overheating. Internal Venetian blinds will also be installed on all external elevation windows of the bedrooms that are susceptible to overheating.
 - **High Albedo Materials:** Light-coloured materials will be used on surfaces, as they are more reflective and result in lower surface temperatures and reduced heat absorption.
 - **Insulation:** Walls, floors, and roofs will be well-insulated to reduce heat transfer.
 - **Green Infrastructure:** A green roof and landscaping are proposed to enhance thermal performance.
 - **Fenestration:** Double-glazed windows with a low g-value will be installed on the façade to limit solar gain.

3.26 Minimise internal heat generation through energy-efficient design:

- **High-Efficiency Systems:** The building will be equipped with energy-efficient appliances and systems, including LED lighting, low-energy heating systems, and MVHR. These technologies are designed to operate efficiently with minimal heat output, helping to reduce overall internal heat generation within the building.
- **Individual Heating Systems:** Each dwelling will be equipped with an individual heating system, which reduces the need for extensive communal piping. To further prevent internal heat buildup, all pipework within each dwelling will be well-insulated, ensuring that heat loss is minimized, and excess heat generation is avoided

3.27 Manage heat within the building through exposed internal thermal mass and high ceilings:

The design incorporates exposed thermal mass and high ceilings to efficiently manage heat and maintain thermal comfort.

3.28 Provide passive ventilation:

Due to noise constraints, passive ventilation through windows is unlikely. However, cross-ventilation will be facilitated through internal doors to ensure airflow.

3.29 Provide mechanical ventilation:

Given the limitations on natural ventilation, mechanical ventilation will be installed in all habitable spaces. This system will ensure that all spaces remain comfortable during potential overheating conditions.

Measures Forming Part of the Retrofit Plan:**3.30 Advanced Shading Enhancements:**

- **Upgraded External Shading Solutions:** As part of the retrofit plan, advanced shading technologies such as automated louvers or dynamic shading systems may be installed to further mitigate overheating in specific areas identified through post-occupancy evaluations.

3.31 Additional Insulation Layers:

- **Insulation Upgrades:** Future retrofits may include the addition of supplementary insulation layers or the use of advanced insulating materials to enhance the thermal performance of the building envelope.

3.32 Enhanced Green Infrastructure:

- **Irrigation and Additional Planting:** The retrofit plan includes provisions for the installation of irrigation systems and the expansion of green infrastructure, such as

additional green walls or rooftop gardens, to improve the building's thermal regulation over time.

3.33 **Passive Ventilation Enhancements:**

- **Trickle Vents or Passive Ventilation Systems:** Additional passive ventilation measures, such as the installation of trickle vents or other low-energy ventilation systems, may be incorporated into the retrofit plan to complement existing ventilation strategies.

3.34 **Advanced Fenestration Upgrades:**

- **Triple Glazing or Advanced Window Coatings:** Future retrofits may involve upgrading windows to triple glazing or applying advanced solar-control coatings to further limit solar gain and reduce internal temperatures.

3.35 **Mechanical Ventilation Upgrades:**

- **MVHR with Hybrid Cooling Systems:** The retrofit plan includes provisions for upgrading the existing MVHR systems to MVHR systems integrated with hybrid cooling. This enhancement will not only improve the efficiency of the ventilation system but also introduce active cooling capabilities, offering a more robust solution to reduce overheating risks and maintain thermal comfort.

3.36 These measures ensure that proposed development at Hornsey Police Station will be well-equipped to manage overheating both immediately upon occupation and in the long term, through a thoughtful and flexible retrofit plan.

Confirmation of Responsibility for Overheating Risk Mitigation:

3.37 Once the development is occupied, responsibility for mitigating overheating risks will be divided as follows:

- **Landlord/Estate Office (Communal Areas):** The operational responsibility for mitigating overheating risks in communal areas will rest with the Landlord, managed through the Estate Office. This includes ensuring that all communal spaces, such as hallways, lobbies, and shared facilities, are adequately ventilated and maintained to prevent overheating.
- **Residents (Individual Accommodation):** Residents will be responsible for managing overheating risks within their own dwellings. They will have control over their windows, blinds, and other cooling mechanisms, such as fans. It will be the resident's responsibility to utilize these features effectively to maintain a comfortable indoor environment and address any overheating concerns in their personal spaces.

- 3.38 A comprehensive Building Use Guide detailing all overheating mitigation strategies will be provided to all new residents by the contractor, ensuring they are fully informed on how to maintain a comfortable indoor environment.

Summary

- 3.39 The updated overheating assessment for the proposed development was conducted using CIBSE TM59 standards and CIBSE TM49 London Weather Centre files for DSY1-3 (2020s) and DSY1 (2050s and 2080s) under high emissions scenarios (50% percentile). The key findings and proposed strategies are summarized as follows:

- **Window Blinds Installation:** The report confirms the internal elevation windows where external blinds will be installed and specifies the external elevation windows where internal Venetian blinds will be installed. Please refer to Figures 3.8–3.11 above for elevation model images detailing the locations of both external and internal blinds, as well as further details in Appendices J–K.
- **Compliance with DSY1 2020s and Building Regulations Part O:** The proposed development successfully meets the mandatory DSY1 2020s requirement by adhering to the Cooling Hierarchy and incorporating low g-value glazing, external blinds, internal venetian blinds, cross ventilation, and MVHR with an extract fan. These combined passive and active strategies effectively mitigate overheating risks while ensuring compliance with Building Regulations Part O.
- **Mitigation for Future Weather Files:** The report outlines the necessary mitigation measures to meet future climate scenarios (2050s and 2080s), distinguishing between those to be implemented before occupation and those included in the retrofit plan.
- **Retrofit Plan and Integration:** The retrofit plan, detailed in sections 3.30-3.35, aligns with the Cooling Hierarchy and confirms that the necessary infrastructure includes advanced shading enhancements, additional insulation layers, enhanced green infrastructure, passive ventilation, advanced fenestration upgrades, and a mechanical ventilation system with hybrid cooling capabilities.
- **Responsibility for Overheating Risk Mitigation:** The operational responsibility for mitigating overheating risks in communal areas will rest with the landlord, while residents will be responsible for managing overheating risks within their own dwellings.
- **External Blinds & Internal Venetian Blinds Details:** The design team has selected external blinds from Waverley Blinds UK, specifically the Warema Cord-Guided External Roller Blind (Fabric Color: Silver Screen®-202ED01 White), for use on the internal elevation windows of bedrooms and south-facing kitchen/living rooms, particularly in MH2, MH3, and MH4. Additionally, the design team has replaced some of the external blinds with high-performance, heat-protective Venetian blinds (Fabric Colour: Cotton) from Luxaflex UK for all external elevation windows of the bedrooms. Please refer to Appendix J for detailed information on the fixing mechanisms, specifications, and heat protection for the external blinds and Venetian blinds.

- **Implementation of Overheating Measures:** The development will be constructed in accordance with the approved overheating mitigation measures and maintained for the building's lifetime. Key measures include:
 - a. External Blinds and Internal Venetian Blinds (sections 3.7-3.13 and Appendices J-K)
 - b. MVHR with extract fans (sections 3.16-3.18 and Appendices L-N)
 - c. High-performance glazing -U-value of 1.2 W/m²K, g-value of 0.25 for south-east-west facing windows, g-value of 0.52 for north facing windows (refer to Appendix B for model images with assigned g-values).
 - d. Insulated hot water pipes to minimize internal heat buildup
 - e. A green roof and enhanced landscaping to improve thermal performance.

3.40 These strategies collectively ensure the development meets current and future overheating standards while maintaining occupant comfort and safety.

4.0 DISCLAIMER

- 4.1 Create Consulting Engineers Ltd disclaims any responsibility to the Client, Archanaeum Ltd and others in respect of any matters outside the scope of this report.
- 4.2 This modelling activity and report has been written based on a number of assumptions which are detailed in the main body of the report and the associated appendices. This data is assumed to be correct at the time of writing and every effort has been made to ensure this is the case. If, however, any of this data is found to be incorrect, the results and recommendations contained therein may no longer hold true.
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APPENDICES

APPENDIX A

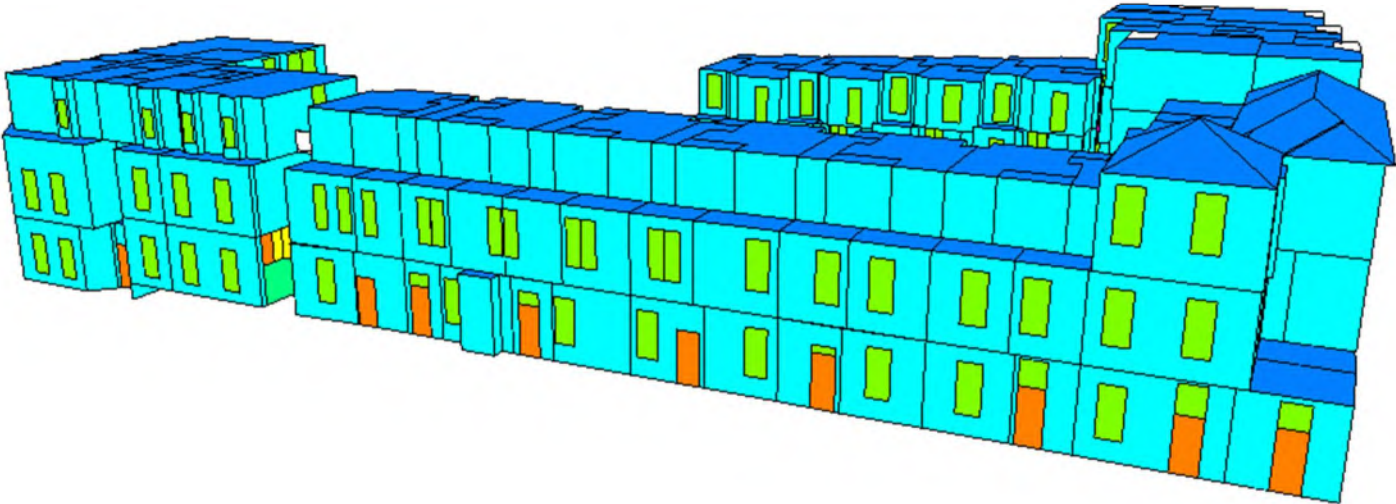


Ventilation			
Infiltration rate			
#	Space Type/Name:	assumed	
1	New build	0.15	ach

Auxiliary Ventilation			
assumed			
Rate		Variation profile	Space
20	l/s	on continuously	Kitchen Living Dining
10	l/s	on continuously	Bedrooms
50	l/s	on continuously	Bedrooms with Extract fan

APPENDIX B

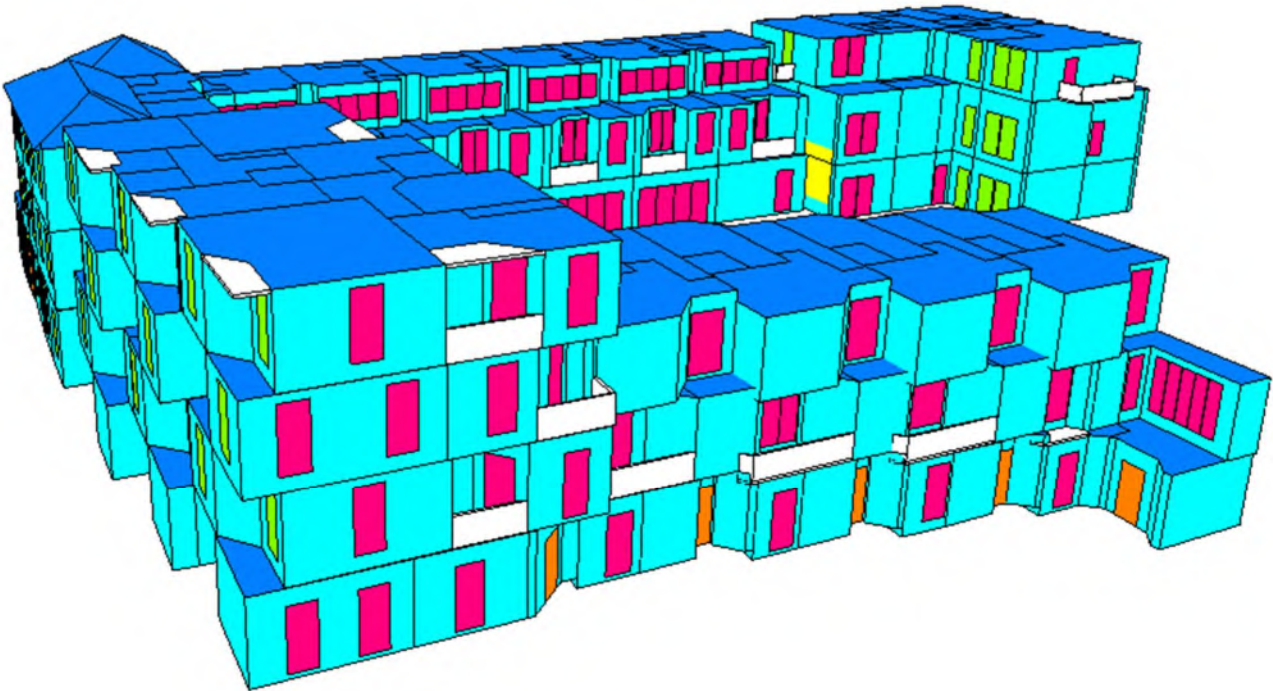
Append B- Windows G-values (elevation)
Hornsey Police Station



Legend	
	South-east-west facing windows with Low g-value of 0.25
	North facing windows with g-value of 0.52

Figure B1: South Elevation

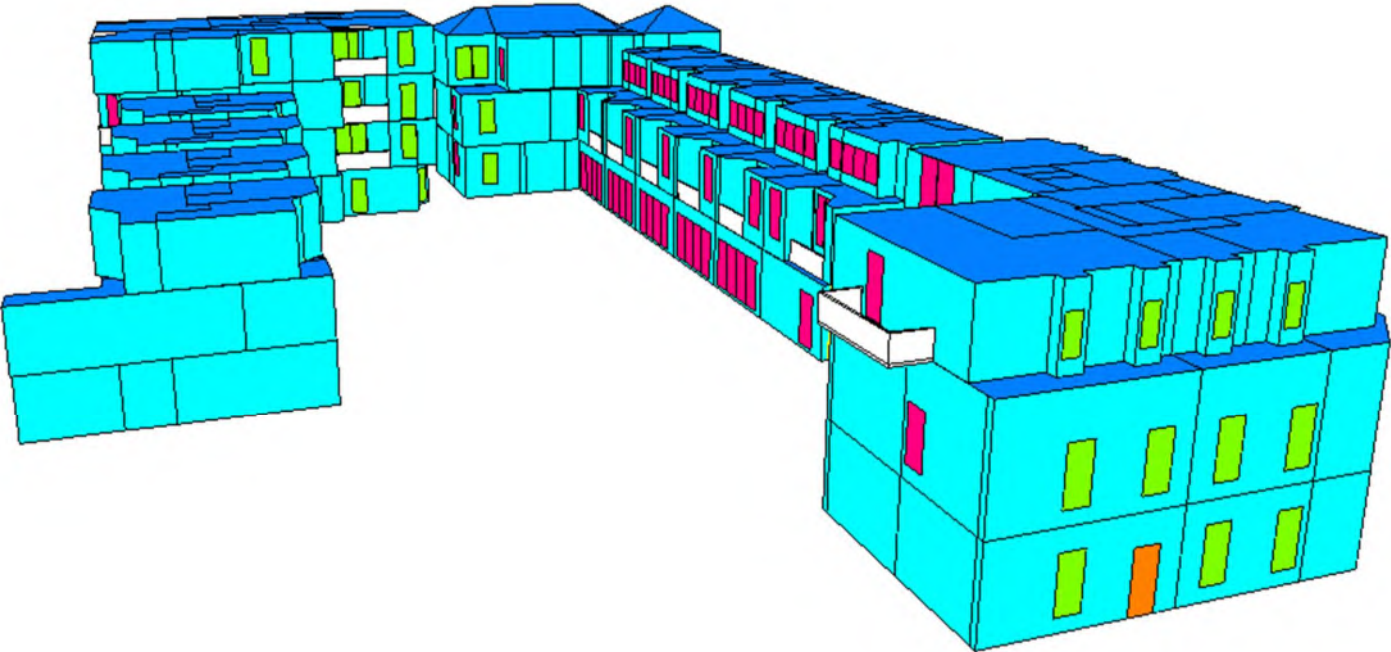
Append B- Windows G-values (elevation)
Hornsey Police Station



Legend	
	South-east-west facing windows with Low g-value of 0.25
	North facing windows with g-value of 0.52

Figure B2: North Elevation

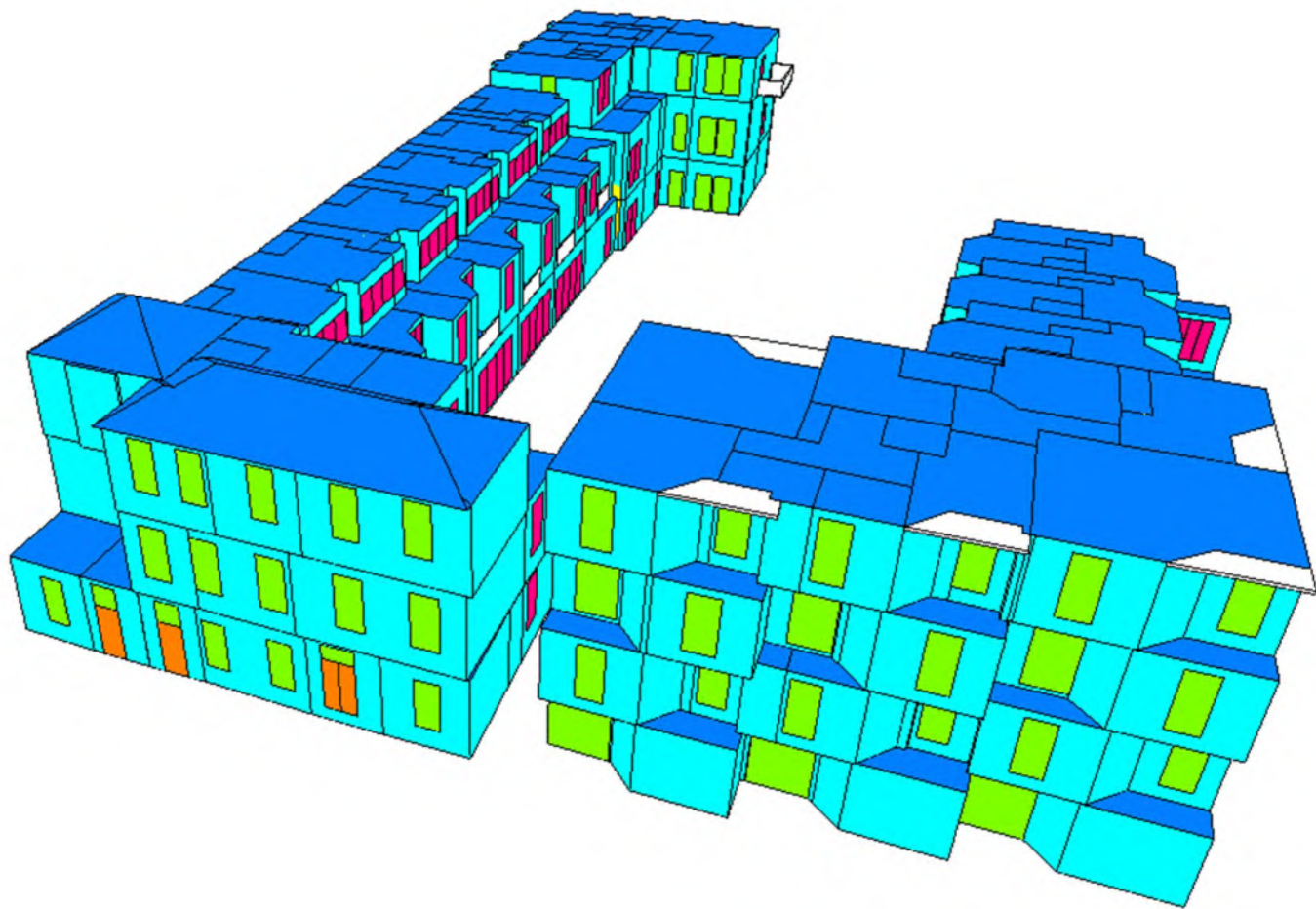
Append B- Windows G-values (elevation)
Hornsey Police Station



Legend	
	South-east-west facing windows with Low g-value of 0.25
	North facing windows with g-value of 0.52

Figure B3: West elevation

Append B- Windows G-values (elevation)
Hornsey Police Station



Legend	
	South-east-west facing windows with Low g-value of 0.25
	North facing windows with g-value of 0.52

Figure B4: East elevation

APPENDIX C

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 18:58:53
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY1_2020High50.epw	
Results file: DSY1_2020H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy:	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	NO
Designer's signature:	

Hornsey Police Station

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	Fail	N/A	-	-
Block C1- bed	Fail	Fail	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block C2- bed	Fail	Fail	-	-
Block C3- 1B2P KLD	Fail	N/A	-	-
Block A AH1- Study	Fail	Fail	-	-
Block A AH2- Study	Fail	Fail	-	-
Block A AH3- Study	Fail	Fail	-	-
Block A AH4- Study	Fail	Fail	-	-
Block A AH5- Study	Fail	Fail	-	-
Block A AH6- Study	Fail	Fail	-	-
Block C4 - Bed	Fail	Fail	-	-
Block C5-bed	Fail	Fail	-	-
Block C6- 1B2P KLD	Fail	N/A	-	-
Block C4 - 2B3P KLD	Fail	N/A	-	-
CORRIDOR-BLOCK B	-	-	-	Yes
Block B2- bed	Fail	-	-	-
Block B2- 2B4P KLD	Fail	N/A	-	-
Block B3-Sbed	Fail	Fail	-	-
Block B2-2B4P KLD	Fail	N/A	-	-
Block B MH1- Bed	Fail	Fail	-	-
Block B MH2- Bed	Fail	-	-	-
Block B MH3-bed	Fail	-	-	-
BLOCK B MH4- bed	Fail	-	-	-
Block B3-BED	Fail	Fail	-	-
Block C7- 1B2P KLD	Fail	N/A	-	-
Block C8- Sbed	Fail	Fail	-	-
Block C8- bed	Fail	-	-	-
Block C8- bed	Fail	Fail	-	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	Fail	N/A	-	-
Block B4- bed	Fail	Fail	-	-
Block B6- 2B4P KLD	Fail	N/A	-	-
Block B7- 2B3P KLD	Fail	N/A	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block A4-3B5P KLD	Fail	N/A	-	-
Block A4-bed	Fail	-	-	-
Block B3-2B3P KLD	Fail	N/A	-	-
Block C3- bed	Fail	Fail	-	-
Block C1- Sbed	Fail	Fail	-	-
Block C2- 1B2P KLD	Fail	N/A	-	-
Block C4 - Sbed	Fail	Fail	-	-
Block C6- bed	Fail	Fail	-	-
Block C5-1B2P KLD	Fail	N/A	-	-
Block B5- bed	Fail	Fail	-	-
Block A AH2- 4B7P KLD	Fail	N/A	-	-
Block A AH3- 4B7P KLD	Fail	N/A	-	-
Block A2- 1B2P LD	Fail	N/A	-	-
Block A AH6- 4B7P KLD	Fail	N/A	-	-
Block A AH4- 4B7P KLD	Fail	N/A	-	-
Block A AH5- 4B7P KLD	Fail	N/A	-	-
Block A1- bed	Fail	-	-	-
Block A2- Kitchen	Fail	N/A	-	-
Block A1- 2B4P KLD	Fail	N/A	-	-
Block A AH1- bed	Fail	-	-	-
Block A AH1- bed	Fail	Fail	-	-
Block A AH2- bed	Fail	-	-	-
Block A AH2- bed	Fail	Fail	-	-
Block A AH3-Bed	Fail	-	-	-
Block A AH3-Bed	Fail	Fail	-	-
Block A AH4- bed	Fail	-	-	-
Block A AH4- bed	Fail	Fail	-	-
Block A AH5- bed	Fail	-	-	-
Block A AH5-bed	Fail	Fail	-	-
Block A AH6- bed	Fail	-	-	-
Block A AH6- bed	Fail	Fail	-	-
Block A2-bed	Fail	Fail	-	-
Block A3-Bed	Fail	-	-	-
Block A3-2B4P KLD	Fail	N/A	-	-
Block A3-Bed	Fail	Fail	-	-
Block A AH6- BED	Fail	Fail	-	-
Block A AH5- bed	Fail	Fail	-	-

Hornsey Police Station

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	Fail	Fail	-	-
Block A AH3- BED	Fail	Fail	-	-
Block A AH4-BED	Fail	Fail	-	-
Block A AH1- BED	Fail	Fail	-	-
Block A4-bed	Fail	Fail	-	-
Block A4-Study	Fail	Fail	-	-
Block B7- bed	Fail	Fail	-	-
Block B7- Sbed	Fail	Fail	-	-
Block B6- bath	Fail	Fail	-	-
Block B6- bed	Fail	-	-	-
Block B6- bed	Fail	Fail	-	-
BLOCK B MH4- 4B8P KLD	Fail	N/A	-	-
Block B MH3- 4B8P KLD	Fail	N/A	-	-
Block B MH2- 4B8P KLD	Fail	N/A	-	-
Block B MH1- 4B8P KLD	Fail	N/A	-	-
Block B2- bed	Fail	Fail	-	-
Block B MH2- Bed	Fail	Fail	-	-
Block B MH3-bed	Fail	Fail	-	-
BLOCK B MH4- Study	Fail	Fail	-	-
BLOCK B MH4- bed	Fail	-	-	-
Block B MH1-bed	Fail	Fail	-	-
Block B MH2-bed	Fail	Fail	-	-
Block B5- sbed	Fail	Fail	-	-
Block B5- 2B3P KLD	Fail	N/A	-	-
Block C8- 3B5P KLD	Fail	N/A	-	-
Block B4-Bed	Fail	Fail	-	-
Block A1- bed	Fail	Fail	-	-
Block A AH1- 4B7P KLD	Fail	N/A	-	-
Block B MH1-bed	Fail	Fail	-	-
BLOCK B MH1- Study	Fail	Fail	-	-
Block B2-bed	Fail	-	-	-
BLOCK B MH4- bed	Fail	Fail	-	-
BLOCK B MH3- Study	Fail	Fail	-	-
Block B MH3-Bed	Fail	Fail	-	-
BLOCK B MH2- Study	Fail	Fail	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block C7- Bed	Fail	Fail	-	-
Block C7- Bed	Fail	Fail	-	-

Hornsey Police Station

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
Block C1- 2B3P KLD	1989	1975	99.3	Fail
Block C1- bed	3672	3523	95.9	Fail
Block C2- bed	3672	3413	92.9	Fail
Block C3- 1B2P KLD	1989	1811	91.1	Fail
Block A AH1- Study	3672	3672	100.0	Fail
Block A AH2- Study	3672	3672	100.0	Fail
Block A AH3- Study	3672	3672	100.0	Fail
Block A AH4- Study	3672	3672	100.0	Fail
Block A AH5- Study	3672	3672	100.0	Fail
Block A AH6- Study	3672	3672	100.0	Fail
Block C4 - Bed	3672	3596	97.9	Fail
Block C5-bed	3672	3537	96.3	Fail
Block C6- 1B2P KLD	1989	1928	96.9	Fail
Block C4 - 2B3P KLD	1989	1989	100.0	Fail
Block B2- bed	3672	3672	100.0	Fail
Block B2- 2B4P KLD	1989	1989	100.0	Fail
Block B3-Sbed	3672	3672	100.0	Fail
Block B2-2B4P KLD	1989	1989	100.0	Fail
Block B MH1- Bed	3672	3672	100.0	Fail
Block B MH2- Bed	3672	3672	100.0	Fail
Block B MH3-bed	3672	3672	100.0	Fail
BLOCK B MH4- bed	3672	3642	99.2	Fail
Block B3-BED	3672	3630	98.9	Fail
Block C7- 1B2P KLD	1989	1977	99.4	Fail
Block C8- Sbed	3672	3672	100.0	Fail
Block C8- bed	3672	3672	100.0	Fail
Block C8- bed	3672	3672	100.0	Fail
Block B4- 2B4P KLD	1989	1989	100.0	Fail
Block B4- bed	3672	3672	100.0	Fail
Block B6- 2B4P KLD	1989	1989	100.0	Fail
Block B7- 2B3P KLD	1989	1976	99.3	Fail
Block A4-3B5P KLD	1989	1964	98.7	Fail
Block A4-bed	3672	3653	99.5	Fail
Block B3-2B3P KLD	1989	1959	98.5	Fail
Block C3- bed	3672	3494	95.2	Fail
Block C1- Sbed	3672	3612	98.4	Fail
Block C2- 1B2P KLD	1989	1849	93.0	Fail

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Room name	Occupied hours	No. hours $\Delta T \geq 1^{\circ}\text{K}$	% Occupied hours $\Delta T \geq 1^{\circ}\text{K}$	Criterion a check
Block C4 - Sbed	3672	3672	100.0	Fail
Block C6- bed	3672	3595	97.9	Fail
Block C5-1B2P KLD	1989	1925	96.8	Fail
Block B5- bed	3672	3672	100.0	Fail
Block A AH2- 4B7P KLD	1989	1957	98.4	Fail
Block A AH3- 4B7P KLD	1989	1986	99.8	Fail
Block A2- 1B2P LD	1989	1753	88.1	Fail
Block A AH6- 4B7P KLD	1989	1980	99.5	Fail
Block A AH4- 4B7P KLD	1989	1980	99.5	Fail
Block A AH5- 4B7P KLD	1989	1986	99.8	Fail
Block A1- bed	3672	3507	95.5	Fail
Block A2- Kitchen	1989	1862	93.6	Fail
Block A1- 2B4P KLD	1989	1906	95.8	Fail
Block A AH1- bed	3672	3672	100.0	Fail
Block A AH1- bed	3672	3672	100.0	Fail
Block A AH2- bed	3672	3672	100.0	Fail
Block A AH2- bed	3672	3672	100.0	Fail
Block A AH3-Bed	3672	3672	100.0	Fail
Block A AH3-Bed	3672	3672	100.0	Fail
Block A AH4- bed	3672	3672	100.0	Fail
Block A AH4- bed	3672	3672	100.0	Fail
Block A AH5- bed	3672	3672	100.0	Fail
Block A AH5-bed	3672	3672	100.0	Fail
Block A AH6- bed	3672	3672	100.0	Fail
Block A AH6- bed	3672	3672	100.0	Fail
Block A2-bed	3672	3591	97.8	Fail
Block A3-Bed	3672	3609	98.3	Fail
Block A3-2B4P KLD	1989	1980	99.5	Fail
Block A3-Bed	3672	3655	99.5	Fail
Block A AH6- BED	3672	3672	100.0	Fail
Block A AH5- bed	3672	3672	100.0	Fail
Block A AH2- BED	3672	3672	100.0	Fail
Block A AH3- BED	3672	3672	100.0	Fail
Block A AH4-BED	3672	3672	100.0	Fail
Block A AH1- BED	3672	3655	99.5	Fail
Block A4-bed	3672	3565	97.1	Fail
Block A4-Study	3672	3613	98.4	Fail
Block B7- bed	3672	3672	100.0	Fail
Block B7- Sbed	3672	3672	100.0	Fail
Block B6- bath	3672	3672	100.0	Fail
Block B6- bed	3672	3672	100.0	Fail
Block B6- bed	3672	3672	100.0	Fail

Hornsey Police Station

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Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
BLOCK B MH4- 4B8P KLD	1989	1849	93.0	Fail
Block B MH3- 4B8P KLD	1989	1971	99.1	Fail
Block B MH2- 4B8P KLD	1989	1970	99.0	Fail
Block B MH1- 4B8P KLD	1989	1955	98.3	Fail
Block B2- bed	3672	3672	100.0	Fail
Block B MH2- Bed	3672	3672	100.0	Fail
Block B MH3-bed	3672	3672	100.0	Fail
BLOCK B MH4- Study	3672	3646	99.3	Fail
BLOCK B MH4- bed	3672	3668	99.9	Fail
Block B MH1-bed	3672	3672	100.0	Fail
Block B MH2-bed	3672	3672	100.0	Fail
Block B5- sbed	3672	3664	99.8	Fail
Block B5- 2B3P KLD	1989	1987	99.9	Fail
Block C8- 3B5P KLD	1989	1987	99.9	Fail
Block B4-Bed	3672	3672	100.0	Fail
Block A1- bed	3672	3495	95.2	Fail
Block A AH1- 4B7P KLD	1989	1805	90.7	Fail
Block B MH1-bed	3672	3672	100.0	Fail
BLOCK B MH1- Study	3672	3672	100.0	Fail
Block B2-bed	3672	3672	100.0	Fail
BLOCK B MH4- bed	3672	3670	99.9	Fail
BLOCK B MH3- Study	3672	3672	100.0	Fail
Block B MH3-Bed	3672	3672	100.0	Fail
BLOCK B MH2- Study	3672	3672	100.0	Fail
Block C7- Bed	3672	3623	98.7	Fail
Block B2-bed	3672	3672	100.0	Fail

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Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C1- 2B3P KLD	N/A	N/A	N/A	N/A
Block C1- bed	391	1336	1727	Fail
Block C2- bed	383	1309	1692	Fail
Block C3- 1B2P KLD	N/A	N/A	N/A	N/A
Block A AH1- Study	486	1615	2101	Fail
Block A AH2- Study	552	1755	2307	Fail
Block A AH3- Study	560	1787	2347	Fail
Block A AH4- Study	523	1686	2209	Fail
Block A AH5- Study	565	1789	2354	Fail
Block A AH6- Study	556	1731	2287	Fail
Block C4 - Bed	371	1282	1653	Fail
Block C5-bed	376	1298	1674	Fail
Block C6- 1B2P KLD	N/A	N/A	N/A	N/A
Block C4 - 2B3P KLD	N/A	N/A	N/A	N/A
Block B2- bed	444	1454	1898	Fail
Block B2- 2B4P KLD	N/A	N/A	N/A	N/A
Block B3-Sbed	477	1641	2118	Fail
Block B2-2B4P KLD	N/A	N/A	N/A	N/A
Block B MH1- Bed	482	1604	2086	Fail
Block B MH2- Bed	500	1709	2209	Fail
Block B MH3-bed	494	1704	2198	Fail
BLOCK B MH4- bed	417	1402	1819	Fail
Block B3-BED	396	1360	1756	Fail
Block C7- 1B2P KLD	N/A	N/A	N/A	N/A
Block C8- Sbed	480	1590	2070	Fail
Block C8- bed	482	1643	2125	Fail
Block B4- 2B4P KLD	N/A	N/A	N/A	N/A
Block B4- bed	577	1917	2494	Fail
Block B6- 2B4P KLD	N/A	N/A	N/A	N/A
Block B7- 2B3P KLD	N/A	N/A	N/A	N/A
Block A4-3B5P KLD	N/A	N/A	N/A	N/A
Block A4-bed	378	1307	1685	Fail
Block B3-2B3P KLD	N/A	N/A	N/A	N/A
Block C3- bed	361	1242	1603	Fail
Block C1- Sbed	410	1402	1812	Fail
Block C2- 1B2P KLD	N/A	N/A	N/A	N/A
Block C4 - Sbed	483	1530	2013	Fail

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Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C6- bed	366	1266	1632	Fail
Block C5-1B2P KLD	N/A	N/A	N/A	N/A
Block B5- bed	470	1583	2053	Fail
Block A AH2- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH3- 4B7P KLD	N/A	N/A	N/A	N/A
Block A2- 1B2P LD	N/A	N/A	N/A	N/A
Block A AH6- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH4- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH5- 4B7P KLD	N/A	N/A	N/A	N/A
Block A1- bed	395	1364	1759	Fail
Block A2- Kitchen	N/A	N/A	N/A	N/A
Block A1- 2B4P KLD	N/A	N/A	N/A	N/A
Block A AH1- bed	459	1481	1940	Fail
Block A AH2- bed	575	1914	2489	Fail
Block A AH3-Bed	555	1840	2395	Fail
Block A AH4- bed	528	1732	2260	Fail
Block A AH5- bed	462	1550	2012	Fail
Block A AH5-bed	606	1973	2579	Fail
Block A AH6- bed	606	1971	2577	Fail
Block A2-bed	391	1354	1745	Fail
Block A3-Bed	411	1385	1796	Fail
Block A3-2B4P KLD	N/A	N/A	N/A	N/A
Block A AH6- BED	475	1586	2061	Fail
Block A AH2- BED	460	1531	1991	Fail
Block A AH3- BED	462	1545	2007	Fail
Block A AH4-BED	452	1448	1900	Fail
Block A AH1- BED	381	1305	1686	Fail
Block A4-Study	380	1305	1685	Fail
Block B7- bed	452	1462	1914	Fail
Block B7- Sbed	513	1655	2168	Fail
Block B6- bath	730	2555	3285	Fail
Block B6- bed	628	2129	2757	Fail
BLOCK B MH4- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH3- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH2- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH1- 4B8P KLD	N/A	N/A	N/A	N/A
BLOCK B MH4- Study	400	1340	1740	Fail
Block B MH1-bed	487	1643	2130	Fail
Block B MH2-bed	485	1630	2115	Fail
Block B5- sbed	431	1389	1820	Fail
Block B5- 2B3P KLD	N/A	N/A	N/A	N/A

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Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C8- 3B5P KLD	N/A	N/A	N/A	N/A
Block B4-Bed	541	1844	2385	Fail
Block A AH1- 4B7P KLD	N/A	N/A	N/A	N/A
Block B MH1-bed	493	1698	2191	Fail
BLOCK B MH1- Study	476	1575	2051	Fail
Block B2-bed	490	1634	2124	Fail
BLOCK B MH3- Study	471	1527	1998	Fail
Block B MH3-Bed	491	1665	2156	Fail
BLOCK B MH2- Study	461	1493	1954	Fail
Block C7- Bed	392	1327	1719	Fail

Mechanically ventilated rooms

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

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

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	2618	29.9	Yes
CORRIDOR-BLOCK B	3675	42.0	Yes
CORRIDOR- BLOCK C	3213	36.7	Yes
CORRIDOR- BLOCK C	3665	41.8	Yes

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH6- Study	7.33	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	14.04	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C3- bed	17.42	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A3-Bed	17.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bath	2.64	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	16.23	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH1-bed	15.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	14.14	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0
Block C1- bed	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0
Block C3- 1B2P KLD	0.15	0
Block A AH1- Study	0.15	0
Block A AH2- Study	0.15	0
Block A AH3- Study	0.15	0
Block A AH4- Study	0.15	0
Block A AH5- Study	0.15	0
Block A AH6- Study	0.15	0
Block C4 - Bed	0.15	0
Block C5-bed	0.15	0
Block C6- 1B2P KLD	0.15	0
Block C4 - 2B3P KLD	0.15	0
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	0
Block B2- 2B4P KLD	0.15	0
Block B3-Sbed	0.15	0
Block B2-2B4P KLD	0.15	0
Block B MH1- Bed	0.15	0
Block B MH2- Bed	0.15	0
Block B MH3-bed	0.15	0
BLOCK B MH4- bed	0.15	0
Block B3-BED	0.15	0
Block C7- 1B2P KLD	0.15	0
Block C8- Sbed	0.15	0
Block C8- bed	0.15	0
Block C8- bed	0.15	0
Block B4- 2B4P KLD	0.15	0
Block B4- bed	0.15	0
Block B6- 2B4P KLD	0.15	0
Block B7- 2B3P KLD	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0
Block A4-bed	0.15	0
Block B3-2B3P KLD	0.15	0
Block C3- bed	0.15	0
Block C1- Sbed	0.15	0
Block C2- 1B2P KLD	0.15	0

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0
Block C6- bed	0.15	0
Block C5-1B2P KLD	0.15	0
Block B5- bed	0.15	0
Block A AH2- 4B7P KLD	0.15	0
Block A AH3- 4B7P KLD	0.15	0
Block A2- 1B2P LD	0.15	0
Block A AH6- 4B7P KLD	0.15	0
Block A AH4- 4B7P KLD	0.15	0
Block A AH5- 4B7P KLD	0.15	0
Block A1- bed	0.15	0
Block A2- Kitchen	0.15	0
Block A1- 2B4P KLD	0.15	0
Block A AH1- bed	0.15	0
Block A AH1- bed	0.15	0
Block A AH2- bed	0.15	0
Block A AH2- bed	0.15	0
Block A AH3-Bed	0.15	0
Block A AH3-Bed	0.15	0
Block A AH4- bed	0.15	0
Block A AH4- bed	0.15	0
Block A AH5- bed	0.15	0
Block A AH5-bed	0.15	0
Block A AH6- bed	0.15	0
Block A AH6- bed	0.15	0
Block A2-bed	0.15	0
Block A3-Bed	0.15	0
Block A3-2B4P KLD	0.15	0
Block A3-Bed	0.15	0
Block A AH6- BED	0.15	0
Block A AH5- bed	0.15	0
Block A AH2- BED	0.15	0
Block A AH3- BED	0.15	0
Block A AH4-BED	0.15	0
Block A AH1- BED	0.15	0
Block A4-bed	0.15	0
Block A4-Study	0.15	0
Block B7- bed	0.15	0
Block B7- Sbed	0.15	0
Block B6- bath	0.15	0
Block B6- bed	0.15	0
Block B6- bed	0.15	0

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0
Block B MH3- 4B8P KLD	0.15	0
Block B MH2- 4B8P KLD	0.15	0
Block B MH1- 4B8P KLD	0.15	0
Block B2- bed	0.15	0
Block B MH2- Bed	0.15	0
Block B MH3-bed	0.15	0
BLOCK B MH4- Study	0.15	0
BLOCK B MH4- bed	0.15	0
Block B MH1-bed	0.15	0
Block B MH2-bed	0.15	0
Block B5- sbed	0.15	0
Block B5- 2B3P KLD	0.15	0
Block C8- 3B5P KLD	0.15	0
Block B4-Bed	0.15	0
Block A1- bed	0.15	0
Block A AH1- 4B7P KLD	0.15	0
Block B MH1-bed	0.15	0
BLOCK B MH1- Study	0.15	0
Block B2-bed	0.15	0
BLOCK B MH4- bed	0.15	0
BLOCK B MH3- Study	0.15	0
Block B MH3-Bed	0.15	0
BLOCK B MH2- Study	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	0
Block B2-bed	0.15	0

APPENDIX D

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 16:25:17
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY1_2020High50.epw	
Results file: DSY1_2020H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	NO
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	Fail	N/A	-	-
Block C1- bed	Fail	Fail	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block C2- bed	Fail	Fail	-	-
Block C3- 1B2P KLD	Fail	N/A	-	-
Block A AH1- Study	Fail	Fail	-	-
Block A AH2- Study	Fail	Fail	-	-
Block A AH3- Study	Fail	Fail	-	-
Block A AH4- Study	Fail	Fail	-	-
Block A AH5- Study	Fail	Fail	-	-
Block A AH6- Study	Fail	Fail	-	-
Block C4 - Bed	Fail	Fail	-	-
Block C5-bed	Fail	Fail	-	-
Block C6- 1B2P KLD	Fail	N/A	-	-
Block C4 - 2B3P KLD	Fail	N/A	-	-
CORRIDOR-BLOCK B	-	-	-	Yes
Block B2- bed	Fail	-	-	-
Block B2- 2B4P KLD	Fail	N/A	-	-
Block B3-Sbed	Fail	Fail	-	-
Block B2-2B4P KLD	Fail	N/A	-	-
Block B MH1- Bed	Fail	Fail	-	-
Block B MH2- Bed	Fail	-	-	-
Block B MH3-bed	Fail	-	-	-
BLOCK B MH4- bed	Fail	-	-	-
Block B3-BED	Fail	Fail	-	-
Block C7- 1B2P KLD	Fail	N/A	-	-
Block C8- Sbed	Fail	Fail	-	-
Block C8- bed	Fail	-	-	-
Block C8- bed	Fail	Fail	-	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	Fail	N/A	-	-
Block B4- bed	Fail	Fail	-	-
Block B6- 2B4P KLD	Fail	N/A	-	-
Block B7- 2B3P KLD	Fail	N/A	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block A4-3B5P KLD	Fail	N/A	-	-
Block A4-bed	Fail	-	-	-
Block B3-2B3P KLD	Fail	N/A	-	-
Block C3- bed	Fail	Fail	-	-
Block C1- Sbed	Fail	Fail	-	-
Block C2- 1B2P KLD	Fail	N/A	-	-
Block C4 - Sbed	Fail	Fail	-	-
Block C6- bed	Fail	Fail	-	-
Block C5-1B2P KLD	Fail	N/A	-	-
Block B5- bed	Fail	Fail	-	-
Block A AH2- 4B7P KLD	Fail	N/A	-	-
Block A AH3- 4B7P KLD	Fail	N/A	-	-
Block A2- 1B2P LD	Fail	N/A	-	-
Block A AH6- 4B7P KLD	Fail	N/A	-	-
Block A AH4- 4B7P KLD	Fail	N/A	-	-
Block A AH5- 4B7P KLD	Fail	N/A	-	-
Block A1- bed	Fail	-	-	-
Block A2- Kitchen	Fail	N/A	-	-
Block A1- 2B4P KLD	Fail	N/A	-	-
Block A AH1- bed	Fail	-	-	-
Block A AH1- bed	Fail	Fail	-	-
Block A AH2- bed	Fail	-	-	-
Block A AH2- bed	Fail	Fail	-	-
Block A AH3-Bed	Fail	-	-	-
Block A AH3-Bed	Fail	Fail	-	-
Block A AH4- bed	Fail	-	-	-
Block A AH4- bed	Fail	Fail	-	-
Block A AH5- bed	Fail	-	-	-
Block A AH5-bed	Fail	Fail	-	-
Block A AH6- bed	Fail	-	-	-
Block A AH6- bed	Fail	Fail	-	-
Block A2-bed	Fail	Fail	-	-
Block A3-Bed	Fail	-	-	-
Block A3-2B4P KLD	Fail	N/A	-	-
Block A3-Bed	Fail	Fail	-	-
Block A AH6- BED	Fail	Fail	-	-
Block A AH5- bed	Fail	Fail	-	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	Fail	Fail	-	-
Block A AH3- BED	Fail	Fail	-	-
Block A AH4-BED	Fail	Fail	-	-
Block A AH1- BED	Fail	Fail	-	-
Block A4-bed	Fail	Fail	-	-
Block A4-Study	Fail	Fail	-	-
Block B7- bed	Fail	Fail	-	-
Block B7- Sbed	Fail	Fail	-	-
Block B6- bath	Fail	Fail	-	-
Block B6- bed	Fail	-	-	-
Block B6- bed	Fail	Fail	-	-
BLOCK B MH4- 4B8P KLD	Fail	N/A	-	-
Block B MH3- 4B8P KLD	Fail	N/A	-	-
Block B MH2- 4B8P KLD	Fail	N/A	-	-
Block B MH1- 4B8P KLD	Fail	N/A	-	-
Block B2- bed	Fail	Fail	-	-
Block B MH2- Bed	Fail	Fail	-	-
Block B MH3-bed	Fail	Fail	-	-
BLOCK B MH4- Study	Fail	Fail	-	-
BLOCK B MH4- bed	Fail	-	-	-
Block B MH1-bed	Fail	Fail	-	-
Block B MH2-bed	Fail	Fail	-	-
Block B5- sbed	Fail	Fail	-	-
Block B5- 2B3P KLD	Fail	N/A	-	-
Block C8- 3B5P KLD	Fail	N/A	-	-
Block B4-Bed	Fail	Fail	-	-
Block A1- bed	Fail	Fail	-	-
Block A AH1- 4B7P KLD	Fail	N/A	-	-
Block B MH1-bed	Fail	Fail	-	-
BLOCK B MH1- Study	Fail	Fail	-	-
Block B2-bed	Fail	-	-	-
BLOCK B MH4- bed	Fail	Fail	-	-
BLOCK B MH3- Study	Fail	Fail	-	-
Block B MH3-Bed	Fail	Fail	-	-
BLOCK B MH2- Study	Fail	Fail	-	-
CORRIDOR- BLOCK C	-	-	-	Yes
Block C7- Bed	Fail	Fail	-	-
Block C7- Bed	Fail	Fail	-	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
Block C1- 2B3P KLD	1989	1952	98.1	Fail
Block C1- bed	3672	3254	88.6	Fail
Block C2- bed	3672	3364	91.6	Fail
Block C3- 1B2P KLD	1989	1692	85.1	Fail
Block A AH1- Study	3672	3669	99.9	Fail
Block A AH2- Study	3672	3672	100.0	Fail
Block A AH3- Study	3672	3672	100.0	Fail
Block A AH4- Study	3672	3672	100.0	Fail
Block A AH5- Study	3672	3672	100.0	Fail
Block A AH6- Study	3672	3672	100.0	Fail
Block C4 - Bed	3672	3277	89.2	Fail
Block C5-bed	3672	3503	95.4	Fail
Block C6- 1B2P KLD	1989	1887	94.9	Fail
Block C4 - 2B3P KLD	1989	1986	99.8	Fail
Block B2- bed	3672	3672	100.0	Fail
Block B2- 2B4P KLD	1989	1989	100.0	Fail
Block B3-Sbed	3672	3672	100.0	Fail
Block B2-2B4P KLD	1989	1989	100.0	Fail
Block B MH1- Bed	3672	3672	100.0	Fail
Block B MH2- Bed	3672	3672	100.0	Fail
Block B MH3-bed	3672	3672	100.0	Fail
BLOCK B MH4- bed	3672	3601	98.1	Fail
Block B3-BED	3672	3589	97.7	Fail
Block C7- 1B2P KLD	1989	1975	99.3	Fail
Block C8- Sbed	3672	3672	100.0	Fail
Block C8- bed	3672	3671	100.0	Fail
Block C8- bed	3672	3672	100.0	Fail
Block B4- 2B4P KLD	1989	1989	100.0	Fail
Block B4- bed	3672	3672	100.0	Fail
Block B6- 2B4P KLD	1989	1989	100.0	Fail
Block B7- 2B3P KLD	1989	1975	99.3	Fail
Block A4-3B5P KLD	1989	1944	97.7	Fail
Block A4-bed	3672	3598	98.0	Fail
Block B3-2B3P KLD	1989	1949	98.0	Fail
Block C3- bed	3672	3107	84.6	Fail
Block C1- Sbed	3672	3479	94.7	Fail
Block C2- 1B2P KLD	1989	1833	92.2	Fail

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Room name	Occupied hours	No. hours $\Delta T \geq 1^{\circ}\text{K}$	% Occupied hours $\Delta T \geq 1^{\circ}\text{K}$	Criterion a check
Block C4 - Sbed	3672	3660	99.7	Fail
Block C6- bed	3672	3386	92.2	Fail
Block C5-1B2P KLD	1989	1915	96.3	Fail
Block B5- bed	3672	3672	100.0	Fail
Block A AH2- 4B7P KLD	1989	1946	97.8	Fail
Block A AH3- 4B7P KLD	1989	1981	99.6	Fail
Block A2- 1B2P LD	1989	1705	85.7	Fail
Block A AH6- 4B7P KLD	1989	1976	99.3	Fail
Block A AH4- 4B7P KLD	1989	1971	99.1	Fail
Block A AH5- 4B7P KLD	1989	1983	99.7	Fail
Block A1- bed	3672	3475	94.6	Fail
Block A2- Kitchen	1989	1852	93.1	Fail
Block A1- 2B4P KLD	1989	1894	95.2	Fail
Block A AH1- bed	3672	3582	97.5	Fail
Block A AH1- bed	3672	3625	98.7	Fail
Block A AH2- bed	3672	3672	100.0	Fail
Block A AH2- bed	3672	3672	100.0	Fail
Block A AH3-Bed	3672	3672	100.0	Fail
Block A AH3-Bed	3672	3672	100.0	Fail
Block A AH4- bed	3672	3672	100.0	Fail
Block A AH4- bed	3672	3672	100.0	Fail
Block A AH5- bed	3672	3672	100.0	Fail
Block A AH5-bed	3672	3672	100.0	Fail
Block A AH6- bed	3672	3672	100.0	Fail
Block A AH6- bed	3672	3672	100.0	Fail
Block A2-bed	3672	3471	94.5	Fail
Block A3-Bed	3672	3549	96.7	Fail
Block A3-2B4P KLD	1989	1979	99.5	Fail
Block A3-Bed	3672	3629	98.8	Fail
Block A AH6- BED	3672	3666	99.8	Fail
Block A AH5- bed	3672	3643	99.2	Fail
Block A AH2- BED	3672	3609	98.3	Fail
Block A AH3- BED	3672	3624	98.7	Fail
Block A AH4-BED	3672	3585	97.6	Fail
Block A AH1- BED	3672	3441	93.7	Fail
Block A4-bed	3672	3446	93.8	Fail
Block A4-Study	3672	3518	95.8	Fail
Block B7- bed	3672	3664	99.8	Fail
Block B7- Sbed	3672	3672	100.0	Fail
Block B6- bath	3672	3672	100.0	Fail
Block B6- bed	3672	3672	100.0	Fail
Block B6- bed	3672	3672	100.0	Fail

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Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
BLOCK B MH4- 4B8P KLD	1989	1469	73.9	Fail
Block B MH3- 4B8P KLD	1989	1728	86.9	Fail
Block B MH2- 4B8P KLD	1989	1762	88.6	Fail
Block B MH1- 4B8P KLD	1989	1948	97.9	Fail
Block B2- bed	3672	3669	99.9	Fail
Block B MH2- Bed	3672	3672	100.0	Fail
Block B MH3-bed	3672	3672	100.0	Fail
BLOCK B MH4- Study	3672	3571	97.2	Fail
BLOCK B MH4- bed	3672	3610	98.3	Fail
Block B MH1-bed	3672	3672	100.0	Fail
Block B MH2-bed	3672	3671	100.0	Fail
Block B5- sbed	3672	3654	99.5	Fail
Block B5- 2B3P KLD	1989	1985	99.8	Fail
Block C8- 3B5P KLD	1989	1985	99.8	Fail
Block B4-Bed	3672	3672	100.0	Fail
Block A1- bed	3672	3421	93.2	Fail
Block A AH1- 4B7P KLD	1989	1766	88.8	Fail
Block B MH1-bed	3672	3672	100.0	Fail
BLOCK B MH1- Study	3672	3672	100.0	Fail
Block B2-bed	3672	3672	100.0	Fail
BLOCK B MH4- bed	3672	3627	98.8	Fail
BLOCK B MH3- Study	3672	3654	99.5	Fail
Block B MH3-Bed	3672	3672	100.0	Fail
BLOCK B MH2- Study	3672	3644	99.2	Fail
Block C7- Bed	3672	3603	98.1	Fail
Block B2-bed	3672	3672	100.0	Fail

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Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C1- 2B3P KLD	N/A	N/A	N/A	N/A
Block C1- bed	381	1289	1670	Fail
Block C2- bed	385	1325	1710	Fail
Block C3- 1B2P KLD	N/A	N/A	N/A	N/A
Block A AH1- Study	465	1445	1910	Fail
Block A AH2- Study	551	1715	2266	Fail
Block A AH3- Study	560	1745	2305	Fail
Block A AH4- Study	504	1646	2150	Fail
Block A AH5- Study	575	1760	2335	Fail
Block A AH6- Study	561	1721	2282	Fail
Block C4 - Bed	361	1226	1587	Fail
Block C5-bed	383	1305	1688	Fail
Block C6- 1B2P KLD	N/A	N/A	N/A	N/A
Block C4 - 2B3P KLD	N/A	N/A	N/A	N/A
Block B2- bed	440	1457	1897	Fail
Block B2- 2B4P KLD	N/A	N/A	N/A	N/A
Block B3-Sbed	476	1634	2110	Fail
Block B2-2B4P KLD	N/A	N/A	N/A	N/A
Block B MH1- Bed	483	1601	2084	Fail
Block B MH2- Bed	495	1688	2183	Fail
Block B MH3-bed	489	1631	2120	Fail
BLOCK B MH4- bed	390	1335	1725	Fail
Block B3-BED	395	1360	1755	Fail
Block C7- 1B2P KLD	N/A	N/A	N/A	N/A
Block C8- Sbed	479	1545	2024	Fail
Block C8- bed	480	1609	2089	Fail
Block B4- 2B4P KLD	N/A	N/A	N/A	N/A
Block B4- bed	605	1957	2562	Fail
Block B6- 2B4P KLD	N/A	N/A	N/A	N/A
Block B7- 2B3P KLD	N/A	N/A	N/A	N/A
Block A4-3B5P KLD	N/A	N/A	N/A	N/A
Block A4-bed	370	1270	1640	Fail
Block B3-2B3P KLD	N/A	N/A	N/A	N/A
Block C3- bed	344	1184	1528	Fail
Block C1- Sbed	406	1392	1798	Fail
Block C2- 1B2P KLD	N/A	N/A	N/A	N/A
Block C4 - Sbed	459	1448	1907	Fail

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Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C6- bed	358	1237	1595	Fail
Block C5-1B2P KLD	N/A	N/A	N/A	N/A
Block B5- bed	466	1555	2021	Fail
Block A AH2- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH3- 4B7P KLD	N/A	N/A	N/A	N/A
Block A2- 1B2P LD	N/A	N/A	N/A	N/A
Block A AH6- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH4- 4B7P KLD	N/A	N/A	N/A	N/A
Block A AH5- 4B7P KLD	N/A	N/A	N/A	N/A
Block A1- bed	398	1356	1754	Fail
Block A2- Kitchen	N/A	N/A	N/A	N/A
Block A1- 2B4P KLD	N/A	N/A	N/A	N/A
Block A AH1- bed	409	1385	1794	Fail
Block A AH2- bed	569	1892	2461	Fail
Block A AH3-Bed	545	1772	2317	Fail
Block A AH4- bed	503	1712	2215	Fail
Block A AH5- bed	409	1375	1784	Fail
Block A AH5-bed	612	1973	2585	Fail
Block A AH6- bed	612	1975	2587	Fail
Block A2-bed	385	1304	1689	Fail
Block A3-Bed	403	1381	1784	Fail
Block A3-2B4P KLD	N/A	N/A	N/A	N/A
Block A AH6- BED	439	1399	1838	Fail
Block A AH2- BED	397	1355	1752	Fail
Block A AH3- BED	399	1359	1758	Fail
Block A AH4-BED	392	1331	1723	Fail
Block A AH1- BED	369	1262	1631	Fail
Block A4-Study	376	1284	1660	Fail
Block B7- bed	437	1402	1839	Fail
Block B7- Sbed	521	1668	2189	Fail
Block B6- bath	730	2555	3285	Fail
Block B6- bed	641	2164	2805	Fail
BLOCK B MH4- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH3- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH2- 4B8P KLD	N/A	N/A	N/A	N/A
Block B MH1- 4B8P KLD	N/A	N/A	N/A	N/A
BLOCK B MH4- Study	386	1312	1698	Fail
Block B MH1-bed	475	1560	2035	Fail
Block B MH2-bed	452	1490	1942	Fail
Block B5- sbed	418	1368	1786	Fail
Block B5- 2B3P KLD	N/A	N/A	N/A	N/A

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Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Block C8- 3B5P KLD	N/A	N/A	N/A	N/A
Block B4-Bed	544	1853	2397	Fail
Block A AH1- 4B7P KLD	N/A	N/A	N/A	N/A
Block B MH1-bed	495	1706	2201	Fail
BLOCK B MH1- Study	456	1478	1934	Fail
Block B2-bed	493	1639	2132	Fail
BLOCK B MH3- Study	432	1404	1836	Fail
Block B MH3-Bed	467	1529	1996	Fail
BLOCK B MH2- Study	422	1396	1818	Fail
Block C7- Bed	383	1323	1706	Fail

Mechanically ventilated rooms

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

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

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	2533	28.9	Yes
CORRIDOR-BLOCK B	3663	41.8	Yes
CORRIDOR- BLOCK C	2977	34.0	Yes
CORRIDOR- BLOCK C	3594	41.0	Yes

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH6- Study	7.33	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	14.04	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C3- bed	17.42	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A3-Bed	17.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bath	2.64	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	16.23	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH1-bed	15.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen	Living Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	14.14	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0
Block C1- bed	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0
Block C3- 1B2P KLD	0.15	0
Block A AH1- Study	0.15	0
Block A AH2- Study	0.15	0
Block A AH3- Study	0.15	0
Block A AH4- Study	0.15	0
Block A AH5- Study	0.15	0
Block A AH6- Study	0.15	0
Block C4 - Bed	0.15	0
Block C5-bed	0.15	0
Block C6- 1B2P KLD	0.15	0
Block C4 - 2B3P KLD	0.15	0
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	0
Block B2- 2B4P KLD	0.15	0
Block B3-Sbed	0.15	0
Block B2-2B4P KLD	0.15	0
Block B MH1- Bed	0.15	0
Block B MH2- Bed	0.15	0
Block B MH3-bed	0.15	0
BLOCK B MH4- bed	0.15	0
Block B3-BED	0.15	0
Block C7- 1B2P KLD	0.15	0
Block C8- Sbed	0.15	0
Block C8- bed	0.15	0
Block C8- bed	0.15	0
Block B4- 2B4P KLD	0.15	0
Block B4- bed	0.15	0
Block B6- 2B4P KLD	0.15	0
Block B7- 2B3P KLD	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0
Block A4-bed	0.15	0
Block B3-2B3P KLD	0.15	0
Block C3- bed	0.15	0
Block C1- Sbed	0.15	0
Block C2- 1B2P KLD	0.15	0

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0
Block C6- bed	0.15	0
Block C5-1B2P KLD	0.15	0
Block B5- bed	0.15	0
Block A AH2- 4B7P KLD	0.15	0
Block A AH3- 4B7P KLD	0.15	0
Block A2- 1B2P LD	0.15	0
Block A AH6- 4B7P KLD	0.15	0
Block A AH4- 4B7P KLD	0.15	0
Block A AH5- 4B7P KLD	0.15	0
Block A1- bed	0.15	0
Block A2- Kitchen	0.15	0
Block A1- 2B4P KLD	0.15	0
Block A AH1- bed	0.15	0
Block A AH1- bed	0.15	0
Block A AH2- bed	0.15	0
Block A AH2- bed	0.15	0
Block A AH3-Bed	0.15	0
Block A AH3-Bed	0.15	0
Block A AH4- bed	0.15	0
Block A AH4- bed	0.15	0
Block A AH5- bed	0.15	0
Block A AH5-bed	0.15	0
Block A AH6- bed	0.15	0
Block A AH6- bed	0.15	0
Block A2-bed	0.15	0
Block A3-Bed	0.15	0
Block A3-2B4P KLD	0.15	0
Block A3-Bed	0.15	0
Block A AH6- BED	0.15	0
Block A AH5- bed	0.15	0
Block A AH2- BED	0.15	0
Block A AH3- BED	0.15	0
Block A AH4-BED	0.15	0
Block A AH1- BED	0.15	0
Block A4-bed	0.15	0
Block A4-Study	0.15	0
Block B7- bed	0.15	0
Block B7- Sbed	0.15	0
Block B6- bath	0.15	0
Block B6- bed	0.15	0
Block B6- bed	0.15	0

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0
Block B MH3- 4B8P KLD	0.15	0
Block B MH2- 4B8P KLD	0.15	0
Block B MH1- 4B8P KLD	0.15	0
Block B2- bed	0.15	0
Block B MH2- Bed	0.15	0
Block B MH3-bed	0.15	0
BLOCK B MH4- Study	0.15	0
BLOCK B MH4- bed	0.15	0
Block B MH1-bed	0.15	0
Block B MH2-bed	0.15	0
Block B5- sbed	0.15	0
Block B5- 2B3P KLD	0.15	0
Block C8- 3B5P KLD	0.15	0
Block B4-Bed	0.15	0
Block A1- bed	0.15	0
Block A AH1- 4B7P KLD	0.15	0
Block B MH1-bed	0.15	0
BLOCK B MH1- Study	0.15	0
Block B2-bed	0.15	0
BLOCK B MH4- bed	0.15	0
BLOCK B MH3- Study	0.15	0
Block B MH3-Bed	0.15	0
BLOCK B MH2- Study	0.15	0
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	0
Block B2-bed	0.15	0

APPENDIX E

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 17:43:36
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY1_2020High50.epw	
Results file: DSY1_2020H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds, MVHR with Extract Fan	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	-	-	Pass	-
Block C1- bed	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C2- bed	-	-	Pass	-
Block C3- 1B2P KLD	-	-	Pass	-
Block A AH1- Study	-	-	Pass	-
Block A AH2- Study	-	-	Pass	-
Block A AH3- Study	-	-	Pass	-
Block A AH4- Study	-	-	Pass	-
Block A AH5- Study	-	-	Pass	-
Block A AH6- Study	-	-	Pass	-
Block C4 - Bed	-	-	Pass	-
Block C5-bed	-	-	Pass	-
Block C6- 1B2P KLD	-	-	Pass	-
Block C4 - 2B3P KLD	-	-	Pass	-
CORRIDOR-BLOCK B	-	-	-	No
Block B2- bed	-	-	Pass	-
Block B2- 2B4P KLD	-	-	Pass	-
Block B3-Sbed	-	-	Pass	-
Block B2-2B4P KLD	-	-	Pass	-
Block B MH1- Bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B3-BED	-	-	Pass	-
Block C7- 1B2P KLD	-	-	Pass	-
Block C8- Sbed	-	-	Pass	-
Block C8- bed	-	-	Pass	-
Block C8- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	-	-	Pass	-
Block B4- bed	-	-	Pass	-
Block B6- 2B4P KLD	-	-	Pass	-
Block B7- 2B3P KLD	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block A4-3B5P KLD	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block B3-2B3P KLD	-	-	Pass	-
Block C3- bed	-	-	Pass	-
Block C1- Sbed	-	-	Pass	-
Block C2- 1B2P KLD	-	-	Pass	-
Block C4 - Sbed	-	-	Pass	-
Block C6- bed	-	-	Pass	-
Block C5-1B2P KLD	-	-	Pass	-
Block B5- bed	-	-	Pass	-
Block A AH2- 4B7P KLD	-	-	Pass	-
Block A AH3- 4B7P KLD	-	-	Pass	-
Block A2- 1B2P LD	-	-	Pass	-
Block A AH6- 4B7P KLD	-	-	Pass	-
Block A AH4- 4B7P KLD	-	-	Pass	-
Block A AH5- 4B7P KLD	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A2- Kitchen	-	-	Pass	-
Block A1- 2B4P KLD	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-
Block A AH5-bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A2-bed	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A3-2B4P KLD	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A AH6- BED	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	-	-	Pass	-
Block A AH3- BED	-	-	Pass	-
Block A AH4-BED	-	-	Pass	-
Block A AH1- BED	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block A4-Study	-	-	Pass	-
Block B7- bed	-	-	Pass	-
Block B7- Sbed	-	-	Pass	-
Block B6- bath	-	-	Pass	-
Block B6- bed	-	-	Pass	-
Block B6- bed	-	-	Pass	-
BLOCK B MH4- 4B8P KLD	-	-	Pass	-
Block B MH3- 4B8P KLD	-	-	Pass	-
Block B MH2- 4B8P KLD	-	-	Pass	-
Block B MH1- 4B8P KLD	-	-	Pass	-
Block B2- bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- Study	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
Block B MH2-bed	-	-	Pass	-
Block B5- sbed	-	-	Pass	-
Block B5- 2B3P KLD	-	-	Pass	-
Block C8- 3B5P KLD	-	-	Pass	-
Block B4-Bed	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A AH1- 4B7P KLD	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
BLOCK B MH1- Study	-	-	Pass	-
Block B2-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
BLOCK B MH3- Study	-	-	Pass	-
Block B MH3-Bed	-	-	Pass	-
BLOCK B MH2- Study	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C7- Bed	-	-	Pass	-
Block B2-bed	-	-	Pass	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
No nat vent rooms	N/A	N/A	N/A	N/A

Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
No nat vent rooms	N/A	N/A	N/A	N/A

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Mechanically ventilated rooms

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

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C1- 2B3P KLD	0	0.0	Pass
Block C1- bed	0	0.0	Pass
Block C2- bed	0	0.0	Pass
Block C3- 1B2P KLD	0	0.0	Pass
Block A AH1- Study	0	0.0	Pass
Block A AH2- Study	0	0.0	Pass
Block A AH3- Study	0	0.0	Pass
Block A AH4- Study	0	0.0	Pass
Block A AH5- Study	0	0.0	Pass
Block A AH6- Study	0	0.0	Pass
Block C4 - Bed	0	0.0	Pass
Block C5-bed	0	0.0	Pass
Block C6- 1B2P KLD	0	0.0	Pass
Block C4 - 2B3P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B2- 2B4P KLD	0	0.0	Pass
Block B3-Sbed	0	0.0	Pass
Block B2-2B4P KLD	0	0.0	Pass
Block B MH1- Bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B3-BED	0	0.0	Pass
Block C7- 1B2P KLD	0	0.0	Pass
Block C8- Sbed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block B4- 2B4P KLD	0	0.0	Pass
Block B4- bed	0	0.0	Pass
Block B6- 2B4P KLD	0	0.0	Pass
Block B7- 2B3P KLD	0	0.0	Pass
Block A4-3B5P KLD	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block B3-2B3P KLD	0	0.0	Pass
Block C3- bed	0	0.0	Pass
Block C1- Sbed	0	0.0	Pass
Block C2- 1B2P KLD	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C4 - Sbed	0	0.0	Pass
Block C6- bed	0	0.0	Pass
Block C5-1B2P KLD	0	0.0	Pass
Block B5- bed	0	0.0	Pass
Block A AH2- 4B7P KLD	0	0.0	Pass
Block A AH3- 4B7P KLD	0	0.0	Pass
Block A2- 1B2P LD	0	0.0	Pass
Block A AH6- 4B7P KLD	0	0.0	Pass
Block A AH4- 4B7P KLD	0	0.0	Pass
Block A AH5- 4B7P KLD	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A2- Kitchen	0	0.0	Pass
Block A1- 2B4P KLD	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH5-bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A2-bed	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A3-2B4P KLD	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A AH6- BED	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH2- BED	0	0.0	Pass
Block A AH3- BED	0	0.0	Pass
Block A AH4-BED	0	0.0	Pass
Block A AH1- BED	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block A4-Study	0	0.0	Pass
Block B7- bed	0	0.0	Pass
Block B7- Sbed	0	0.0	Pass
Block B6- bath	0	0.0	Pass
Block B6- bed	0	0.0	Pass
Block B6- bed	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
BLOCK B MH4- 4B8P KLD	0	0.0	Pass
Block B MH3- 4B8P KLD	0	0.0	Pass
Block B MH2- 4B8P KLD	0	0.0	Pass
Block B MH1- 4B8P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- Study	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
Block B MH2-bed	0	0.0	Pass
Block B5- sbed	0	0.0	Pass
Block B5- 2B3P KLD	0	0.0	Pass
Block C8- 3B5P KLD	0	0.0	Pass
Block B4-Bed	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A AH1- 4B7P KLD	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
BLOCK B MH1- Study	0	0.0	Pass
Block B2-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
BLOCK B MH3- Study	0	0.0	Pass
Block B MH3-Bed	0	0.0	Pass
BLOCK B MH2- Study	0	0.0	Pass
Block C7- Bed	0	0.0	Pass
Block B2-bed	0	0.0	Pass

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR-BLOCK B	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH6- Study	7.33	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH3-bed	14.04	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C3- bed	17.42	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living- with summer bypass	Living Occupancy	Living Occupancy	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen with Summer bypass	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A3-Bed	17.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B6- bath	2.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bed	16.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	15.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1-bed	14.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0.81
Block C1- bed	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0.68
Block C3- 1B2P KLD	0.15	0.5
Block A AH1- Study	0.15	1.39
Block A AH2- Study	0.15	1.55
Block A AH3- Study	0.15	1.49
Block A AH4- Study	0.15	1.33
Block A AH5- Study	0.15	1.44
Block A AH6- Study	0.15	1.59
Block C4 - Bed	0.15	0.54
Block C5-bed	0.15	0.54
Block C6- 1B2P KLD	0.15	0.4
Block C4 - 2B3P KLD	0.15	0.73
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	4.94
Block B2- 2B4P KLD	0.15	0.84
Block B3-Sbed	0.15	1.01
Block B2-2B4P KLD	0.15	0.77
Block B MH1- Bed	0.15	0.89
Block B MH2- Bed	0.15	0.93
Block B MH3-bed	0.15	0.92
BLOCK B MH4- bed	0.15	0.89
Block B3-BED	0.15	3.64
Block C7- 1B2P KLD	0.15	0.57
Block C8- Sbed	0.15	6.39
Block C8- bed	0.15	4.12
Block C8- bed	0.15	1.0
Block B4- 2B4P KLD	0.15	0.76
Block B4- bed	0.15	1.06
Block B6- 2B4P KLD	0.15	0.77
Block B7- 2B3P KLD	0.15	0.79
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0.59
Block A4-bed	0.15	4.77
Block B3-2B3P KLD	0.15	0.79
Block C3- bed	0.15	0.63
Block C1- Sbed	0.15	1.02
Block C2- 1B2P KLD	0.15	0.46

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0.93
Block C6- bed	0.15	0.51
Block C5-1B2P KLD	0.15	0.36
Block B5- bed	0.15	0.84
Block A AH2- 4B7P KLD	0.15	0.52
Block A AH3- 4B7P KLD	0.15	0.52
Block A2- 1B2P LD	0.15	0.99
Block A AH6- 4B7P KLD	0.15	0.54
Block A AH4- 4B7P KLD	0.15	0.49
Block A AH5- 4B7P KLD	0.15	0.51
Block A1- bed	0.15	0.82
Block A2- Kitchen	0.15	1.4
Block A1- 2B4P KLD	0.15	0.62
Block A AH1- bed	0.15	0.69
Block A AH1- bed	0.15	0.69
Block A AH2- bed	0.15	0.77
Block A AH2- bed	0.15	0.87
Block A AH3-Bed	0.15	0.76
Block A AH3-Bed	0.15	0.81
Block A AH4- bed	0.15	0.65
Block A AH4- bed	0.15	0.72
Block A AH5- bed	0.15	0.73
Block A AH5-bed	0.15	0.84
Block A AH6- bed	0.15	0.79
Block A AH6- bed	0.15	0.86
Block A2-bed	0.15	0.58
Block A3-Bed	0.15	0.68
Block A3-2B4P KLD	0.15	0.67
Block A3-Bed	0.15	0.63
Block A AH6- BED	0.15	4.19
Block A AH5- bed	0.15	3.97
Block A AH2- BED	0.15	3.97
Block A AH3- BED	0.15	3.97
Block A AH4-BED	0.15	3.6
Block A AH1- BED	0.15	3.61
Block A4-bed	0.15	0.48
Block A4-Study	0.15	0.87
Block B7- bed	0.15	0.73
Block B7- Sbed	0.15	1.02
Block B6- bath	0.15	4.87
Block B6- bed	0.15	0.79
Block B6- bed	0.15	0.92

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0.6
Block B MH3- 4B8P KLD	0.15	0.65
Block B MH2- 4B8P KLD	0.15	0.65
Block B MH1- 4B8P KLD	0.15	0.61
Block B2- bed	0.15	0.67
Block B MH2- Bed	0.15	0.99
Block B MH3-bed	0.15	0.97
BLOCK B MH4- Study	0.15	0.67
BLOCK B MH4- bed	0.15	0.81
Block B MH1-bed	0.15	0.84
Block B MH2-bed	0.15	0.84
Block B5- sbed	0.15	4.97
Block B5- 2B3P KLD	0.15	0.83
Block C8- 3B5P KLD	0.15	0.65
Block B4-Bed	0.15	0.86
Block A1- bed	0.15	4.12
Block A AH1- 4B7P KLD	0.15	0.47
Block B MH1-bed	0.15	0.91
BLOCK B MH1- Study	0.15	0.66
Block B2-bed	0.15	0.78
BLOCK B MH4- bed	0.15	0.95
BLOCK B MH3- Study	0.15	0.7
Block B MH3-Bed	0.15	0.8
BLOCK B MH2- Study	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	4.28
Block B2-bed	0.15	1.05

APPENDIX F

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 20:06:10
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY2_2020High50.epw	
Results file: DSY2_2020H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds, MVHR with Extract Fan	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	-	-	Pass	-
Block C1- bed	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C2- bed	-	-	Pass	-
Block C3- 1B2P KLD	-	-	Pass	-
Block A AH1- Study	-	-	Pass	-
Block A AH2- Study	-	-	Pass	-
Block A AH3- Study	-	-	Pass	-
Block A AH4- Study	-	-	Pass	-
Block A AH5- Study	-	-	Pass	-
Block A AH6- Study	-	-	Pass	-
Block C4 - Bed	-	-	Pass	-
Block C5-bed	-	-	Pass	-
Block C6- 1B2P KLD	-	-	Pass	-
Block C4 - 2B3P KLD	-	-	Pass	-
CORRIDOR-BLOCK B	-	-	-	No
Block B2- bed	-	-	Pass	-
Block B2- 2B4P KLD	-	-	Pass	-
Block B3-Sbed	-	-	Pass	-
Block B2-2B4P KLD	-	-	Pass	-
Block B MH1- Bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B3-BED	-	-	Pass	-
Block C7- 1B2P KLD	-	-	Pass	-
Block C8- Sbed	-	-	Pass	-
Block C8- bed	-	-	Pass	-
Block C8- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	-	-	Pass	-
Block B4- bed	-	-	Pass	-
Block B6- 2B4P KLD	-	-	Pass	-
Block B7- 2B3P KLD	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block A4-3B5P KLD	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block B3-2B3P KLD	-	-	Pass	-
Block C3- bed	-	-	Pass	-
Block C1- Sbed	-	-	Pass	-
Block C2- 1B2P KLD	-	-	Pass	-
Block C4 - Sbed	-	-	Pass	-
Block C6- bed	-	-	Pass	-
Block C5-1B2P KLD	-	-	Pass	-
Block B5- bed	-	-	Pass	-
Block A AH2- 4B7P KLD	-	-	Pass	-
Block A AH3- 4B7P KLD	-	-	Pass	-
Block A2- 1B2P LD	-	-	Pass	-
Block A AH6- 4B7P KLD	-	-	Pass	-
Block A AH4- 4B7P KLD	-	-	Pass	-
Block A AH5- 4B7P KLD	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A2- Kitchen	-	-	Pass	-
Block A1- 2B4P KLD	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-
Block A AH5-bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A2-bed	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A3-2B4P KLD	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A AH6- BED	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	-	-	Pass	-
Block A AH3- BED	-	-	Pass	-
Block A AH4-BED	-	-	Pass	-
Block A AH1- BED	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block A4-Study	-	-	Pass	-
Block B7- bed	-	-	Pass	-
Block B7- Sbed	-	-	Pass	-
Block B6- bath	-	-	Pass	-
Block B6- bed	-	-	Pass	-
Block B6- bed	-	-	Pass	-
BLOCK B MH4- 4B8P KLD	-	-	Pass	-
Block B MH3- 4B8P KLD	-	-	Pass	-
Block B MH2- 4B8P KLD	-	-	Pass	-
Block B MH1- 4B8P KLD	-	-	Pass	-
Block B2- bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- Study	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
Block B MH2-bed	-	-	Pass	-
Block B5- sbed	-	-	Pass	-
Block B5- 2B3P KLD	-	-	Pass	-
Block C8- 3B5P KLD	-	-	Pass	-
Block B4-Bed	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A AH1- 4B7P KLD	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
BLOCK B MH1- Study	-	-	Pass	-
Block B2-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
BLOCK B MH3- Study	-	-	Pass	-
Block B MH3-Bed	-	-	Pass	-
BLOCK B MH2- Study	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C7- Bed	-	-	Pass	-
Block B2-bed	-	-	Pass	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
No nat vent rooms	N/A	N/A	N/A	N/A

Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
No nat vent rooms	N/A	N/A	N/A	N/A

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Mechanically ventilated rooms

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

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C1- 2B3P KLD	0	0.0	Pass
Block C1- bed	0	0.0	Pass
Block C2- bed	0	0.0	Pass
Block C3- 1B2P KLD	0	0.0	Pass
Block A AH1- Study	0	0.0	Pass
Block A AH2- Study	0	0.0	Pass
Block A AH3- Study	0	0.0	Pass
Block A AH4- Study	0	0.0	Pass
Block A AH5- Study	0	0.0	Pass
Block A AH6- Study	0	0.0	Pass
Block C4 - Bed	0	0.0	Pass
Block C5-bed	0	0.0	Pass
Block C6- 1B2P KLD	0	0.0	Pass
Block C4 - 2B3P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B2- 2B4P KLD	0	0.0	Pass
Block B3-Sbed	0	0.0	Pass
Block B2-2B4P KLD	0	0.0	Pass
Block B MH1- Bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B3-BED	0	0.0	Pass
Block C7- 1B2P KLD	0	0.0	Pass
Block C8- Sbed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block B4- 2B4P KLD	0	0.0	Pass
Block B4- bed	0	0.0	Pass
Block B6- 2B4P KLD	0	0.0	Pass
Block B7- 2B3P KLD	0	0.0	Pass
Block A4-3B5P KLD	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block B3-2B3P KLD	0	0.0	Pass
Block C3- bed	0	0.0	Pass
Block C1- Sbed	0	0.0	Pass
Block C2- 1B2P KLD	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C4 - Sbed	0	0.0	Pass
Block C6- bed	0	0.0	Pass
Block C5-1B2P KLD	0	0.0	Pass
Block B5- bed	0	0.0	Pass
Block A AH2- 4B7P KLD	0	0.0	Pass
Block A AH3- 4B7P KLD	0	0.0	Pass
Block A2- 1B2P LD	0	0.0	Pass
Block A AH6- 4B7P KLD	0	0.0	Pass
Block A AH4- 4B7P KLD	0	0.0	Pass
Block A AH5- 4B7P KLD	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A2- Kitchen	0	0.0	Pass
Block A1- 2B4P KLD	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH5-bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A2-bed	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A3-2B4P KLD	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A AH6- BED	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH2- BED	0	0.0	Pass
Block A AH3- BED	0	0.0	Pass
Block A AH4-BED	0	0.0	Pass
Block A AH1- BED	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block A4-Study	0	0.0	Pass
Block B7- bed	0	0.0	Pass
Block B7- Sbed	0	0.0	Pass
Block B6- bath	0	0.0	Pass
Block B6- bed	0	0.0	Pass
Block B6- bed	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
BLOCK B MH4- 4B8P KLD	0	0.0	Pass
Block B MH3- 4B8P KLD	0	0.0	Pass
Block B MH2- 4B8P KLD	0	0.0	Pass
Block B MH1- 4B8P KLD	3	0.1	Pass
Block B2- bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- Study	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
Block B MH2-bed	0	0.0	Pass
Block B5- sbed	0	0.0	Pass
Block B5- 2B3P KLD	0	0.0	Pass
Block C8- 3B5P KLD	0	0.0	Pass
Block B4-Bed	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A AH1- 4B7P KLD	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
BLOCK B MH1- Study	0	0.0	Pass
Block B2-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
BLOCK B MH3- Study	0	0.0	Pass
Block B MH3-Bed	0	0.0	Pass
BLOCK B MH2- Study	0	0.0	Pass
Block C7- Bed	0	0.0	Pass
Block B2-bed	0	0.0	Pass

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR-BLOCK B	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH6- Study	7.33	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH3-bed	14.04	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C3- bed	17.42	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living- with summer bypass	Living Occupancy	Living Occupancy	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen with Summer bypass	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A3-Bed	17.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B6- bath	2.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bed	16.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	15.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1-bed	14.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0.81
Block C1- bed	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0.68
Block C3- 1B2P KLD	0.15	0.5
Block A AH1- Study	0.15	1.39
Block A AH2- Study	0.15	1.55
Block A AH3- Study	0.15	1.49
Block A AH4- Study	0.15	1.33
Block A AH5- Study	0.15	1.44
Block A AH6- Study	0.15	1.59
Block C4 - Bed	0.15	0.54
Block C5-bed	0.15	0.54
Block C6- 1B2P KLD	0.15	0.4
Block C4 - 2B3P KLD	0.15	0.73
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	4.94
Block B2- 2B4P KLD	0.15	0.84
Block B3-Sbed	0.15	1.01
Block B2-2B4P KLD	0.15	0.77
Block B MH1- Bed	0.15	0.89
Block B MH2- Bed	0.15	0.93
Block B MH3-bed	0.15	0.92
BLOCK B MH4- bed	0.15	0.89
Block B3-BED	0.15	3.64
Block C7- 1B2P KLD	0.15	0.57
Block C8- Sbed	0.15	6.39
Block C8- bed	0.15	4.12
Block C8- bed	0.15	1.0
Block B4- 2B4P KLD	0.15	0.76
Block B4- bed	0.15	1.06
Block B6- 2B4P KLD	0.15	0.77
Block B7- 2B3P KLD	0.15	0.79
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0.59
Block A4-bed	0.15	4.77
Block B3-2B3P KLD	0.15	0.79
Block C3- bed	0.15	0.63
Block C1- Sbed	0.15	1.02
Block C2- 1B2P KLD	0.15	0.46

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0.93
Block C6- bed	0.15	0.51
Block C5-1B2P KLD	0.15	0.36
Block B5- bed	0.15	0.84
Block A AH2- 4B7P KLD	0.15	0.52
Block A AH3- 4B7P KLD	0.15	0.52
Block A2- 1B2P LD	0.15	0.99
Block A AH6- 4B7P KLD	0.15	0.54
Block A AH4- 4B7P KLD	0.15	0.49
Block A AH5- 4B7P KLD	0.15	0.51
Block A1- bed	0.15	0.82
Block A2- Kitchen	0.15	1.4
Block A1- 2B4P KLD	0.15	0.62
Block A AH1- bed	0.15	0.69
Block A AH1- bed	0.15	0.69
Block A AH2- bed	0.15	0.77
Block A AH2- bed	0.15	0.87
Block A AH3-Bed	0.15	0.76
Block A AH3-Bed	0.15	0.81
Block A AH4- bed	0.15	0.65
Block A AH4- bed	0.15	0.72
Block A AH5- bed	0.15	0.73
Block A AH5-bed	0.15	0.84
Block A AH6- bed	0.15	0.79
Block A AH6- bed	0.15	0.86
Block A2-bed	0.15	0.58
Block A3-Bed	0.15	0.68
Block A3-2B4P KLD	0.15	0.67
Block A3-Bed	0.15	0.63
Block A AH6- BED	0.15	4.19
Block A AH5- bed	0.15	3.97
Block A AH2- BED	0.15	3.97
Block A AH3- BED	0.15	3.97
Block A AH4-BED	0.15	3.6
Block A AH1- BED	0.15	3.61
Block A4-bed	0.15	0.48
Block A4-Study	0.15	0.87
Block B7- bed	0.15	0.73
Block B7- Sbed	0.15	1.02
Block B6- bath	0.15	4.87
Block B6- bed	0.15	0.79
Block B6- bed	0.15	0.92

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0.6
Block B MH3- 4B8P KLD	0.15	0.65
Block B MH2- 4B8P KLD	0.15	0.65
Block B MH1- 4B8P KLD	0.15	0.61
Block B2- bed	0.15	0.67
Block B MH2- Bed	0.15	0.99
Block B MH3-bed	0.15	0.97
BLOCK B MH4- Study	0.15	0.67
BLOCK B MH4- bed	0.15	0.81
Block B MH1-bed	0.15	0.84
Block B MH2-bed	0.15	0.84
Block B5- sbed	0.15	4.97
Block B5- 2B3P KLD	0.15	0.83
Block C8- 3B5P KLD	0.15	0.65
Block B4-Bed	0.15	0.86
Block A1- bed	0.15	4.12
Block A AH1- 4B7P KLD	0.15	0.47
Block B MH1-bed	0.15	0.91
BLOCK B MH1- Study	0.15	0.66
Block B2-bed	0.15	0.78
BLOCK B MH4- bed	0.15	0.95
BLOCK B MH3- Study	0.15	0.7
Block B MH3-Bed	0.15	0.8
BLOCK B MH2- Study	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	4.28
Block B2-bed	0.15	1.05

APPENDIX G

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 17:45:17
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY3_2020High50.epw	
Results file: DSY3_2020H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds, MVHR with Extract Fan	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	-	-	Pass	-
Block C1- bed	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C2- bed	-	-	Pass	-
Block C3- 1B2P KLD	-	-	Pass	-
Block A AH1- Study	-	-	Pass	-
Block A AH2- Study	-	-	Pass	-
Block A AH3- Study	-	-	Pass	-
Block A AH4- Study	-	-	Pass	-
Block A AH5- Study	-	-	Pass	-
Block A AH6- Study	-	-	Pass	-
Block C4 - Bed	-	-	Pass	-
Block C5-bed	-	-	Pass	-
Block C6- 1B2P KLD	-	-	Pass	-
Block C4 - 2B3P KLD	-	-	Pass	-
CORRIDOR-BLOCK B	-	-	-	No
Block B2- bed	-	-	Pass	-
Block B2- 2B4P KLD	-	-	Pass	-
Block B3-Sbed	-	-	Pass	-
Block B2-2B4P KLD	-	-	Pass	-
Block B MH1- Bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B3-BED	-	-	Pass	-
Block C7- 1B2P KLD	-	-	Pass	-
Block C8- Sbed	-	-	Pass	-
Block C8- bed	-	-	Pass	-
Block C8- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	-	-	Pass	-
Block B4- bed	-	-	Pass	-
Block B6- 2B4P KLD	-	-	Pass	-
Block B7- 2B3P KLD	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block A4-3B5P KLD	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block B3-2B3P KLD	-	-	Pass	-
Block C3- bed	-	-	Pass	-
Block C1- Sbed	-	-	Pass	-
Block C2- 1B2P KLD	-	-	Pass	-
Block C4 - Sbed	-	-	Pass	-
Block C6- bed	-	-	Pass	-
Block C5-1B2P KLD	-	-	Pass	-
Block B5- bed	-	-	Pass	-
Block A AH2- 4B7P KLD	-	-	Pass	-
Block A AH3- 4B7P KLD	-	-	Pass	-
Block A2- 1B2P LD	-	-	Pass	-
Block A AH6- 4B7P KLD	-	-	Pass	-
Block A AH4- 4B7P KLD	-	-	Pass	-
Block A AH5- 4B7P KLD	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A2- Kitchen	-	-	Pass	-
Block A1- 2B4P KLD	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-
Block A AH5-bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A2-bed	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A3-2B4P KLD	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A AH6- BED	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	-	-	Pass	-
Block A AH3- BED	-	-	Pass	-
Block A AH4-BED	-	-	Pass	-
Block A AH1- BED	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block A4-Study	-	-	Pass	-
Block B7- bed	-	-	Pass	-
Block B7- Sbed	-	-	Pass	-
Block B6- bath	-	-	Pass	-
Block B6- bed	-	-	Pass	-
Block B6- bed	-	-	Pass	-
BLOCK B MH4- 4B8P KLD	-	-	Pass	-
Block B MH3- 4B8P KLD	-	-	Pass	-
Block B MH2- 4B8P KLD	-	-	Pass	-
Block B MH1- 4B8P KLD	-	-	Pass	-
Block B2- bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- Study	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
Block B MH2-bed	-	-	Pass	-
Block B5- sbed	-	-	Pass	-
Block B5- 2B3P KLD	-	-	Pass	-
Block C8- 3B5P KLD	-	-	Pass	-
Block B4-Bed	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A AH1- 4B7P KLD	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
BLOCK B MH1- Study	-	-	Pass	-
Block B2-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
BLOCK B MH3- Study	-	-	Pass	-
Block B MH3-Bed	-	-	Pass	-
BLOCK B MH2- Study	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C7- Bed	-	-	Pass	-
Block B2-bed	-	-	Pass	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
No nat vent rooms	N/A	N/A	N/A	N/A

Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
No nat vent rooms	N/A	N/A	N/A	N/A

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Mechanically ventilated rooms

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

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C1- 2B3P KLD	0	0.0	Pass
Block C1- bed	0	0.0	Pass
Block C2- bed	0	0.0	Pass
Block C3- 1B2P KLD	0	0.0	Pass
Block A AH1- Study	0	0.0	Pass
Block A AH2- Study	0	0.0	Pass
Block A AH3- Study	0	0.0	Pass
Block A AH4- Study	0	0.0	Pass
Block A AH5- Study	0	0.0	Pass
Block A AH6- Study	0	0.0	Pass
Block C4 - Bed	0	0.0	Pass
Block C5-bed	0	0.0	Pass
Block C6- 1B2P KLD	0	0.0	Pass
Block C4 - 2B3P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B2- 2B4P KLD	0	0.0	Pass
Block B3-Sbed	0	0.0	Pass
Block B2-2B4P KLD	0	0.0	Pass
Block B MH1- Bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B3-BED	0	0.0	Pass
Block C7- 1B2P KLD	0	0.0	Pass
Block C8- Sbed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block B4- 2B4P KLD	0	0.0	Pass
Block B4- bed	0	0.0	Pass
Block B6- 2B4P KLD	0	0.0	Pass
Block B7- 2B3P KLD	0	0.0	Pass
Block A4-3B5P KLD	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block B3-2B3P KLD	0	0.0	Pass
Block C3- bed	0	0.0	Pass
Block C1- Sbed	0	0.0	Pass
Block C2- 1B2P KLD	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C4 - Sbed	0	0.0	Pass
Block C6- bed	0	0.0	Pass
Block C5-1B2P KLD	0	0.0	Pass
Block B5- bed	0	0.0	Pass
Block A AH2- 4B7P KLD	0	0.0	Pass
Block A AH3- 4B7P KLD	0	0.0	Pass
Block A2- 1B2P LD	0	0.0	Pass
Block A AH6- 4B7P KLD	0	0.0	Pass
Block A AH4- 4B7P KLD	0	0.0	Pass
Block A AH5- 4B7P KLD	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A2- Kitchen	0	0.0	Pass
Block A1- 2B4P KLD	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH5-bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A2-bed	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A3-2B4P KLD	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A AH6- BED	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH2- BED	0	0.0	Pass
Block A AH3- BED	0	0.0	Pass
Block A AH4-BED	0	0.0	Pass
Block A AH1- BED	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block A4-Study	0	0.0	Pass
Block B7- bed	0	0.0	Pass
Block B7- Sbed	0	0.0	Pass
Block B6- bath	0	0.0	Pass
Block B6- bed	0	0.0	Pass
Block B6- bed	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
BLOCK B MH4- 4B8P KLD	0	0.0	Pass
Block B MH3- 4B8P KLD	0	0.0	Pass
Block B MH2- 4B8P KLD	0	0.0	Pass
Block B MH1- 4B8P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- Study	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
Block B MH2-bed	0	0.0	Pass
Block B5- sbed	0	0.0	Pass
Block B5- 2B3P KLD	0	0.0	Pass
Block C8- 3B5P KLD	0	0.0	Pass
Block B4-Bed	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A AH1- 4B7P KLD	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
BLOCK B MH1- Study	0	0.0	Pass
Block B2-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
BLOCK B MH3- Study	0	0.0	Pass
Block B MH3-Bed	0	0.0	Pass
BLOCK B MH2- Study	0	0.0	Pass
Block C7- Bed	0	0.0	Pass
Block B2-bed	0	0.0	Pass

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR-BLOCK B	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH6- Study	7.33	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH3-bed	14.04	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C3- bed	17.42	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living- with summer bypass	Living Occupancy	Living Occupancy	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen with Summer bypass	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A3-Bed	17.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B6- bath	2.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bed	16.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	15.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1-bed	14.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0.81
Block C1- bed	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0.68
Block C3- 1B2P KLD	0.15	0.5
Block A AH1- Study	0.15	1.39
Block A AH2- Study	0.15	1.55
Block A AH3- Study	0.15	1.49
Block A AH4- Study	0.15	1.33
Block A AH5- Study	0.15	1.44
Block A AH6- Study	0.15	1.59
Block C4 - Bed	0.15	0.54
Block C5-bed	0.15	0.54
Block C6- 1B2P KLD	0.15	0.4
Block C4 - 2B3P KLD	0.15	0.73
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	4.94
Block B2- 2B4P KLD	0.15	0.84
Block B3-Sbed	0.15	1.01
Block B2-2B4P KLD	0.15	0.77
Block B MH1- Bed	0.15	0.89
Block B MH2- Bed	0.15	0.93
Block B MH3-bed	0.15	0.92
BLOCK B MH4- bed	0.15	0.89
Block B3-BED	0.15	3.64
Block C7- 1B2P KLD	0.15	0.57
Block C8- Sbed	0.15	6.39
Block C8- bed	0.15	4.12
Block C8- bed	0.15	1.0
Block B4- 2B4P KLD	0.15	0.76
Block B4- bed	0.15	1.06
Block B6- 2B4P KLD	0.15	0.77
Block B7- 2B3P KLD	0.15	0.79
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0.59
Block A4-bed	0.15	4.77
Block B3-2B3P KLD	0.15	0.79
Block C3- bed	0.15	0.63
Block C1- Sbed	0.15	1.02
Block C2- 1B2P KLD	0.15	0.46

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0.93
Block C6- bed	0.15	0.51
Block C5-1B2P KLD	0.15	0.36
Block B5- bed	0.15	0.84
Block A AH2- 4B7P KLD	0.15	0.52
Block A AH3- 4B7P KLD	0.15	0.52
Block A2- 1B2P LD	0.15	0.99
Block A AH6- 4B7P KLD	0.15	0.54
Block A AH4- 4B7P KLD	0.15	0.49
Block A AH5- 4B7P KLD	0.15	0.51
Block A1- bed	0.15	0.82
Block A2- Kitchen	0.15	1.4
Block A1- 2B4P KLD	0.15	0.62
Block A AH1- bed	0.15	0.69
Block A AH1- bed	0.15	0.69
Block A AH2- bed	0.15	0.77
Block A AH2- bed	0.15	0.87
Block A AH3-Bed	0.15	0.76
Block A AH3-Bed	0.15	0.81
Block A AH4- bed	0.15	0.65
Block A AH4- bed	0.15	0.72
Block A AH5- bed	0.15	0.73
Block A AH5-bed	0.15	0.84
Block A AH6- bed	0.15	0.79
Block A AH6- bed	0.15	0.86
Block A2-bed	0.15	0.58
Block A3-Bed	0.15	0.68
Block A3-2B4P KLD	0.15	0.67
Block A3-Bed	0.15	0.63
Block A AH6- BED	0.15	4.19
Block A AH5- bed	0.15	3.97
Block A AH2- BED	0.15	3.97
Block A AH3- BED	0.15	3.97
Block A AH4-BED	0.15	3.6
Block A AH1- BED	0.15	3.61
Block A4-bed	0.15	0.48
Block A4-Study	0.15	0.87
Block B7- bed	0.15	0.73
Block B7- Sbed	0.15	1.02
Block B6- bath	0.15	4.87
Block B6- bed	0.15	0.79
Block B6- bed	0.15	0.92

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0.6
Block B MH3- 4B8P KLD	0.15	0.65
Block B MH2- 4B8P KLD	0.15	0.65
Block B MH1- 4B8P KLD	0.15	0.61
Block B2- bed	0.15	0.67
Block B MH2- Bed	0.15	0.99
Block B MH3-bed	0.15	0.97
BLOCK B MH4- Study	0.15	0.67
BLOCK B MH4- bed	0.15	0.81
Block B MH1-bed	0.15	0.84
Block B MH2-bed	0.15	0.84
Block B5- sbed	0.15	4.97
Block B5- 2B3P KLD	0.15	0.83
Block C8- 3B5P KLD	0.15	0.65
Block B4-Bed	0.15	0.86
Block A1- bed	0.15	4.12
Block A AH1- 4B7P KLD	0.15	0.47
Block B MH1-bed	0.15	0.91
BLOCK B MH1- Study	0.15	0.66
Block B2-bed	0.15	0.78
BLOCK B MH4- bed	0.15	0.95
BLOCK B MH3- Study	0.15	0.7
Block B MH3-Bed	0.15	0.8
BLOCK B MH2- Study	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	4.28
Block B2-bed	0.15	1.05

APPENDIX H

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 17:45:56
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY1_2050High50.epw	
Results file: DSY2_2050H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds, MVHR with Extract Fan	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	-	-	Pass	-
Block C1- bed	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C2- bed	-	-	Pass	-
Block C3- 1B2P KLD	-	-	Pass	-
Block A AH1- Study	-	-	Pass	-
Block A AH2- Study	-	-	Pass	-
Block A AH3- Study	-	-	Pass	-
Block A AH4- Study	-	-	Pass	-
Block A AH5- Study	-	-	Pass	-
Block A AH6- Study	-	-	Pass	-
Block C4 - Bed	-	-	Pass	-
Block C5-bed	-	-	Pass	-
Block C6- 1B2P KLD	-	-	Pass	-
Block C4 - 2B3P KLD	-	-	Pass	-
CORRIDOR-BLOCK B	-	-	-	No
Block B2- bed	-	-	Pass	-
Block B2- 2B4P KLD	-	-	Pass	-
Block B3-Sbed	-	-	Pass	-
Block B2-2B4P KLD	-	-	Pass	-
Block B MH1- Bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B3-BED	-	-	Pass	-
Block C7- 1B2P KLD	-	-	Pass	-
Block C8- Sbed	-	-	Pass	-
Block C8- bed	-	-	Pass	-
Block C8- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	-	-	Pass	-
Block B4- bed	-	-	Pass	-
Block B6- 2B4P KLD	-	-	Pass	-
Block B7- 2B3P KLD	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block A4-3B5P KLD	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block B3-2B3P KLD	-	-	Pass	-
Block C3- bed	-	-	Pass	-
Block C1- Sbed	-	-	Pass	-
Block C2- 1B2P KLD	-	-	Pass	-
Block C4 - Sbed	-	-	Pass	-
Block C6- bed	-	-	Pass	-
Block C5-1B2P KLD	-	-	Pass	-
Block B5- bed	-	-	Pass	-
Block A AH2- 4B7P KLD	-	-	Pass	-
Block A AH3- 4B7P KLD	-	-	Pass	-
Block A2- 1B2P LD	-	-	Pass	-
Block A AH6- 4B7P KLD	-	-	Pass	-
Block A AH4- 4B7P KLD	-	-	Pass	-
Block A AH5- 4B7P KLD	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A2- Kitchen	-	-	Pass	-
Block A1- 2B4P KLD	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-
Block A AH5-bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A2-bed	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A3-2B4P KLD	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A AH6- BED	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	-	-	Pass	-
Block A AH3- BED	-	-	Pass	-
Block A AH4-BED	-	-	Pass	-
Block A AH1- BED	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block A4-Study	-	-	Pass	-
Block B7- bed	-	-	Pass	-
Block B7- Sbed	-	-	Pass	-
Block B6- bath	-	-	Pass	-
Block B6- bed	-	-	Pass	-
Block B6- bed	-	-	Pass	-
BLOCK B MH4- 4B8P KLD	-	-	Pass	-
Block B MH3- 4B8P KLD	-	-	Pass	-
Block B MH2- 4B8P KLD	-	-	Pass	-
Block B MH1- 4B8P KLD	-	-	Pass	-
Block B2- bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- Study	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
Block B MH2-bed	-	-	Pass	-
Block B5- sbed	-	-	Pass	-
Block B5- 2B3P KLD	-	-	Pass	-
Block C8- 3B5P KLD	-	-	Pass	-
Block B4-Bed	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A AH1- 4B7P KLD	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
BLOCK B MH1- Study	-	-	Pass	-
Block B2-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
BLOCK B MH3- Study	-	-	Pass	-
Block B MH3-Bed	-	-	Pass	-
BLOCK B MH2- Study	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C7- Bed	-	-	Pass	-
Block B2-bed	-	-	Pass	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
No nat vent rooms	N/A	N/A	N/A	N/A

Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
No nat vent rooms	N/A	N/A	N/A	N/A

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Mechanically ventilated rooms

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

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C1- 2B3P KLD	0	0.0	Pass
Block C1- bed	0	0.0	Pass
Block C2- bed	0	0.0	Pass
Block C3- 1B2P KLD	0	0.0	Pass
Block A AH1- Study	0	0.0	Pass
Block A AH2- Study	0	0.0	Pass
Block A AH3- Study	0	0.0	Pass
Block A AH4- Study	0	0.0	Pass
Block A AH5- Study	0	0.0	Pass
Block A AH6- Study	0	0.0	Pass
Block C4 - Bed	0	0.0	Pass
Block C5-bed	0	0.0	Pass
Block C6- 1B2P KLD	0	0.0	Pass
Block C4 - 2B3P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B2- 2B4P KLD	0	0.0	Pass
Block B3-Sbed	0	0.0	Pass
Block B2-2B4P KLD	0	0.0	Pass
Block B MH1- Bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B3-BED	0	0.0	Pass
Block C7- 1B2P KLD	0	0.0	Pass
Block C8- Sbed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block B4- 2B4P KLD	0	0.0	Pass
Block B4- bed	0	0.0	Pass
Block B6- 2B4P KLD	0	0.0	Pass
Block B7- 2B3P KLD	0	0.0	Pass
Block A4-3B5P KLD	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block B3-2B3P KLD	0	0.0	Pass
Block C3- bed	0	0.0	Pass
Block C1- Sbed	0	0.0	Pass
Block C2- 1B2P KLD	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C4 - Sbed	0	0.0	Pass
Block C6- bed	0	0.0	Pass
Block C5-1B2P KLD	0	0.0	Pass
Block B5- bed	0	0.0	Pass
Block A AH2- 4B7P KLD	0	0.0	Pass
Block A AH3- 4B7P KLD	0	0.0	Pass
Block A2- 1B2P LD	0	0.0	Pass
Block A AH6- 4B7P KLD	0	0.0	Pass
Block A AH4- 4B7P KLD	0	0.0	Pass
Block A AH5- 4B7P KLD	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A2- Kitchen	0	0.0	Pass
Block A1- 2B4P KLD	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH5-bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A2-bed	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A3-2B4P KLD	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A AH6- BED	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH2- BED	0	0.0	Pass
Block A AH3- BED	0	0.0	Pass
Block A AH4-BED	0	0.0	Pass
Block A AH1- BED	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block A4-Study	0	0.0	Pass
Block B7- bed	0	0.0	Pass
Block B7- Sbed	0	0.0	Pass
Block B6- bath	0	0.0	Pass
Block B6- bed	0	0.0	Pass
Block B6- bed	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
BLOCK B MH4- 4B8P KLD	0	0.0	Pass
Block B MH3- 4B8P KLD	0	0.0	Pass
Block B MH2- 4B8P KLD	0	0.0	Pass
Block B MH1- 4B8P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- Study	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
Block B MH2-bed	0	0.0	Pass
Block B5- sbed	0	0.0	Pass
Block B5- 2B3P KLD	0	0.0	Pass
Block C8- 3B5P KLD	0	0.0	Pass
Block B4-Bed	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A AH1- 4B7P KLD	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
BLOCK B MH1- Study	0	0.0	Pass
Block B2-bed	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
BLOCK B MH3- Study	0	0.0	Pass
Block B MH3-Bed	0	0.0	Pass
BLOCK B MH2- Study	0	0.0	Pass
Block C7- Bed	0	0.0	Pass
Block B2-bed	0	0.0	Pass

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR-BLOCK B	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH6- Study	7.33	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH3-bed	14.04	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C3- bed	17.42	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living- with summer bypass	Living Occupancy	Living Occupancy	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen with Summer bypass	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A3-Bed	17.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B6- bath	2.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bed	16.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	15.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1-bed	14.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0.81
Block C1- bed	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0.68
Block C3- 1B2P KLD	0.15	0.5
Block A AH1- Study	0.15	1.39
Block A AH2- Study	0.15	1.55
Block A AH3- Study	0.15	1.49
Block A AH4- Study	0.15	1.33
Block A AH5- Study	0.15	1.44
Block A AH6- Study	0.15	1.59
Block C4 - Bed	0.15	0.54
Block C5-bed	0.15	0.54
Block C6- 1B2P KLD	0.15	0.4
Block C4 - 2B3P KLD	0.15	0.73
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	4.94
Block B2- 2B4P KLD	0.15	0.84
Block B3-Sbed	0.15	1.01
Block B2-2B4P KLD	0.15	0.77
Block B MH1- Bed	0.15	0.89
Block B MH2- Bed	0.15	0.93
Block B MH3-bed	0.15	0.92
BLOCK B MH4- bed	0.15	0.89
Block B3-BED	0.15	3.64
Block C7- 1B2P KLD	0.15	0.57
Block C8- Sbed	0.15	6.39
Block C8- bed	0.15	4.12
Block C8- bed	0.15	1.0
Block B4- 2B4P KLD	0.15	0.76
Block B4- bed	0.15	1.06
Block B6- 2B4P KLD	0.15	0.77
Block B7- 2B3P KLD	0.15	0.79
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0.59
Block A4-bed	0.15	4.77
Block B3-2B3P KLD	0.15	0.79
Block C3- bed	0.15	0.63
Block C1- Sbed	0.15	1.02
Block C2- 1B2P KLD	0.15	0.46

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0.93
Block C6- bed	0.15	0.51
Block C5-1B2P KLD	0.15	0.36
Block B5- bed	0.15	0.84
Block A AH2- 4B7P KLD	0.15	0.52
Block A AH3- 4B7P KLD	0.15	0.52
Block A2- 1B2P LD	0.15	0.99
Block A AH6- 4B7P KLD	0.15	0.54
Block A AH4- 4B7P KLD	0.15	0.49
Block A AH5- 4B7P KLD	0.15	0.51
Block A1- bed	0.15	0.82
Block A2- Kitchen	0.15	1.4
Block A1- 2B4P KLD	0.15	0.62
Block A AH1- bed	0.15	0.69
Block A AH1- bed	0.15	0.69
Block A AH2- bed	0.15	0.77
Block A AH2- bed	0.15	0.87
Block A AH3-Bed	0.15	0.76
Block A AH3-Bed	0.15	0.81
Block A AH4- bed	0.15	0.65
Block A AH4- bed	0.15	0.72
Block A AH5- bed	0.15	0.73
Block A AH5-bed	0.15	0.84
Block A AH6- bed	0.15	0.79
Block A AH6- bed	0.15	0.86
Block A2-bed	0.15	0.58
Block A3-Bed	0.15	0.68
Block A3-2B4P KLD	0.15	0.67
Block A3-Bed	0.15	0.63
Block A AH6- BED	0.15	4.19
Block A AH5- bed	0.15	3.97
Block A AH2- BED	0.15	3.97
Block A AH3- BED	0.15	3.97
Block A AH4-BED	0.15	3.6
Block A AH1- BED	0.15	3.61
Block A4-bed	0.15	0.48
Block A4-Study	0.15	0.87
Block B7- bed	0.15	0.73
Block B7- Sbed	0.15	1.02
Block B6- bath	0.15	4.87
Block B6- bed	0.15	0.79
Block B6- bed	0.15	0.92

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0.6
Block B MH3- 4B8P KLD	0.15	0.65
Block B MH2- 4B8P KLD	0.15	0.65
Block B MH1- 4B8P KLD	0.15	0.61
Block B2- bed	0.15	0.67
Block B MH2- Bed	0.15	0.99
Block B MH3-bed	0.15	0.97
BLOCK B MH4- Study	0.15	0.67
BLOCK B MH4- bed	0.15	0.81
Block B MH1-bed	0.15	0.84
Block B MH2-bed	0.15	0.84
Block B5- sbed	0.15	4.97
Block B5- 2B3P KLD	0.15	0.83
Block C8- 3B5P KLD	0.15	0.65
Block B4-Bed	0.15	0.86
Block A1- bed	0.15	4.12
Block A AH1- 4B7P KLD	0.15	0.47
Block B MH1-bed	0.15	0.91
BLOCK B MH1- Study	0.15	0.66
Block B2-bed	0.15	0.78
BLOCK B MH4- bed	0.15	0.95
BLOCK B MH3- Study	0.15	0.7
Block B MH3-Bed	0.15	0.8
BLOCK B MH2- Study	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	4.28
Block B2-bed	0.15	1.05

APPENDIX I

Approved Document O report
Overheating risk in residential buildings
for
Hornsey Police Station

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Building details

Project name: Hornsey Police Station	Date: 07-04-2025 17:46:35
Location: London City Ap, United Kingdom	
Address:	
Building use: Residential	
Are there any security, noise, or pollution issues: Yes	

Designer's details

Designer's name:
Designer's organisation:
Designer's address:

Dynamic thermal model

Software: IESVE version 2024.0.1.0	
Weather file: London_LWC_DSY1_2080High50.epw	
Results file: DSY2_2080H50.aps	
Number of rooms analysed: 109	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: External Blinds and Internal Venetian Blinds, MVHR with Extract Fan	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

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Summary

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

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

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

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

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block C1- 2B3P KLD	-	-	Pass	-
Block C1- bed	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C2- bed	-	-	Pass	-
Block C3- 1B2P KLD	-	-	Pass	-
Block A AH1- Study	-	-	Pass	-
Block A AH2- Study	-	-	Pass	-
Block A AH3- Study	-	-	Pass	-
Block A AH4- Study	-	-	Pass	-
Block A AH5- Study	-	-	Pass	-
Block A AH6- Study	-	-	Pass	-
Block C4 - Bed	-	-	Pass	-
Block C5-bed	-	-	Pass	-
Block C6- 1B2P KLD	-	-	Pass	-
Block C4 - 2B3P KLD	-	-	Pass	-
CORRIDOR-BLOCK B	-	-	-	No
Block B2- bed	-	-	Pass	-
Block B2- 2B4P KLD	-	-	Pass	-
Block B3-Sbed	-	-	Pass	-
Block B2-2B4P KLD	-	-	Pass	-
Block B MH1- Bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B3-BED	-	-	Pass	-
Block C7- 1B2P KLD	-	-	Pass	-
Block C8- Sbed	-	-	Pass	-
Block C8- bed	-	-	Pass	-
Block C8- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block B4- 2B4P KLD	-	-	Pass	-
Block B4- bed	-	-	Pass	-
Block B6- 2B4P KLD	-	-	Pass	-
Block B7- 2B3P KLD	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block A4-3B5P KLD	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block B3-2B3P KLD	-	-	Pass	-
Block C3- bed	-	-	Pass	-
Block C1- Sbed	-	-	Pass	-
Block C2- 1B2P KLD	-	-	Pass	-
Block C4 - Sbed	-	-	Pass	-
Block C6- bed	-	-	Pass	-
Block C5-1B2P KLD	-	-	Pass	-
Block B5- bed	-	-	Pass	-
Block A AH2- 4B7P KLD	-	-	Pass	-
Block A AH3- 4B7P KLD	-	-	Pass	-
Block A2- 1B2P LD	-	-	Pass	-
Block A AH6- 4B7P KLD	-	-	Pass	-
Block A AH4- 4B7P KLD	-	-	Pass	-
Block A AH5- 4B7P KLD	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A2- Kitchen	-	-	Pass	-
Block A1- 2B4P KLD	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH1- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH2- bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH3-Bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH4- bed	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-
Block A AH5-bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A AH6- bed	-	-	Pass	-
Block A2-bed	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A3-2B4P KLD	-	-	Pass	-
Block A3-Bed	-	-	Pass	-
Block A AH6- BED	-	-	Pass	-
Block A AH5- bed	-	-	Pass	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Block A AH2- BED	-	-	Pass	-
Block A AH3- BED	-	-	Pass	-
Block A AH4-BED	-	-	Pass	-
Block A AH1- BED	-	-	Pass	-
Block A4-bed	-	-	Pass	-
Block A4-Study	-	-	Pass	-
Block B7- bed	-	-	Pass	-
Block B7- Sbed	-	-	Pass	-
Block B6- bath	-	-	Pass	-
Block B6- bed	-	-	Pass	-
Block B6- bed	-	-	Pass	-
BLOCK B MH4- 4B8P KLD	-	-	Pass	-
Block B MH3- 4B8P KLD	-	-	Pass	-
Block B MH2- 4B8P KLD	-	-	Pass	-
Block B MH1- 4B8P KLD	-	-	Pass	-
Block B2- bed	-	-	Pass	-
Block B MH2- Bed	-	-	Pass	-
Block B MH3-bed	-	-	Pass	-
BLOCK B MH4- Study	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
Block B MH2-bed	-	-	Pass	-
Block B5- sbed	-	-	Pass	-
Block B5- 2B3P KLD	-	-	Pass	-
Block C8- 3B5P KLD	-	-	Pass	-
Block B4-Bed	-	-	Pass	-
Block A1- bed	-	-	Pass	-
Block A AH1- 4B7P KLD	-	-	Pass	-
Block B MH1-bed	-	-	Pass	-
BLOCK B MH1- Study	-	-	Pass	-
Block B2-bed	-	-	Pass	-
BLOCK B MH4- bed	-	-	Pass	-
BLOCK B MH3- Study	-	-	Pass	-
Block B MH3-Bed	-	-	Pass	-
BLOCK B MH2- Study	-	-	Pass	-
CORRIDOR- BLOCK C	-	-	-	No
Block C7- Bed	-	-	Pass	-
Block B2-bed	-	-	Pass	-

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Naturally ventilated rooms – criterion (a)

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

Room name	Occupied hours	No. hours $\Delta T \geq 1^\circ\text{K}$	% Occupied hours $\Delta T \geq 1^\circ\text{K}$	Criterion a check
No nat vent rooms	N/A	N/A	N/A	N/A

Naturally ventilated rooms – criterion (b)

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

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
No nat vent rooms	N/A	N/A	N/A	N/A

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Mechanically ventilated rooms

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

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C1- 2B3P KLD	0	0.0	Pass
Block C1- bed	0	0.0	Pass
Block C2- bed	0	0.0	Pass
Block C3- 1B2P KLD	0	0.0	Pass
Block A AH1- Study	0	0.0	Pass
Block A AH2- Study	0	0.0	Pass
Block A AH3- Study	0	0.0	Pass
Block A AH4- Study	0	0.0	Pass
Block A AH5- Study	0	0.0	Pass
Block A AH6- Study	0	0.0	Pass
Block C4 - Bed	0	0.0	Pass
Block C5-bed	0	0.0	Pass
Block C6- 1B2P KLD	0	0.0	Pass
Block C4 - 2B3P KLD	0	0.0	Pass
Block B2- bed	0	0.0	Pass
Block B2- 2B4P KLD	0	0.0	Pass
Block B3-Sbed	0	0.0	Pass
Block B2-2B4P KLD	0	0.0	Pass
Block B MH1- Bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- bed	21	0.2	Pass
Block B3-BED	0	0.0	Pass
Block C7- 1B2P KLD	0	0.0	Pass
Block C8- Sbed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block C8- bed	0	0.0	Pass
Block B4- 2B4P KLD	0	0.0	Pass
Block B4- bed	0	0.0	Pass
Block B6- 2B4P KLD	0	0.0	Pass
Block B7- 2B3P KLD	0	0.0	Pass
Block A4-3B5P KLD	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block B3-2B3P KLD	0	0.0	Pass
Block C3- bed	0	0.0	Pass
Block C1- Sbed	0	0.0	Pass
Block C2- 1B2P KLD	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
Block C4 - Sbed	0	0.0	Pass
Block C6- bed	0	0.0	Pass
Block C5-1B2P KLD	0	0.0	Pass
Block B5- bed	0	0.0	Pass
Block A AH2- 4B7P KLD	66	1.4	Pass
Block A AH3- 4B7P KLD	71	1.5	Pass
Block A2- 1B2P LD	0	0.0	Pass
Block A AH6- 4B7P KLD	0	0.0	Pass
Block A AH4- 4B7P KLD	43	0.9	Pass
Block A AH5- 4B7P KLD	6	0.1	Pass
Block A1- bed	0	0.0	Pass
Block A2- Kitchen	0	0.0	Pass
Block A1- 2B4P KLD	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH1- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH2- bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH3-Bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH4- bed	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH5-bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A AH6- bed	0	0.0	Pass
Block A2-bed	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A3-2B4P KLD	0	0.0	Pass
Block A3-Bed	0	0.0	Pass
Block A AH6- BED	0	0.0	Pass
Block A AH5- bed	0	0.0	Pass
Block A AH2- BED	0	0.0	Pass
Block A AH3- BED	0	0.0	Pass
Block A AH4-BED	0	0.0	Pass
Block A AH1- BED	0	0.0	Pass
Block A4-bed	0	0.0	Pass
Block A4-Study	0	0.0	Pass
Block B7- bed	0	0.0	Pass
Block B7- Sbed	0	0.0	Pass
Block B6- bath	0	0.0	Pass
Block B6- bed	0	0.0	Pass
Block B6- bed	0	0.0	Pass

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Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
BLOCK B MH4- 4B8P KLD	0	0.0	Pass
Block B MH3- 4B8P KLD	0	0.0	Pass
Block B MH2- 4B8P KLD	0	0.0	Pass
Block B MH1- 4B8P KLD	31	0.7	Pass
Block B2- bed	0	0.0	Pass
Block B MH2- Bed	0	0.0	Pass
Block B MH3-bed	0	0.0	Pass
BLOCK B MH4- Study	0	0.0	Pass
BLOCK B MH4- bed	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
Block B MH2-bed	0	0.0	Pass
Block B5- sbed	0	0.0	Pass
Block B5- 2B3P KLD	0	0.0	Pass
Block C8- 3B5P KLD	0	0.0	Pass
Block B4-Bed	0	0.0	Pass
Block A1- bed	0	0.0	Pass
Block A AH1- 4B7P KLD	0	0.0	Pass
Block B MH1-bed	0	0.0	Pass
BLOCK B MH1- Study	0	0.0	Pass
Block B2-bed	0	0.0	Pass
BLOCK B MH4- bed	12	0.1	Pass
BLOCK B MH3- Study	0	0.0	Pass
Block B MH3-Bed	0	0.0	Pass
BLOCK B MH2- Study	0	0.0	Pass
Block C7- Bed	0	0.0	Pass
Block B2-bed	0	0.0	Pass

Communal corridors

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

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR-BLOCK B	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No
CORRIDOR- BLOCK C	0	0.0	No

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Modelled details & overheating mitigation strategy

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

Modelled occupancy

Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block C1- 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C1- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	18.83	TM59 - Circulation - Corridors			on continuously
Block C2- bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C3- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- Study	7.87	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH2- Study	7.05	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH3- Study	7.3	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH4- Study	8.2	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block A AH5- Study	7.56	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH6- Study	7.33	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C4 - Bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-bed	16.2	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C6- 1B2P KLD	28.7	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - 2B3P KLD	30.36	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR-BLOCK B	19.03	TM59 - Circulation - Corridors			on continuously
Block B2- bed	13.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2- 2B4P KLD	30.48	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B3-Sbed	12.73	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-2B4P KLD	33.24	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- Bed	14.48	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	13.79	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH3-bed	14.04	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	14.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-BED	17.65	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C7- 1B2P KLD	29.54	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- Sbed	10.07	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C8- bed	15.62	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C8- bed	12.91	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B4- 2B4P KLD	33.92	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4- bed	12.13	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- 2B4P KLD	33.26	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B7- 2B3P KLD	32.52	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
CORRIDOR- BLOCK C	16.65	TM59 - Circulation - Corridors			on continuously

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A4-3B5P KLD	37.07	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A4-bed	11.43	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B3-2B3P KLD	32.69	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C3- bed	17.42	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C1- Sbed	11.8	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C2- 1B2P KLD	31.42	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C4 - Sbed	11.81	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block C6- bed	17.35	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block C5-1B2P KLD	32.03	TM59 - 1 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B5- bed	15.27	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- 4B7P KLD	41.7	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH3- 4B7P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A2- 1B2P LD	16.49	TM59 - 1 Bedroom - Living- with summer bypass	Living Occupancy	Living Occupancy	18-23h
Block A AH6- 4B7P KLD	40.43	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH4- 4B7P KLD	44.81	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH5- 4B7P KLD	42.48	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A1- bed	13.31	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2- Kitchen	7.77	TM59 - 1 Bedroom - Kitchen with Summer bypass	Kitchen Occupancy	Kitchen Equipment	18-23h
Block A1- 2B4P KLD	35.47	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block A AH1- bed	15.83	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- bed	15.81	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- bed	14.17	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A AH2- bed	12.5	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	14.4	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3-Bed	13.44	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	16.85	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4- bed	15.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5-bed	13.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	13.75	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- bed	12.67	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A2-bed	18.71	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-Bed	16.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A3-2B4P KLD	32.67	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block A3-Bed	17.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH6- BED	17.92	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH5- bed	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH2- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH3- BED	18.89	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH4-BED	20.82	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- BED	20.8	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-bed	22.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A4-Study	12.57	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B7- bed	17.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B7- Sbed	12.66	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B6- bath	2.64	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B6- bed	16.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B6- bed	14.03	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- 4B8P KLD	42.89	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH3- 4B8P KLD	39.51	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH2- 4B8P KLD	39.57	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1- 4B8P KLD	41.91	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B2- bed	19.26	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2- Bed	12.97	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-bed	13.29	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- Study	19.28	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH4- bed	15.96	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Block B MH1-bed	15.25	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH2-bed	15.56	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B5- sbed	12.93	TM59 - Single Bedroom - with MVHR summer bypass	Single Bedroom Occupancy	Single Bedroom Equipment	18-23h
Block B5- 2B3P KLD	30.91	TM59 - 2 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block C8- 3B5P KLD	39.32	TM59 - 3 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B4-Bed	14.9	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A1- bed	13.23	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block A AH1- 4B7P KLD	46.76	TM59 - 4 Bedroom - Living / Kitchen - with MVHR summer bypass	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Block B MH1-bed	14.14	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH1- Study	19.63	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	16.46	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m ²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
BLOCK B MH4- bed	13.54	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH3- Study	18.45	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B MH3-Bed	16.0	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
BLOCK B MH2- Study	18.84	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
CORRIDOR- BLOCK C	10.54	TM59 - Circulation - Corridors			on continuously
Block C7- Bed	15.01	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Block B2-bed	12.21	TM59 - Double Bedroom - with MVHR Summer bypass	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C1- 2B3P KLD	13.91	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	4.98	on continuously, off continuously
Block C1- bed	24.25	0.52	2.64, 2.64, 1.98, 1.98	0.0, 0.0, 80.0, 80.0	19.56	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	10.46	0.52	2.16, 1.98	0.0, 0.0	0.0	off continuously
Block C2- bed	20.5	0.25	1.79, 1.79, 1.98	0.0, 0.0, 80.0	9.78	DOOR Open 07:00-22:00, off continuously
Block C3- 1B2P KLD	4.96	0.25	1.79, 1.98, 1.89	0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block A AH1- Study	19.88	0.52	2.37, 1.89	0.0, 80.0	19.21	DOOR Open 07:00-22:00, off continuously
Block A AH2- Study	20.79	0.52	2.37, 1.89	0.0, 80.0	21.45	DOOR Open 07:00-22:00, off continuously
Block A AH3- Study	20.96	0.52	2.37, 1.89	0.0, 80.0	20.71	DOOR Open 07:00-22:00, off continuously
Block A AH4- Study	18.7	0.52	2.37, 1.89	0.0, 80.0	18.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- Study	20.04	0.52	2.37, 1.89	0.0, 80.0	20.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- Study	20.63	0.52	2.37, 1.89	0.0, 80.0	20.63	DOOR Open 07:00-22:00, off continuously
Block C4 - Bed	17.52	0.52	2.64, 2.64, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C5-bed	19.1	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	9.33	DOOR Open 07:00-22:00, off continuously
Block C6- 1B2P KLD	12.05	0.25, 0.52	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	5.27	on continuously, off continuously
Block C4 - 2B3P KLD	9.47	0.25	1.89, 1.79, 1.79	80.0, 0.0, 0.0	4.98	on continuously, off continuously
CORRIDOR-BLOCK B	18.25	0.25	1.99, 2.11	0.0, 0.0	0.0	off continuously
Block B2- bed	19.35	0.52	1.89, 1.98	0.0, 80.0	12.18	DOOR Open 07:00-22:00, off continuously
Block B2- 2B4P KLD	24.22	0.25, 0.52	3.93, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 80.0	4.96	on continuously, off continuously
Block B3-Sbed	39.16	0.25	1.86, 1.89	0.0, 80.0	11.88	DOOR Open 07:00-22:00, off continuously
Block B2-2B4P KLD	15.1	0.25, 0.25, 0.52	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B MH1- Bed	8.92	0.25	1.87, 0.01, 0.01, 1.04, 1.04	80.0, 80.0, 80.0, 0.0, 0.0	10.44	DOOR Open 07:00-22:00, off continuously
Block B MH2- Bed	13.13	0.25	1.89, 1.04, 1.04	80.0, 0.0, 0.0	10.96	DOOR Open 07:00-22:00, off continuously
Block B MH3-bed	13.08	0.25	1.89, 1.04, 1.03	80.0, 0.0, 0.0	10.77	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	13.25	0.25	1.98, 1.03, 1.03	80.0, 0.0, 0.0	10.95	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B3-BED	7.32	0.25	1.89, 1.86	80.0, 0.0	8.57	DOOR Open 07:00-22:00, off continuously
Block C7- 1B2P KLD	18.75	0.25, 0.25, 0.25, 0.52	1.89, 0.82, 0.82, 2.07, 2.53, 2.53	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	5.12	on continuously, off continuously
Block C8- Sbed	8.81	0.25	1.89, 0.82	80.0, 0.0	15.01	DOOR Open 07:00-22:00, off continuously
Block C8- bed	3.16	0.25	1.89, 0.82	80.0, 0.0	9.68	DOOR Open 07:00-22:00, off continuously
Block C8- bed	23.94	0.25	2.07, 1.89	0.0, 80.0	11.71	DOOR Open 07:00-22:00, off continuously
Block B4- 2B4P KLD	23.89	0.25, 0.25, 0.52	2.73, 1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.46	on continuously, off continuously
Block B4- bed	42.81	0.25	1.66, 1.89	0.0, 80.0	12.46	DOOR Open 07:00-22:00, off continuously
Block B6- 2B4P KLD	15.76	0.52, 0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.55	on continuously, off continuously
Block B7- 2B3P KLD	14.75	0.25, 0.25	2.07, 1.24, 1.86	0.0, 0.0, 0.0	0.0	off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block A4-3B5P KLD	15.01	0.25, 0.25, 0.52	1.76, 1.76, 2.07, 2.07, 2.07, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	4.08	on continuously, off continuously
Block A4-bed	17.37	0.25	1.89, 1.76	80.0, 0.0	13.23	DOOR Open 07:00-22:00, off continuously
Block B3-2B3P KLD	15.85	0.25, 0.25	1.86, 1.86, 1.86, 1.89	0.0, 0.0, 0.0, 80.0	4.63	on continuously, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block C3- bed	19.39	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.68	DOOR Open 07:00-22:00, off continuously
Block C1- Sbed	17.2	0.25	1.79, 1.89	0.0, 80.0	12.81	DOOR Open 07:00-22:00, off continuously
Block C2- 1B2P KLD	14.71	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.81	on continuously, off continuously
Block C4 - Sbed	11.82	0.25	1.79, 1.89	0.0, 80.0	12.8	DOOR Open 07:00-22:00, off continuously
Block C6- bed	15.53	0.25	2.64, 2.64, 1.89	0.0, 0.0, 80.0	8.71	DOOR Open 07:00-22:00, off continuously
Block C5-1B2P KLD	10.74	0.25, 0.25	1.79, 1.79, 1.79, 1.89	0.0, 0.0, 0.0, 80.0	4.72	on continuously, off continuously
Block B5- bed	11.02	0.25	1.86, 1.89	0.0, 80.0	9.9	DOOR Open 07:00-22:00, off continuously
Block A AH2- 4B7P KLD	36.89	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.63	on continuously, off continuously
Block A AH3- 4B7P KLD	41.51	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A2- 1B2P LD	22.19	0.25	1.77, 1.77, 1.89	0.0, 0.0, 80.0	9.17	on continuously, off continuously
Block A AH6- 4B7P KLD	44.64	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.77	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH4- 4B7P KLD	41.79	0.52, 0.25	2.64, 2.64, 2.64, 2.64, 1.76	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously
Block A AH5- 4B7P KLD	43.13	0.25, 0.52	1.76, 2.64, 2.64, 2.64, 2.64	0.0, 0.0, 0.0, 0.0, 0.0	0.0	off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A1- bed	7.9	0.25	1.76, 1.89	0.0, 80.0	11.36	DOOR Open 07:00-22:00, off continuously
Block A2- Kitchen	11.07	0.25	2.09, 0.86	0.0, 0.0	0.0	off continuously
Block A1- 2B4P KLD	20.62	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	4.26	on continuously, off continuously
Block A AH1- bed	10.41	0.52	1.57, 1.57, 1.89	0.0, 0.0, 80.0	9.55	DOOR Open 07:00-22:00, off continuously
Block A AH1- bed	9.74	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	9.56	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	24.48	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	10.67	DOOR Open 07:00-22:00, off continuously
Block A AH2- bed	15.01	0.25	1.31, 1.89	0.0, 80.0	12.1	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	24.3	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	10.5	DOOR Open 07:00-22:00, off continuously
Block A AH3-Bed	26.31	0.25	1.31, 1.31, 1.89	0.0, 0.0, 80.0	11.25	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	22.83	0.52	1.57, 1.58, 1.89	0.0, 0.0, 80.0	8.97	DOOR Open 07:00-22:00, off continuously
Block A AH4- bed	15.9	0.25	1.89, 1.78	80.0, 0.0	9.99	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.14	0.52	1.58, 1.57, 1.89	0.0, 0.0, 80.0	10.07	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH5-bed	18.41	0.25	1.79, 1.89	0.0, 80.0	11.63	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	25.24	0.52	1.58, 1.58, 1.89	0.0, 0.0, 80.0	11.0	DOOR Open 07:00-22:00, off continuously
Block A AH6- bed	19.0	0.25	1.79, 1.89	0.0, 80.0	11.93	DOOR Open 07:00-22:00, off continuously
Block A2-bed	12.69	0.25	1.79, 1.79, 1.89	0.0, 0.0, 80.0	8.08	DOOR Open 07:00-22:00, off continuously
Block A3-Bed	13.86	0.52, 0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	9.44	DOOR Open 07:00-22:00, off continuously
Block A3-2B4P KLD	11.53	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	4.63	on continuously, off continuously
Block A3-Bed	34.97	0.25	2.1, 2.1, 1.89	0.0, 0.0, 80.0	8.77	DOOR Open 07:00-22:00, off continuously
Block A AH6- BED	26.4	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.44	DOOR Open 07:00-22:00, off continuously
Block A AH5- bed	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH2- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH3- BED	24.46	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	8.0	DOOR Open 07:00-22:00, off continuously
Block A AH4-BED	22.19	0.52	1.89, 1.3, 1.3, 1.3	80.0, 0.0, 0.0, 0.0	7.26	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block A AH1- BED	13.77	0.52	1.3, 1.3, 1.3, 1.89	0.0, 0.0, 0.0, 80.0	7.27	DOOR Open 07:00-22:00, off continuously
Block A4-bed	9.04	0.25	1.76, 1.76, 0.05, 1.84	0.0, 0.0, 80.0, 80.0	6.68	DOOR Open 07:00-22:00, off continuously
Block A4-Study	15.68	0.25	1.76, 1.76, 1.89	0.0, 0.0, 80.0	12.03	DOOR Open 07:00-22:00, off continuously
Block B7- bed	7.29	0.25	1.86	0.0	0.0	off continuously
Block B7- Sbed	17.25	0.25	1.86	0.0	0.0	off continuously
Block B6- bath	0.0				0.0	
Block B6- bed	15.67	0.52, 0.52	2.07, 1.86, 1.89	0.0, 0.0, 80.0	9.32	DOOR Open 07:00-22:00, off continuously
Block B6- bed	11.98	0.25	1.66, 1.89	0.0, 80.0	10.78	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- 4B8P KLD	26.87	0.52, 0.25	1.89, 2.42, 2.42, 2.42, 2.42, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.53	on continuously, off continuously
Block B MH3- 4B8P KLD	48.97	0.52, 0.25	1.95, 1.89, 2.64, 2.64, 2.64, 2.64	0.0, 80.0, 0.0, 0.0, 0.0, 0.0	3.83	on continuously, off continuously
Block B MH2- 4B8P KLD	44.92	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.82	on continuously, off continuously
Block B MH1- 4B8P KLD	41.95	0.25, 0.52	2.42, 2.42, 2.42, 2.42, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 0.0, 80.0	3.61	on continuously, off continuously
Block B2- bed	0.0		1.98	80.0	8.22	DOOR Open 07:00-22:00
Block B MH2- Bed	22.49	0.52	1.43, 1.43, 1.89	0.0, 0.0, 80.0	11.66	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Block B MH3-bed	22.3	0.52	2.82, 1.89	0.0, 80.0	11.38	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- Study	7.51	0.52	2.07, 1.89	0.0, 80.0	7.84	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	11.35	0.25	1.68, 1.89	0.0, 80.0	9.47	DOOR Open 07:00-22:00, off continuously
Block B MH1-bed	8.59	0.25	1.68, 1.89	0.0, 80.0	9.91	DOOR Open 07:00-22:00, off continuously
Block B MH2-bed	13.68	0.25	2.07, 1.89	0.0, 80.0	9.72	DOOR Open 07:00-22:00, off continuously
Block B5- sbed	14.32	0.25	1.89, 2.73	80.0, 0.0	11.69	DOOR Open 07:00-22:00, off continuously
Block B5- 2B3P KLD	19.59	0.25, 0.25, 0.25	2.1, 0.63, 1.89, 1.89, 1.89	0.0, 0.0, 0.0, 0.0, 80.0	4.89	on continuously, off continuously
Block C8- 3B5P KLD	15.61	0.25, 0.52, 0.25, 0.25	1.89, 2.53, 2.53, 1.89, 0.82, 0.82	80.0, 0.0, 0.0, 0.0, 0.0, 0.0	3.85	on continuously, off continuously
Block B4-Bed	28.62	0.52, 0.52	1.89, 1.86, 1.86	80.0, 0.0, 0.0	10.15	DOOR Open 07:00-22:00, off continuously
Block A1- bed	8.01	0.52, 0.25	1.05, 1.89, 0.89	0.0, 80.0, 0.0	11.43	DOOR Open 07:00-22:00, off continuously
Block A AH1- 4B7P KLD	9.25	0.25, 0.52	1.89, 1.78, 2.64	80.0, 0.0, 0.0	3.23	on continuously, off continuously
Block B MH1-bed	22.04	0.52	2.52, 1.89	0.0, 80.0	10.69	DOOR Open 07:00-22:00, off continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m ²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
BLOCK B MH1- Study	13.18	0.52	2.52, 1.89	0.0, 80.0	7.7	DOOR Open 07:00-22:00, off continuously
Block B2-bed	16.3	0.52, 0.52	1.89, 1.89, 1.68	80.0, 0.0, 0.0	9.19	DOOR Open 07:00-22:00, off continuously
BLOCK B MH4- bed	18.88	0.52	2.02, 1.98	0.0, 80.0	11.7	DOOR Open 07:00-22:00, off continuously
BLOCK B MH3- Study	10.85	0.52	2.52, 1.89	0.0, 80.0	8.2	DOOR Open 07:00-22:00, off continuously
Block B MH3-Bed	10.78	0.25	1.68, 1.89	0.0, 80.0	9.45	DOOR Open 07:00-22:00, off continuously
BLOCK B MH2- Study	10.95	0.52	2.52, 1.88	0.0, 80.0	7.98	DOOR Open 07:00-22:00, off continuously
CORRIDOR- BLOCK C	0.0				0.0	
Block C7- Bed	3.01	0.25	1.89, 0.82	80.0, 0.0	10.07	DOOR Open 07:00-22:00, off continuously
Block B2-bed	73.94	0.25	1.89, 1.88	80.0, 0.0	12.38	DOOR Open 07:00-22:00, off continuously

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Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C1- 2B3P KLD	0.15	0.81
Block C1- bed	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C2- bed	0.15	0.68
Block C3- 1B2P KLD	0.15	0.5
Block A AH1- Study	0.15	1.39
Block A AH2- Study	0.15	1.55
Block A AH3- Study	0.15	1.49
Block A AH4- Study	0.15	1.33
Block A AH5- Study	0.15	1.44
Block A AH6- Study	0.15	1.59
Block C4 - Bed	0.15	0.54
Block C5-bed	0.15	0.54
Block C6- 1B2P KLD	0.15	0.4
Block C4 - 2B3P KLD	0.15	0.73
CORRIDOR-BLOCK B	0.15	0
Block B2- bed	0.15	4.94
Block B2- 2B4P KLD	0.15	0.84
Block B3-Sbed	0.15	1.01
Block B2-2B4P KLD	0.15	0.77
Block B MH1- Bed	0.15	0.89
Block B MH2- Bed	0.15	0.93
Block B MH3-bed	0.15	0.92
BLOCK B MH4- bed	0.15	0.89
Block B3-BED	0.15	3.64
Block C7- 1B2P KLD	0.15	0.57
Block C8- Sbed	0.15	6.39
Block C8- bed	0.15	4.12
Block C8- bed	0.15	1.0
Block B4- 2B4P KLD	0.15	0.76
Block B4- bed	0.15	1.06
Block B6- 2B4P KLD	0.15	0.77
Block B7- 2B3P KLD	0.15	0.79
CORRIDOR- BLOCK C	0.15	0
Block A4-3B5P KLD	0.15	0.59
Block A4-bed	0.15	4.77
Block B3-2B3P KLD	0.15	0.79
Block C3- bed	0.15	0.63
Block C1- Sbed	0.15	1.02
Block C2- 1B2P KLD	0.15	0.46

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Block C4 - Sbed	0.15	0.93
Block C6- bed	0.15	0.51
Block C5-1B2P KLD	0.15	0.36
Block B5- bed	0.15	0.84
Block A AH2- 4B7P KLD	0.15	0.52
Block A AH3- 4B7P KLD	0.15	0.52
Block A2- 1B2P LD	0.15	0.99
Block A AH6- 4B7P KLD	0.15	0.54
Block A AH4- 4B7P KLD	0.15	0.49
Block A AH5- 4B7P KLD	0.15	0.51
Block A1- bed	0.15	0.82
Block A2- Kitchen	0.15	1.4
Block A1- 2B4P KLD	0.15	0.62
Block A AH1- bed	0.15	0.69
Block A AH1- bed	0.15	0.69
Block A AH2- bed	0.15	0.77
Block A AH2- bed	0.15	0.87
Block A AH3-Bed	0.15	0.76
Block A AH3-Bed	0.15	0.81
Block A AH4- bed	0.15	0.65
Block A AH4- bed	0.15	0.72
Block A AH5- bed	0.15	0.73
Block A AH5-bed	0.15	0.84
Block A AH6- bed	0.15	0.79
Block A AH6- bed	0.15	0.86
Block A2-bed	0.15	0.58
Block A3-Bed	0.15	0.68
Block A3-2B4P KLD	0.15	0.67
Block A3-Bed	0.15	0.63
Block A AH6- BED	0.15	4.19
Block A AH5- bed	0.15	3.97
Block A AH2- BED	0.15	3.97
Block A AH3- BED	0.15	3.97
Block A AH4-BED	0.15	3.6
Block A AH1- BED	0.15	3.61
Block A4-bed	0.15	0.48
Block A4-Study	0.15	0.87
Block B7- bed	0.15	0.73
Block B7- Sbed	0.15	1.02
Block B6- bath	0.15	4.87
Block B6- bed	0.15	0.79
Block B6- bed	0.15	0.92

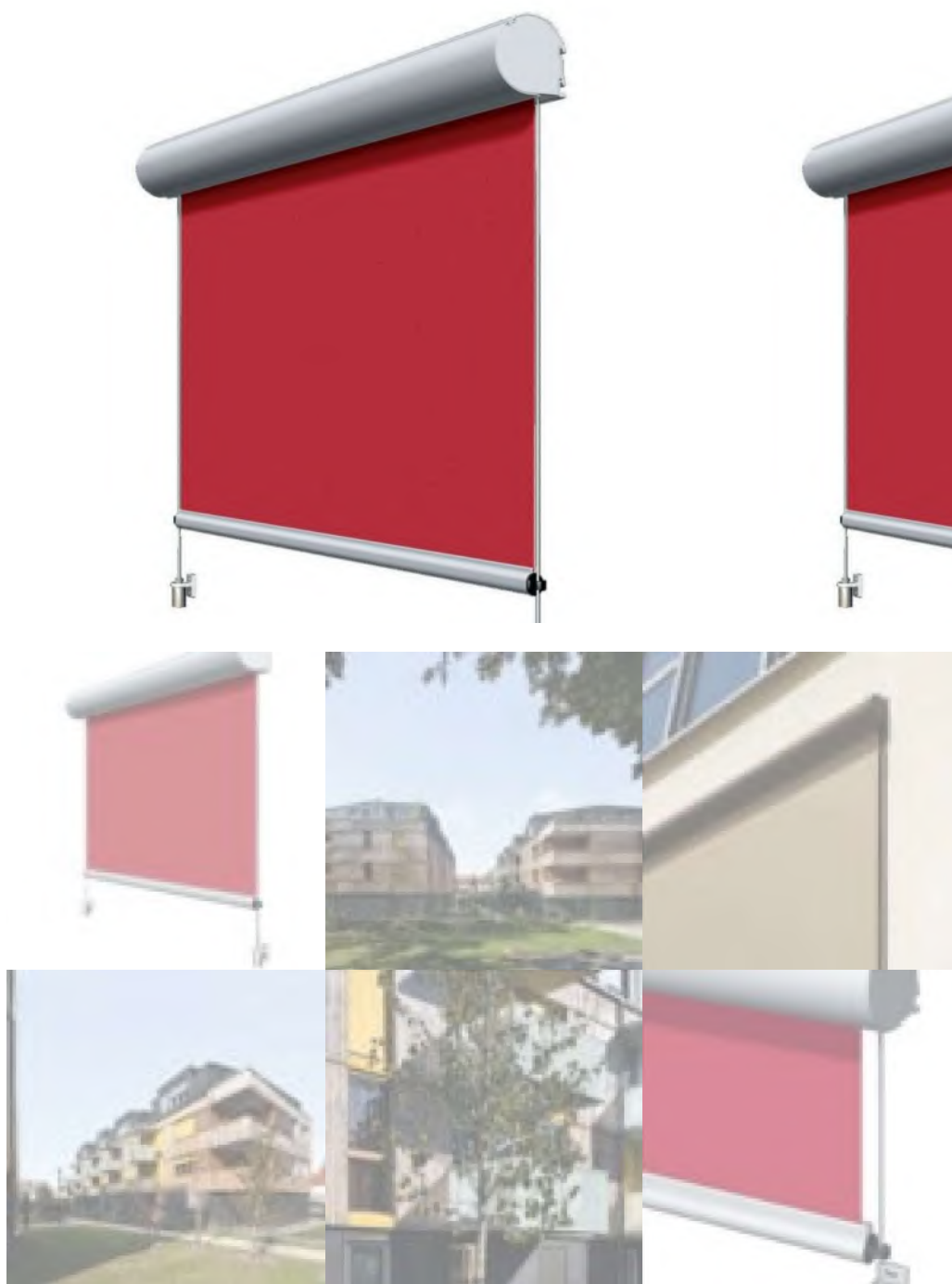
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Room name	Infiltration rate ACH	Mech vent flow rate ACH
BLOCK B MH4- 4B8P KLD	0.15	0.6
Block B MH3- 4B8P KLD	0.15	0.65
Block B MH2- 4B8P KLD	0.15	0.65
Block B MH1- 4B8P KLD	0.15	0.61
Block B2- bed	0.15	0.67
Block B MH2- Bed	0.15	0.99
Block B MH3-bed	0.15	0.97
BLOCK B MH4- Study	0.15	0.67
BLOCK B MH4- bed	0.15	0.81
Block B MH1-bed	0.15	0.84
Block B MH2-bed	0.15	0.84
Block B5- sbed	0.15	4.97
Block B5- 2B3P KLD	0.15	0.83
Block C8- 3B5P KLD	0.15	0.65
Block B4-Bed	0.15	0.86
Block A1- bed	0.15	4.12
Block A AH1- 4B7P KLD	0.15	0.47
Block B MH1-bed	0.15	0.91
BLOCK B MH1- Study	0.15	0.66
Block B2-bed	0.15	0.78
BLOCK B MH4- bed	0.15	0.95
BLOCK B MH3- Study	0.15	0.7
Block B MH3-Bed	0.15	0.8
BLOCK B MH2- Study	0.15	0.68
CORRIDOR- BLOCK C	0.15	0
Block C7- Bed	0.15	4.28
Block B2-bed	0.15	1.05

APPENDIX J

[Home \(https://waverley.co.uk/\)](https://waverley.co.uk/) / [External Blinds \(https://waverley.co.uk/product-category/external-blinds/\)](https://waverley.co.uk/product-category/external-blinds/) / Warema Cord Guided External Roller Blind



Warema Cord Guided External Roller Blind

Using tension cables to guide the fabric, Warema's Cord Guided External Roller Blinds offer an alternative to the rail system.

[Read More >](#)

Interested in this Product?

[Make Enquiry](#)

♥ [Add to my favourites \(?add_to_wishlist=20347\)](#)

CAD Drawing(<https://waverley.co.uk/wp-content/uploads/2023/08/Cord-Guided-External-Roller-Blind.zip>).

You may also like



Warema Rail Guided External Roller Blind (<https://waverley.co.uk/product/rail-guided-external-roller-blind/>)
(<https://waverley.co.uk/product/rail-guided-external-roller-blind/>)

(<https://waverley.co.uk/product/rail-guided-external-roller-blind/>)



Warema Recessed Roller Shutter (<https://waverley.co.uk/product/recessed-roller-shutter/>)
(<https://waverley.co.uk/product/recessed-roller-shutter/>)

(<https://waverley.co.uk/product/recessed-roller-shutter/>)



Warema Cord Guided External Venetian Blind (<https://waverley.co.uk/product/cord-guided-external-venetian-blind/>)
(<https://waverley.co.uk/product/cord-guided-external-venetian-blind/>)

(<https://waverley.co.uk/product/cord-guided-external-venetian-blind/>)

Product Description

Fabric Recommendations

Book Consultation

Downloads



Using tension cables to guide the fabric, Warema's (<https://waverley.co.uk/warema/>) Cord Guided External Roller Blinds offer an alternative to the rail system.

The Cord Guided External Roller Blind is an incredibly sleek system that provides a smooth operation when raising and lowering the blind.

Maximum dimensions:

- Width: 3000mm
- Height: 3000mm
- Area: 9m²

Features & Benefits

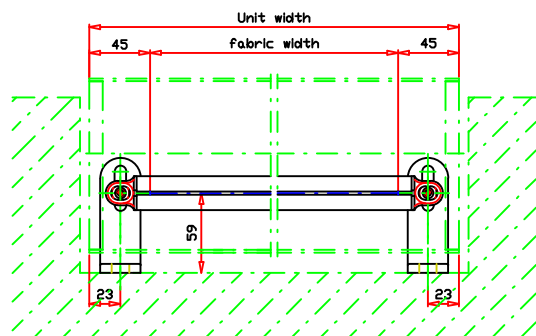
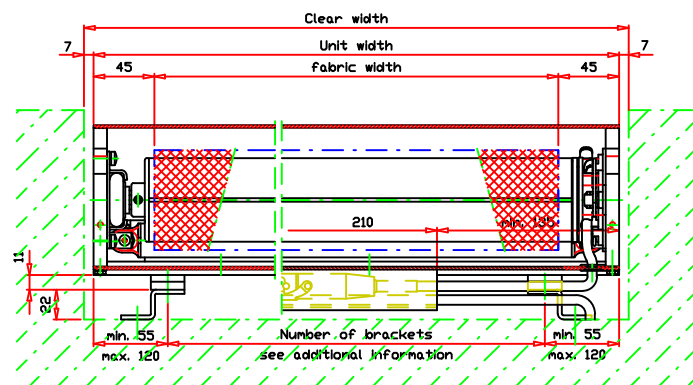
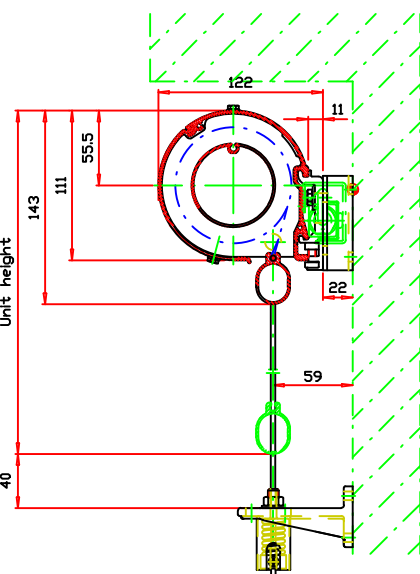
- Versatile
- Glare control
- Privacy
- Bespoke design
- Aesthetically pleasing
- Fabric options
- Sleek

Fabric Recommendations

Contact us here (<https://waverley.co.uk/contact-us/>) for the best fabric recommendations for this product.

Book A Consultation

We work with you to provide reassurance the finished project will not only meet or exceed your expectations, it will also be completed on time and within budget. Once we have all the information our consultants can recommend a solution and help with specification documents and product samples.



W**AV****ERLEY**

Openness
Factor

2%

SilverScreen®

Metalised Screen Fabric

 **ShadeTech®**

SilverScreen®

Highest performing, reflective metallised fabric which substantially reduces heat and glare.

Applications



Roller blinds



Panel blinds

Properties



Thermal comfort



Metalised backing



Flame retardant



Visual comfort



Easy to clean



Tear resistance



Through visibility



Fabric can be joined



Can railroad

Product Data

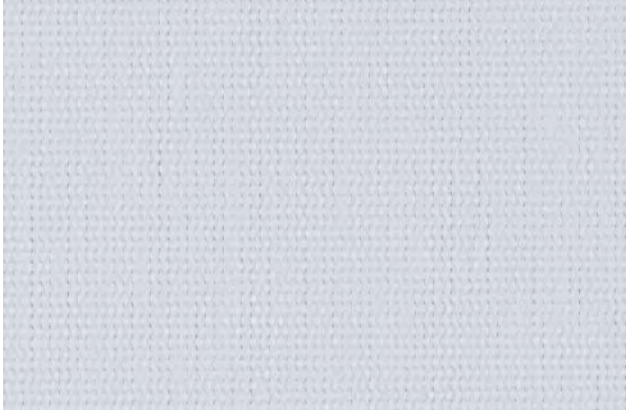
Composition	PVC 64%, glass 36%
Openness factor	2%
Widths	2000mm, 2800mm
Thickness	0.46mm
Weight	400gsm
Fire rating	EN 13501-1 C-s3,d0; BS 5867 part 2 type B; NFP 92503 M1; NFPA 701; AS/NZS 1530.3 (0-0-0-4)
Cleaning	Wipe clean with a damp cloth

Thermal Control Values

Colour	Openness	Code	Tv	Ts	Rs	As
White	2%	202ED01	3%	3%	85%	12%
Black	2%	202EB01	2%	2%	85%	13%
Dark Grey	2%	202EB02	3%	3%	85%	12%
Steel Grey	2%	202EC02	3%	3%	85%	12%
Light Grey	2%	202ED03	3%	3%	85%	12%
Bronze	2%	202EB03	3%	3%	85%	12%
Beige	2%	202ED02	3%	3%	85%	12%
Dark Beige	2%	202ED04	3%	3%	85%	12%

Glare Control Tv = % of visible light transmitted through fabric

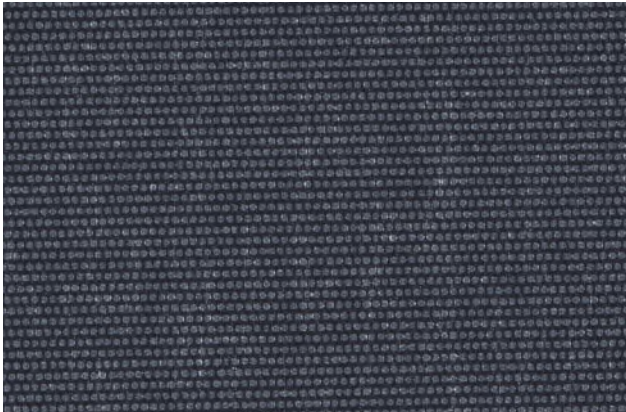
Thermal Control As = % of solar energy absorbed by fabric Rs = % of solar energy reflected by fabric
Ts = % of solar energy transmitted through fabric



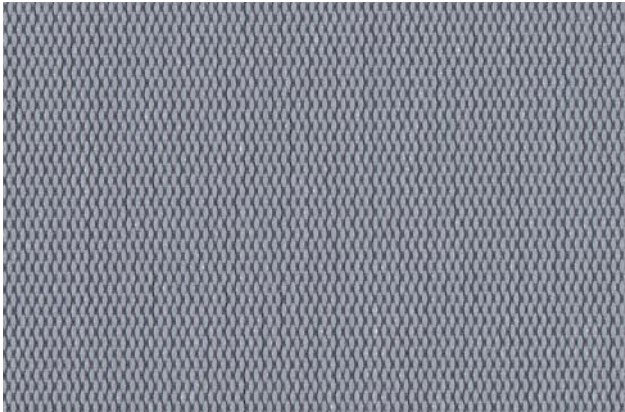
White



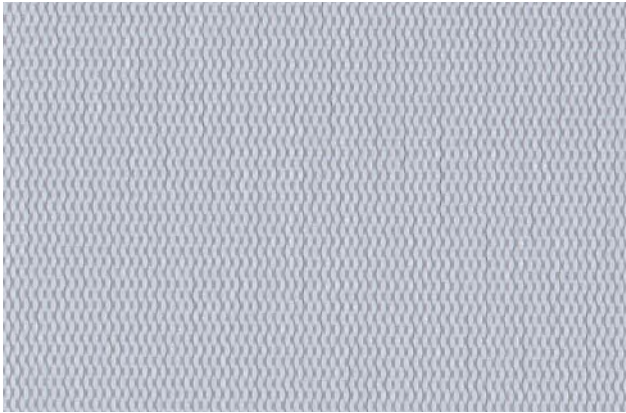
Black



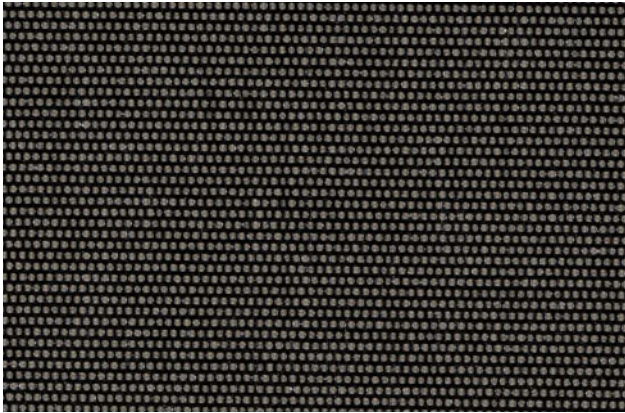
Dark Grey



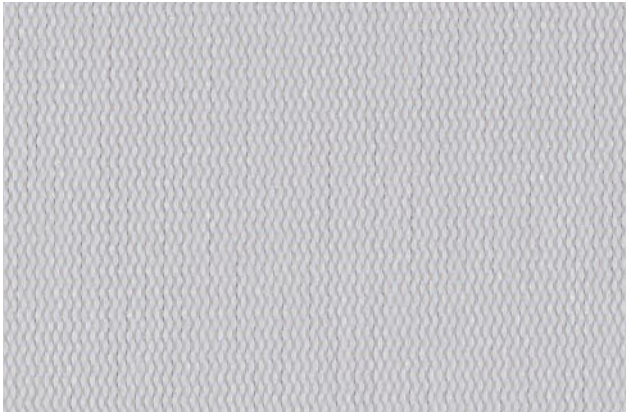
Steel Grey *



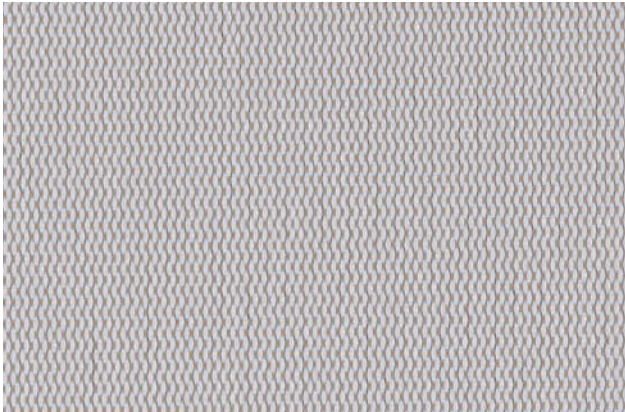
Light Grey



Bronze *



Beige



Dark Beige *

* Minimum order quantities will apply to these colours

For further information, contact our dedicated helpline
☎ 01252 737973 ✉ hello@waverley.co.uk 🌐 waverley.co.uk

SilverScreen®

Waverley's range of shade fabrics facilitate environmental accreditations such as LEED, BREEAM, SKA and The WELL Building Standard.

Accreditations

Our fabrics have been rigorously tested and awarded with various accreditations as listed below

Health

Health and wellbeing are Waverley's biggest priority and we pride ourselves on manufacturing responsibly, while also ensuring ethical sourcing across our range.

Environmental Responsibility

At Waverley, we understand the importance of taking responsibility for the effect we have on the environment and the need to reduce our carbon footprint. HPD available for this fabric.



W^AVERLEY

Waverley Contract and Supply Limited, Rowan House, Guildford Road Trading Estate, Farnham, GU9 9PZ

01252 737973 hello@waverley.co.uk waverley.co.uk



venetian blinds specification sheet

Luxaflex[®]

WINDOW FASHIONS

www.luxaflex.co.nz

PRODUCT OVERVIEW



Luxaflex® Aluminium Venetian blinds have a well earned reputation for technical reliability and durable construction. They are highly functional and decorative. We use the best materials, aluminium alloys and paint systems in conjunction with automated assembly methods to manufacture a product that represents true value for money.

Venetian blind models

- 25mm Slimline
- 25mm Twi-Nighter®
- 50mm Classic
- 25mm Between-Glass

Colour range

The Luxaflex® colour range is one of the most extensive in New Zealand.

25mm width and Twi-Nighter® -

60+ colours plus, including 6 colours in perforated slat.

50mm - 9 colours including 4 perforated slats.

Applications

- Any internal installation where heat, light and / or privacy control are required
- In between double glazing panes (40mm required between panes)
- Partition walls
- Rectangular and special shaped windows
- Automated operation
- All parts of buildings requiring fire retardant materials

Specification overview

High tensile 'bounce back' aluminium slat:

- 25mm Premium – 0.215mm thick
- 50mm Classic – 0.250mm thick

Head and bottom rail manufactured from zincalume steel that has been stove-enamelled for excellent corrosion resistance.

Durability

Manually operated products have been cycle tested to ensure longevity.

Energy benefits

Aluminium Venetians are effective reflectors of heat, particularly in Thermostop® slats which reduces heat radiation by up to three times that of standard venetians.

Automated Venetian blinds can be connected to building management systems for optimal control of air conditioning loads and comfort of the building occupants.

Environmental benefits

The adjustable light control function of Venetian blinds means that the use of natural light can be maximised, which is important for individual comfort and well being while reducing the need for artificial lighting. Perforated Venetian blinds provide shading while allowing the building occupants a view to the outside, reducing the feeling of disconnection from the outside world.

The slats in Aluminium Venetian blinds are made from up to 95% recycled materials.

Luxaflex® operates under an Environmental Management System that actively works towards waste and emission reduction and maximising the use of recycling.

Quality

Hunter Douglas Limited, the supplier of the Aluminium Venetian blind components, is a quality endorsed company, certified as complying with the requirements of AS/NZS ISO 9001:2000.

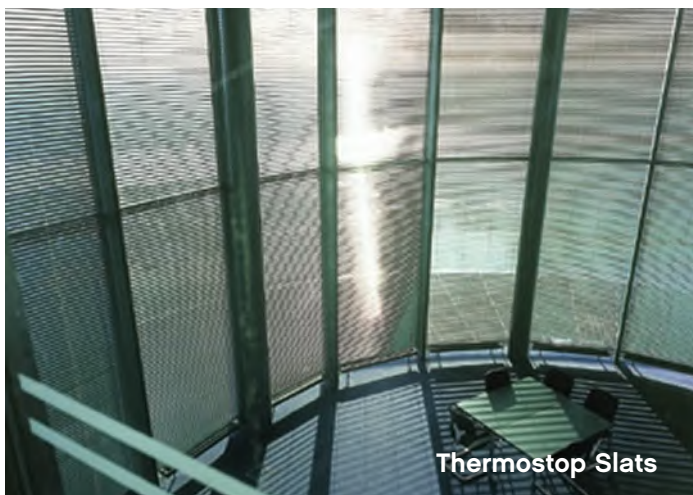
Warranty

All Aluminium Venetian blinds are covered by a 3 Year Warranty. Conditions apply.

CONSTRUCTION



Slimline Venetian Blind



Thermostop Slats

Headrail

The headrail is U-shaped zincalume steel roll-formed and stove-enamelled, incorporating the tilt/raise and lowering mechanism.

Tiltstop and clutch

A tiltstop and clutch is fitted to limit tilt-rod rotation at the blind's fully closed position to prevent damage to the tilting mechanism from overwinding (not available on Ltd Edition).

Slats

Premium slats are made from a 0.215mm thick high tensile aluminium alloy, (selected special finish colours and 50mm slats are made from 0.25mm thick material), which is pre-treated prior to painting for corrosion resistance and is crowned to improve its rigidity and strength. The slats are stove-enamelled, making them resistant to abrasion, peeling, scratching, dulling, discolouration and corrosion.

Thermostop® slats

The Thermostop® slat is based on a slat which has a special coating on the concave side of the slat, giving an emission of heat radiation three times lower (Emission value 30% instead of 90% for a normal painted slat). This special finish increases the thermal resistance in winter and decreases the inside heat transfer in summer.

Bottom rail

The bottom rail is made from D shaped steel for maximum rigidity, is stove-enamelled and fitted with colour co-ordinated end caps.

Automated tilt and raise and auto-tilt

This option provides the ultimate in technology and operating comfort. The angle of the slats are adjusted to suit your requirements by a simple remote control. The blind is operated by a built in electric motor. There is a choice of switches, group operation, infrared remote, radio remote or solar control. 25mm blinds are operated by 24V motors and 50mm blinds are operated by 240V motors. Auto Tilt option allows you to adjust the operation of the slat only with a battery operated motor and remote. (25mm only)

Colour co-ordination

For premium slat all visible components are colour co-ordinated to the colour of the slats (with the exception of the wand). (Ltd Edition colours are colour matched only).



Luxaflex[®]

WINDOW FASHIONS

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MODELS & OPTIONS



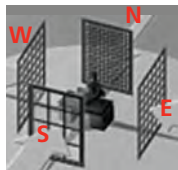
25mm premium Slimline® Venetian Blinds

For the discerning buyer who wants only the best, Luxaflex® Venetians fit this criteria. These blinds feature heavy duty slat, full colour co-ordination from headrail to bottom rail and a choice of over 60 fashion colours. The wand incorporates an overriding clutch mechanism. Slat overlap is 5mm. Spring loaded hold down clips available to hold bottom rail in fixed position.



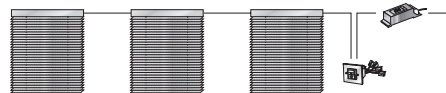
25mm Twi-Nighter® Venetian blinds: the Venetian blind without visible holes

A Twi-Nighter® Venetian blind has no visible holes, which means no reflections on the television or computer screen. For this reason Twi-Nighter® Venetian blinds are suitable for windows in direct sunlight. Also ideal for optimal security and privacy (e.g. separation walls). Available as 25mm only. Automation is not available. Slat overlap 7mm.



Perforations

Various perforation options are available. This innovative solution allows you to choose the shade solution suitable for different facade orientations (8% on south facade, 4% on east, north and west facade). These perforation options provide the ideal solution for optimal daylight regulation.



Automated-electric tilt and raising

The blind is powered by a built-in electric motor. There is a choice of separate switches, group operation, infra-red remote, radio remote. 25mm blinds are operated by 24V motors, and 50mm blinds by 240V motors. Battery powered tilt-only operation is also available in 25mm. For further information on automation refer to the automation section of this manual.



25mm in between glass Venetian blinds

For hanging between panes operation is available through manual tilt or automated. Manual tilting is by way of rotation knob.

NOTE: 40mm between panes required for installation.

50mm classic Venetian blinds

For retro styling, the 50mm is truly a classic in Venetian blind design. Utilising a 50mm headrail system, and 50mm wide high tensile aluminium alloy slats, the classic is a great choice for residential or commercial applications.

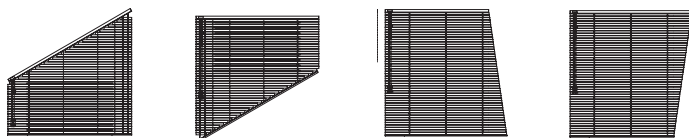
The 50mm is available in a range of plain and perforated colours with string tape as standard and 12mm tape available on selected colours for increased privacy.

Concealed face or reveal fitting spring loaded brackets, along with a headrail end cap and colour co-ordinating headbox and bottom rail, provide a stylish, clean line appearance. Slat overlap is 9mm.

25mm Venetian blinds – speciality shapes

Venetian blinds are available in a variety of special shapes to suit modern glazing.

Maximum slope 45°. Top sloper will raise to start of slope and bottom sloper is static and tilt only.



SPECIFICATION & SIZE LIMITATIONS

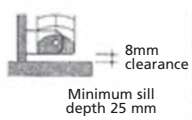
Dimensions

Type	25mm Slimline®	25mm Twi-Nighter®	50mm Classic
Minimum width	210mm	210mm	300mm
Maximum width	3300mm	3300mm	3600mm
Maximum drop	3200mm	3200mm	3200mm
Maximum area	9m ²	9m ²	12m ²
Stack height	(.034 x drop +45 mm)	(.036 x drop +45mm)	(.05 x drop +45mm)
Split control	400mm & under	400mm & under	450mm & under

Installation

If required, sill clips may be fitted.

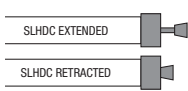
Face Fit



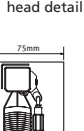
Reveal Fit



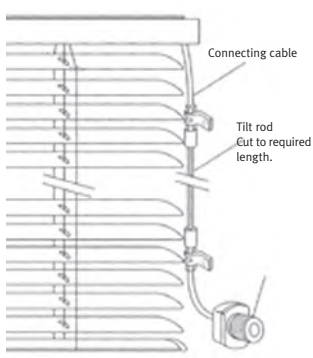
If required, spring loaded hold down catches may be fitted.



Recessed head detail

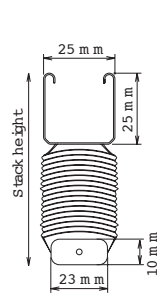


In-Between Glass

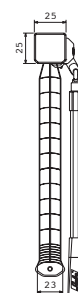


Standard Product Dimensions

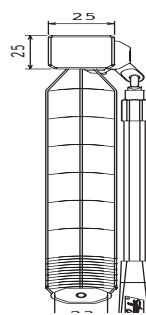
25mm



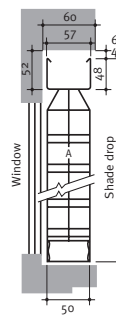
25mm



25mm



50mm



Specification templates

Product name	Aluminium Venetian blinds - 25mm.
Model	25mm Slimline®/25mm Twi-Nighter®/In Between Glass
Slat material	The slats shall be manufactured from 0.215mm thick high tensile aluminium alloy which are crowned. The crowned slat shall be flexible enough to bend 1800 around a 12.5mm radius without incurring any permanent deformation.
Slat dimensions	25mm Twi-Nighter®: the slat width is 25mm with a 7mm slat overlap 25mm Slimline: the slat width is 25mm with a 5mm slat overlap
Polyester cord	The core of the polyester cord shall be 1.5mm thick with a braided jacket.
Head & bottom rails	Fabricated from 0.5mm hot-dipped aluminium zinc coated steel. The finish is 12 ffl2 microns thick and comprises a thermoset polymer coating over primer.
Colour & finish	The colour shall be co-ordinated with trims.
Control	The blind shall be operated by wand/automated/control knob (in-between glass model)
Automation type	It shall incorporate automatic down stop/automatic up stop/low speed tilting/remote control/switch control.
Clutch	Wand operated 25mm Aluminium Venetian blinds shall contain the clutch mechanism.
Product name	50mm classic Aluminium Venetian blinds.
Slat material	The slats shall be manufactured from 0.200mm thick high tensile aluminium alloy 6001 T8. The crowned slat shall be flexible enough to bend 1800 around a 12.5mm radius without incurring any permanent deformation.
Slat dimensions	The slat width is 50mm with a 9mm slat overlap.
Polyester cord	The core of the polyester cord shall be 2.3mm thick with a braided jacket.
Headrails	The 98 MK2 headrail is manufactured from .04 steel alloy 9300S2.AZ150.
Bottom rail	The VB50 bottom rail is a 2 piece bottom rail manufactured from .60 aluminium alloy 5005 H16NAT
Colour	The colour shall be plain/perforated with 12mm tape/string tape and coordinated trims.
Automation type	It shall incorporate automatic down stop/automatic up stop/low speed tilting/remote control/switch control.

Luxaflex®

WINDOW FASHIONS

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COMFORT RATING

Aluminium Venetian blinds - 25mm and Twi-Nighter® Venetian blinds

COMFORT RATING™						Solar Optical Properties									
COLOUR						Ts	Rs	As	TL	RL	AL	Tuv	SC	R1	R2
Cotton	◆◆◆◆	◆◆	◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆	0	62	38	0	56	44	0	0.32	1.365	2.28
Grey Sheen	◆◆◆◆	◆◆	◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆	0	49	51	0	45	55	0	0.41	1.365	2.28
Bright Silver	◆◆◆◆	◆◆	◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆	0	54	46	0	61	39	0	0.38	1.365	2.28
Ebony	◆◆◆	◆◆	◆◆◆◆◆	◆◆◆◆◆	◆◆◆◆◆	0	5	95	0	7	93	0	0.72	1.365	2.28
Perf Cirrus 8%	◆◆◆◆	◆◆	◆◆◆	◆◆◆◆	◆◆◆◆	8	58	34	11	55	34	8	0.37	1.365	2.28
Perf Cirrus 4%	◆◆◆◆	◆◆	◆◆◆◆	◆◆◆◆	◆◆◆◆	4	58	38	6	58	36	4	0.36	1.365	2.28
Perf Shimmer 8%	◆◆◆◆	◆◆	◆◆◆	◆◆◆◆	◆◆◆◆	8	39	53	10	44	46	8	0.51	1.365	2.28
Perf Coal 8%	◆◆◆	◆◆	◆◆◆	◆◆◆◆	◆◆◆◆	8	5	87	11	6	83	8	0.74	1.365	2.28



Fire Retardant
[AS 1530.3.1999]

Complies with the General and Special Requirements of the Building Code of Australia for Fire Hazard properties of materials in buildings, as at the time of publication of this document.

Ignitability Index	0	[Range 0-20]
Spread of Flame Index	0	[Range 0-10]
Heat Evolved Index	0	[Range 0-10]
Smoke Developed Index	0-1	[Range 0-10]

Solar Optical Properties:

As - Heat Absorbance (%) Rs - Heat Reflectance (%)
Ts - Heat Transmittance (%) Al - Light Absorbance (%)
Rl - Light Reflectance (%) Tl - Light Transmittance (%)
SC - Shading Coefficient R1 - R-Value single glazing
R2 - R-Value double glazing

COMFORT RATING™

- ◆◆◆◆ Highest level of protection/performance
- ◆◆◆ High level of protection/performance
- ◆◆ Medium level of protection/performance
- ◆◆ Low level of protection/performance
- ◆ No protection



Heat protection



Insulation



Shade factor



Glare reduction



UV protection

MODELS & OPTIONS

COLOUR					
Black	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Bright Silver	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Clean Brilliant White	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Crisp Cotton	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Glazed Fawn	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Grey Sheen	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Euro Rich Cream	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Shale	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Shimmer Gold	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Sterling	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Chocolate	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Traditional Donkey	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Ebony	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Grape	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Grey Gloss	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Latin Gulf Blue	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Indigo Ash	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Ancient Jade	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Latte	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Linen	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Mocha	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Steel Nordic Blue	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
US Paperbank	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Warm Pure Silk	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Jet Red Currant	◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Pale Sky	◆◆◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Storm	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆
Deep Stratford Blue	◆◆◆	◆	◆◆◆◆	blockout	◆◆◆◆



Fire Retardant [AS 1530.3.1999]

Complies with the General and Special Requirements of the Building Code of Australia for Fire Hazard properties of materials in buildings, as at the time of publication of this document.

Ignitability Index	0 [Range 0-20]
Spread of Flame Index	0 [Range 0-10]
Heat Evolved Index	0 [Range 0-10]
Smoke Developed Index	0-1 [Range 0-10]

Solar Optical Properties:

As - Heat Absorbance (%)	Rs - Heat Reflectance (%)
Ts - Heat Transmittance (%)	Al - Light Absorbance (%)
RI - Light Reflectance (%)	TI - Light Transmittance (%)
SC - Shading Coefficient	R1 - R-Value single glazing
R2 - R-Value double glazing	

COMFORT RATING™

- ◆◆◆◆ Highest level of protection/performance
- ◆◆◆ High level of protection/performance
- ◆◆ Medium level of protection/performance
- ◆◆ Low level of protection/performance
- ◆ No protection



Heat protection



Insulation



Shade factor



Glare reduction



UV protection

Luxaflex®

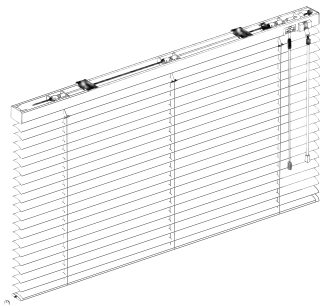
WINDOW FASHIONS

www.luxaflex.co.nz

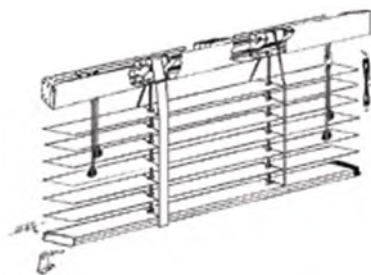
MODELS & OPTIONS

Exploded view diagram

Slimline® 25mm



Classic 50mm



Slat composition

6011 aluminium alloy. High tensile bounce back.

Width of slat options

25mm & 50mm

Headbox

The 25mm Aluminium Venetian blind uses a 26mm wide x 26mm deep strip rolled from pre-coated 0.5mm aluminium zinc alloy coated steel finished in a thermosetting polyester coating over a chromated primer, adding strength and rigidity to the headrail.

Bottomrail

The 25mm Aluminium Venetian blind uses a D-shaped 22.5mm x 10mm lock seamed tubular section, roll formed from 0.5mm aluminium zinc alloy coated steel, finished in a thermosetting polyester coating over a chromated primer. This fully enclosed bottom rail adds weight and maximum strength for rigidity. The coating process meets coil coating.

Standards

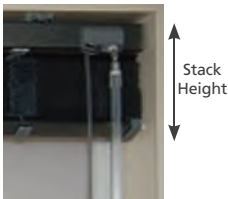
(AS/NZS2728:2007) to ensure paint adhesion flexibility and resistance to solvents and has been stove enamelled for greater corrosion resistance.

Stringtape

Woven to strict specification which allows you more slat overlap for light control.

Limitations

Aluminium Venetian blind limitations have been developed to ensure the blind operates and performs to maximum potential. Measurements outside of these parameters may not perform to our quality standards and will be void of warranty.



	Minimum Width	Maximum Width	Minimum Height	Maximum Height	Stack Height
25mm	210mm	3300mm	250mm	3200mm	(Drop x 0.34)+0.45
50mm	300mm	4000mm	180mm	3500mm	(Drop x 0.50)+0.45
Twilight®	210mm	3300mm	250mm	3200mm	(Drop x 0.34)+0.45



WINDOW FASHIONS

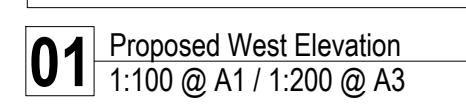
www.luxaflex.co.nz

Luxaflex® is a division of New Zealand Window Shades Ltd. Luxaflex® is a registered trade mark of New Zealand Window Shades Ltd.

New Zealand Windows Shades Limited, 2 - 6 Niall Burges Road, Mt Wellington, Auckland, New Zealand.

PO Box 12 785, Penrose, Auckland. Telephone 09 574 2200, Facsimile 09 573 6198

APPENDIX K



Drawing Number: 044 A-211C	Revision: 01
--------------------------------------	------------------------



01 Proposed East Elevation
1:100 @ A1 / 1:200 @ A3

Block A
Bike Store

Refurbished
High density
traditional timber
6 paneled door

Refurbished
High density
traditional timber
6 paneled door

New stone
steps

Block B
Entrance

Low level
Planters

New metal
gate



02 Key Plan
NTS

DISCLAIMER:

All dimensions are in millimetres. Do not scale from this drawing. All dimensions and conditions are to be checked and confirmed on site by the contractor. The contractor should inform the Architect of any discrepancies before proceeding with the work. This drawing is to be read in conjunction with all other relevant documentation including that produced by other consultants, subcontractors and suppliers.

All elements of work and materials are to comply with the Building Regulations, British Standards, good industry practice and the recommendations of material and component manufacturers. All products are to be suitable for their purpose. The contractor is to install all products where noted in accordance with manufacturers recommendations, specifications and inform the Architect of any discrepancies or changes in the specification before proceeding with the work.

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NOTES:



North

SCALE
BAR 1:100

0 1 2 5 10m

No.	Date	Issues and Revisions	By	Check	No.	Date	Issues and Revisions	By	Check
02	13/05/24	Issued for Construction	CB	CB					
01	05/04/24	mendments to Block B following SE drawings	ES	CB					
00	20/09/23	Issued to Consultants	CB	CB					

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Co No: 10498892
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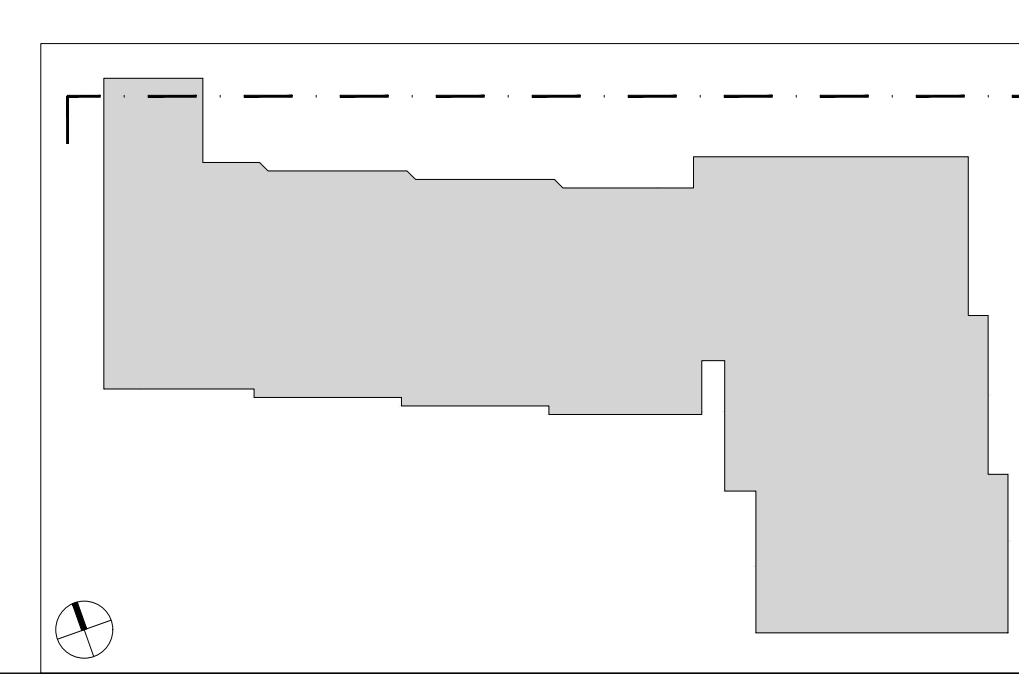
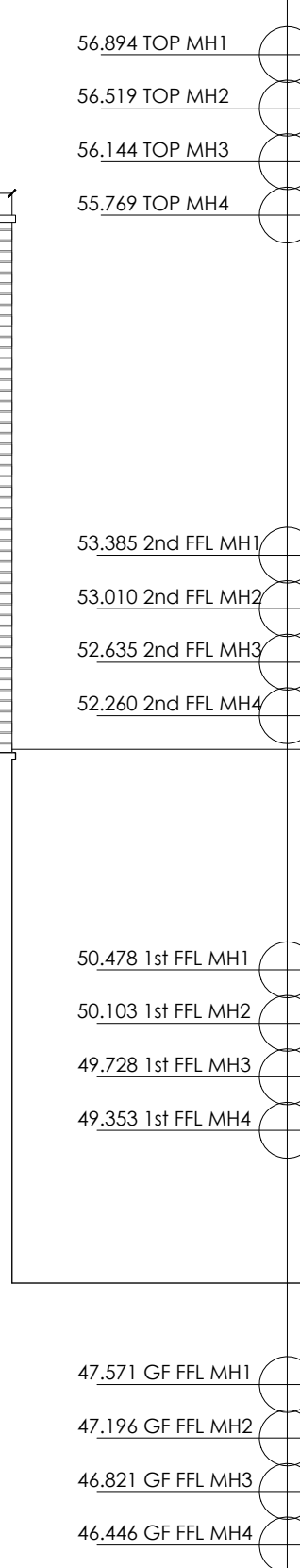


Project Name: HORNSEY POLICE STATION
Project Number: 044
Status: CONSTRUCTION
Description: PROPOSED EAST ELEVATION
Scale: 1:100 @ A1, 1:200 @ A3

Drawing Number:
044 A-212C

Revision:
02

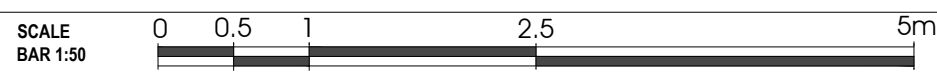
 : Windows with Internal Venetian Blinds



All dimensions are in millimetres. Do not scale from this drawing. All dimensions and conditions are to be checked and confirmed on site by the contractor. The contractor should inform the Architect of any discrepancies before proceeding with the work. This drawing is to be read in conjunction with all other relevant documentation including that produced by other consultants subcontractors and suppliers.

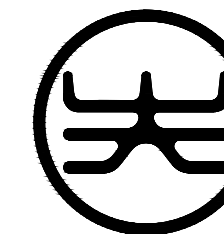
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SCALE
RANGE 1-5



00	26/04/24	Issued to contractor		C8	C8								
No.	Date	Issues and Revisions	By	Check	No.	Date	Issues and Revisions				By	Check	

ARCHANÆUM
Co No: 10498892 www.archanaeum.com



Project Name: HORNSEY POLICE STATION
Project Number: 044
Status: CONSTRUCTION
Description: BLOCK B NORTH ELEVATION
Scale: 1:50 @ A1, 1:100 @ A3

Drawing Number:
044 BLK B-212

Revision
00

APPENDIX L

Lo-Carbon Sentinel Kinetic Plus

- Acoustic Enclosure option for reduced breakout noise
- Acoustic Top Box option for reduced in-duct noise
- Recognised in SAP PCDB
- Horizontal duct option for space-saving installations
- High airflow, ideal for student accommodation clusters
- Unique folding filter for removal when access is restricted
- Integrated digital controller for simple and accurate commissioning
- Plug and play controls; Humidistat
- BMS connectivity
- LS inputs (Light Switch)
- Volt-free inputs
- Self diagnosis for simplified fault finding
- Adjustable delay On/delay Off timer
- 4 fully adjustable speeds and a purge setting



Increased Performance

The Sentinel Kinetic Plus benefits from the latest high efficiency, backward curved impeller design, ensuring the lowest possible energy consumption, ultra quiet operation and an exceptional performance range covering small one bed apartments to the largest of houses.

For scenarios where noise is a critical issue, an Acoustic Enclosure is available to reduce breakout noise and the Acoustic Top Box will reduce in-duct noise at key frequencies.

Care Homes & Student Accommodation

The Sentinel Kinetic Plus is ideal for larger homes and multiple occupancy units such as care homes and student accommodation. Capable of 400m³/hr at 150Pa, the unit can extract from up to ten bathrooms and a communal kitchen while still achieving almost 90% heat recovery. The fully automatic capability of the Kinetic range means that adequate ventilation is always achieved.

The Kinetic's BMS capability is also ideal for those commercial applications where landlords or property managers want to monitor and optimise building performance and maintenance. The Kinetic BMS can provide status information and its self diagnostics can report if any fault is found.

Spigot Options

Spigots may be re-positioned to give horizontal connection or a combination of vertical and horizontal connection.

Optional 180mm/200mm spigots can simplify connection in commercial installations where larger diameter duct work has been used.

Quick Change Filter

As many systems are placed within cupboards the unique filter design folds as you remove it to ensure easy access in restricted spaces.

Integral Humidity Sensor

The integral humidity sensor increases speed in proportion to relative humidity levels, saving energy and reducing noise. The sensor also reacts to small but rapid increases in humidity, even if the normal trigger threshold is not reached. This unique feature ensures adequate ventilation, even for the smallest wet room. The night time relative humidity setback feature suppresses nuisance tripping as humidity gradually increases with falling temperature.

Models

Model	Stock Ref
Sentinel Kinetic Plus BS	447938
Sentinel Kinetic Plus Right	443028
Sentinel Kinetic Plus Right with Acoustic Top Box & Enclosure	479538
Sentinel Kinetic Plus Right with Acoustic Top Box	479537
Sentinel Kinetic Plus Right with Acoustic Enclosure	479536
Sentinel Kinetic Plus Left	443028L
Sentinel Kinetic Plus Left with Acoustic Top Box & Enclosure	479541
Sentinel Kinetic Plus Left with Acoustic Top Box	479540
Sentinel Kinetic Plus Left with Acoustic Enclosure	479539

Accessories

Model	Stock Ref
Wired Remote Controller	443283
LED Alarm with 15m cable	448356
Opto-coupler for volt-free BMS connection	447340
ISO 45% Coarse (G3) 2x Filter	403702
ISO ePM10 50% Pollen (M5) 1x Filter	444201
180mm/200mm Spigot Kit (One per pack)	446523
Anti Vibration Mounts	68MP033G
Acoustic Purge Fan	477988
Acoustic Purge Fan XL	479829

SAP PCDB Test Results (Kinetic Plus BS)

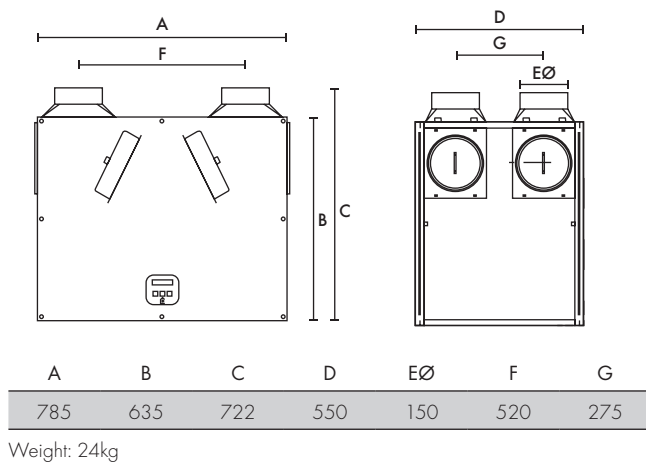
SAP 2009			SAP 2012	
	Thermal Efficiency %	SFP (W/l/s)	Thermal Efficiency %	SFP (W/l/s)
K+1	91	0.51	91	0.42
K+2	91	0.40	91	0.44
K+3	90	0.41	90	0.52
K+4	90	0.45	90	0.63
K+5	90	0.53	90	0.76
K+6	90	0.60	91	0.90
K+7	90	0.70	91	1.05

SEC Class

Model	SEC Class
Kinetic Plus	A+

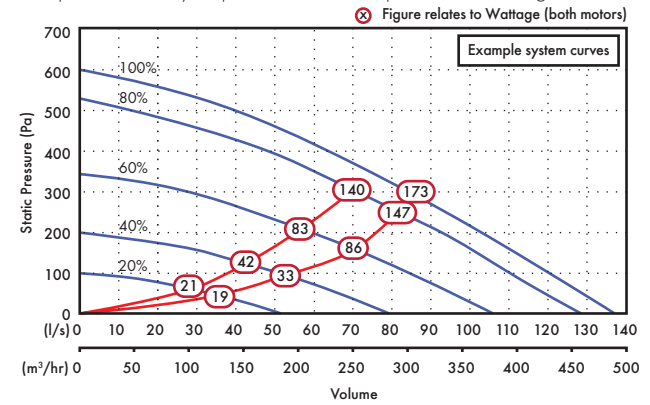
Dimensions (mm)

Unit

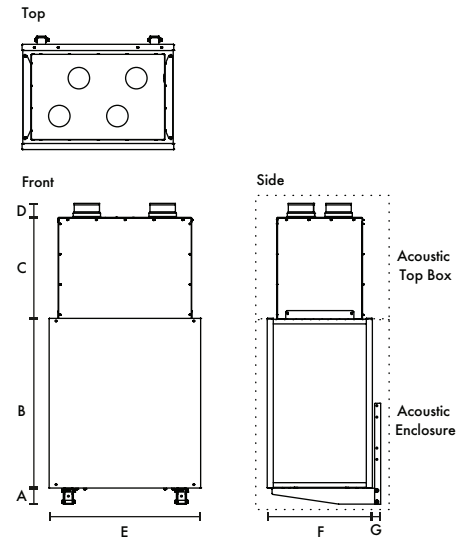


Performance

Fan speeds are fully adjustable within the performance range.



Acoustic Solution



		Acoustic Top Box		Acoustic Enclosure					
A	B	C	D	E	F	G	kg	kg	Spigot
80	733	501	71	855	583	40	17	33	150

Sound Data (Unit only)

Unit setting	Test mode	Octave band, Hz, dB SWL										SPL dB(A)	
		63	125	250	500	1k	2k	4k	8k	LwA	at 3m		
20%	Supply	54.4	60.9	50.6	45.9	34.3	23.6	19.1	24.5	51.3	30.8		
	Extract	48.4	56.7	43.7	35.9	21.4	16	18.7	24.5	42.3	24.8		
	Breakout	42.6	40.2	39.6	38	31.1	24.3	19.4	24.6	35.1	17.6		
40%	Supply	61.6	64.6	58.4	55.5	45.9	37.2	24.7	25.1	58.8	38.3		
	Extract	54.9	62.2	51.5	44.8	32.1	24.1	19.7	24.6	48.8	31.3		
	Breakout	51.1	49.3	48.9	45.9	41.3	35.7	26.7	25.6	44.0	26.5		
60%	Supply	67.5	67.5	73.2	62.4	53.4	47.5	33.5	28.3	69.2	48.7		
	Extract	62.5	61.7	60.1	51.1	39.2	32.1	23.2	24.8	54.0	36.5		
	Breakout	54.9	53	58.4	55.1	49.7	43.9	35.4	31.9	52.8	35.3		
80%	Supply	70.5	71.1	73.8	66.5	58.3	53.2	39.7	33.3	71.3	50.8		
	Extract	68.4	65.9	71.8	55.6	43.6	37.1	27.3	25.5	63.8	46.3		
	Breakout	59.2	56.8	63.6	57.3	54.2	49	41	37.5	56.8	39.3		
100%	Supply	72.8	73.1	75.2	70.4	61.6	56.6	44.2	37.6	73.9	53.4		
	Extract	71.7	69	71.8	57.4	45.7	39.9	30.9	26.6	64.1	46.6		
	Breakout	61.2	58.8	67.9	59.6	56.7	52.2	44.4	41.2	60.1	42.6		

Sound Data (Unit with Acoustic Solution)

Unit setting	Test mode	Octave band, Hz, dB SWL										SPL dB(A)	
		63	125	250	500	1k	2k	4k	8k	LwA	at 3m		
20%	Supply	55.7	49.2	36.6	23.6	17.4	14.9	17.8	23.3	36.1	18.6		
	Extract	51.4	42.4	30.3	20.9	16.8	14.9	17.8	23.3	30.8	13.3		
	Breakout	37.4	39.7	30.0	22.7	15.6	14.0	17.9	23.3	28.4	7.9		
40%	Supply	59.7	59.7	45.5	32.2	22.2	15.2	17.9	23.3	45.1	27.6		
	Extract	54.8	55.0	38.0	26.8	18.1	14.9	17.8	23.3	40.2	22.7		
	Breakout	45.7	48.5	39.9	32.8	24.2	17.5	18.0	23.4	36.8	16.3		
60%	Supply	66.1	61.9	53.6	41.0	29.8	18.3	18.0	23.3	49.5	32.0		
	Extract	60.6	55.9	48.4	34.9	23.8	16.3	17.9	23.3	43.8	26.3		
	Breakout	51.1	51.0	52.4	40.9	33.2	26.1	19.7	23.4	44.5	24.0		
80%	Supply	70.0	67.6	68.5	48.1	37.9	25.3	19.4	23.6	60.7	43.2		
	Extract	65.4	59.7	57.2	41.6	31.3	21.8	19.2	23.4	50.4	32.9		
	Breakout	55.6	55.6	57.9	47.9	40.4	34.3	26.1	23.7	51.3	30.8		
100%	Supply	72.1	70.1	66.4	51.6	41.9	29.7	21.7	24.0	60.0	42.5		
	Extract	68.2	62.4	60.6	45.5	36.0	26.6	21.7	23.6	53.8	36.3		
	Breakout	57.6	58.8	63.3	51.0	44.2	38.5	31.0	24.9	56.3	35.8		

Tested according to BS EN 13141-7:2010. Breakout quoted spherical. Supply and Extract quoted hemispherical. For in-duct data, end reflections are added based on the spigot size of the unit.

Consultant's Specification

Operation

The supply and extract ventilation unit shall be as Sentinel Kinetic Plus as manufactured by Vent-Axia and shall be sized as indicated on the drawings and shall be in accordance with the particular specification.

Supply air to the room shall be pre-heated by the extract air via the integrated composite plastic counterflow heat recovery cell. The Sentinel Kinetic Plus shall automatically vary the ventilation rate via EC/DC motors, as it receives signals from one of the optional interconnected sensors.

When a signal is received, the fans shall either vary their speed proportionally or on a trickle and boost principle.

The unit shall have the facility to commission the supply and extract fans individually via in-built minimum and maximum speed adjustment, or alternative wired remote control unit. The fans themselves shall have independent, infinitely variable speed control.

Unit Specification

The unit shall be manufactured with an ABS outer case construction, and incorporate a reversible core to allow for left or right hand mounting.

The unit shall have a high efficiency composite plastic counterflow heat exchanger, supply and extract filters, automatic summer bypass, integral minimum and maximum infinitely variable speed controls with fascia mounted failure indication.

The unit shall have low energy, high efficiency EC/DC fan/motor assemblies with sealed for life bearings. The impellers shall be high efficiency backward curved centrifugal type.

The unit shall have a heat exchanger cell with a thermal efficiency of up to 92% when tested to EN 308. This shall be protected by ISO 45% Coarse (G3) grade synthetic filters on supply and extract. Complete with a condensate drip tray and drain connection.

To reduce breakout noise, the MVHR unit shall be provided with an Acoustic Enclosure of steel construction lined with class 'O' acoustic foam. To reduce in-duct noise, the top of the MVHR shall be fitted with an Acoustic Top Box to provide attenuation to the 4 ducts of the unit. This Acoustic Top Box shall be of steel construction lined with acoustic class 'O' foam with the MVHR spigots linked to the Top Box via 4 separate attenuated ducts. The acoustic enclosure and top box shall each be independently tested for noise to BS EN 13141-7.

The unit shall be constructed with a removable Core allowing full maintenance access. The removable Core shall provide access to the following:

- ✓ Supply and extract filter
- ✓ Heat exchanger
- ✓ Access to the electrical connections

Access shall be provided for wiring termination and setup/commissioning. The backlit LCD user interface therein may be duplicated for remote mounting if required.

Units shall be as manufactured by Vent-Axia Ltd.

The MVHR unit shall incorporate an Expanded Polystyrene (EPS) inner chassis with custom motor and impeller mounting features. The inner chassis will assist in reducing noise and act as a large anti-vibration mount to avoid transmission through to the back mounting plate or the base of the unit.

The MVHR unit shall be tested to ensure it meets the maximum allowable vibration of no more than 1 mm/s, measured on the unit wall fixing points.

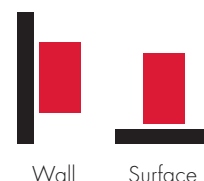
Sound tested to BS EN 13141-7:2010

Standard Controls

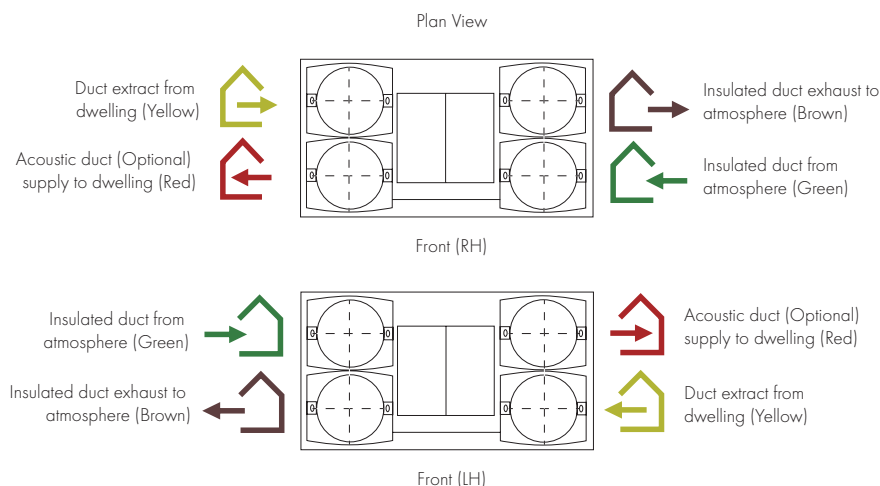
All Sentinel Kinetic units shall incorporate the following functions integrally mounted, pre-wired and factory fitted by the manufacturer:

- ✓ Integral infinitely variable fan speed control on supply and extract
- ✓ Integral min/max ventilation control/set point
- ✓ Integral BMS input/output interfaces – control and status indication
- ✓ Heating interlocks
- ✓ 0-10V proportional speed adjustment
- ✓ Volt free contacts
- ✓ 24V sensor supply
- ✓ Integral on/off or trickle boost function from remote switch, e.g. PIR occupancy detector
- ✓ Fully automatic summer bypass
- ✓ Switched Live input with adjustable 'delay-on' feature
- ✓ Fan failure or component failure indicated via individual fault code display
- ✓ Running time counter
- ✓ Control panel PIN number lock
- ✓ Automatic frost protection effective to -20°C
- ✓ The unit shall incorporate an integral humidity sensor with the following features:
 - Ambient Response; Raises the humidity trigger point as dwelling temperature reduces
 - Rapid Response: Monitors the rate of change in humidity and triggers increased airflow even if the humidity trigger threshold is not reached
 - Proportional Response; Incrementally increases the fan speed to reduce noise and reduce energy consumption
- ✓ The unit shall be controlled by the 'Sentinel' control devices (enablers and sensors) as detailed in the schedule or on the drawings.
- ✓ Tool free filter access

Mounting Option

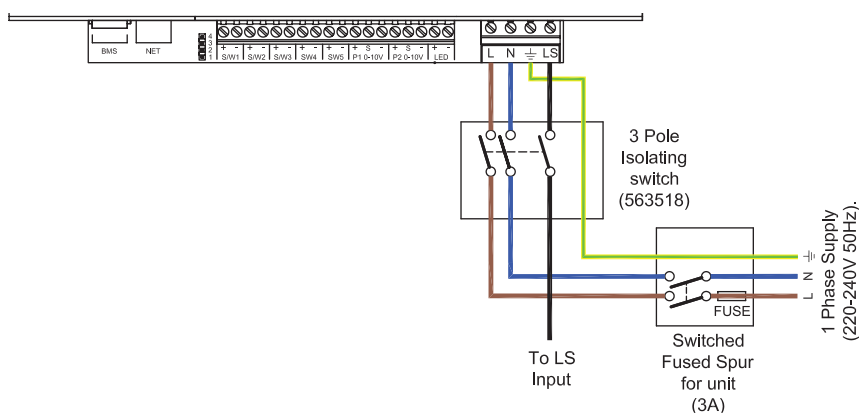


Airflow Direction

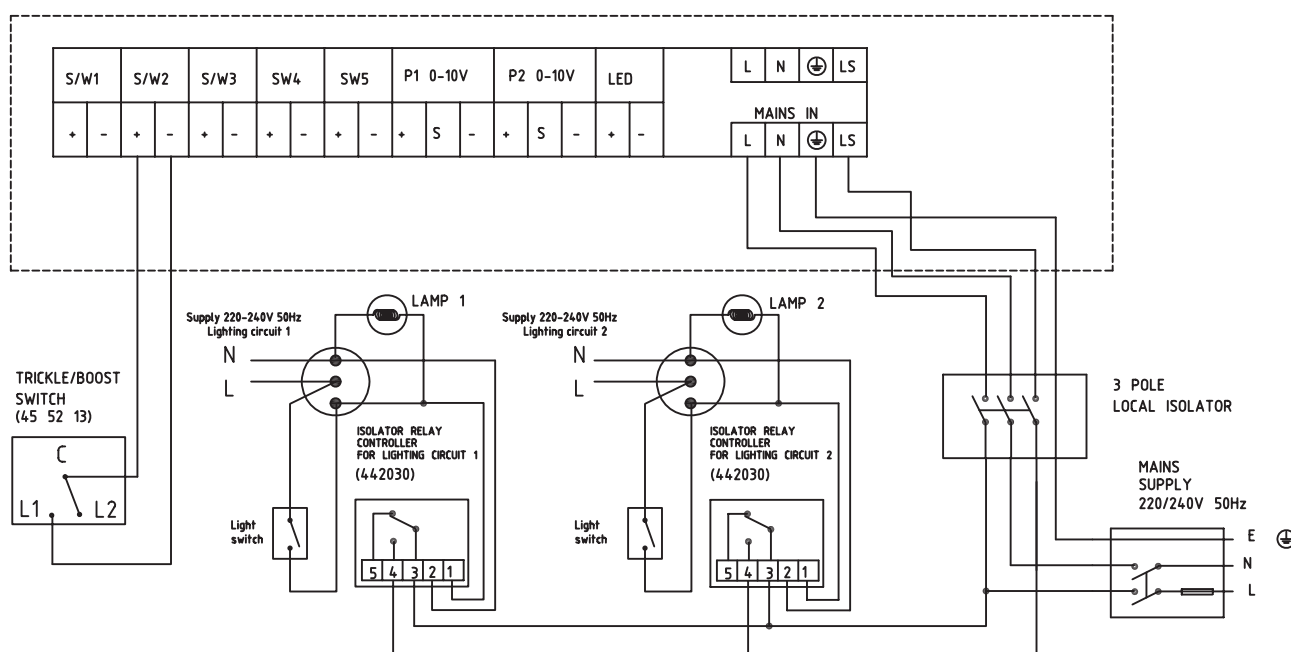


Electrical Connection

Please note: Electrical connection should be carried out by an appropriately qualified person and in accordance with current wiring regulations.



Trickle to Boost by two lighting circuits or Trickle/Boost Switch

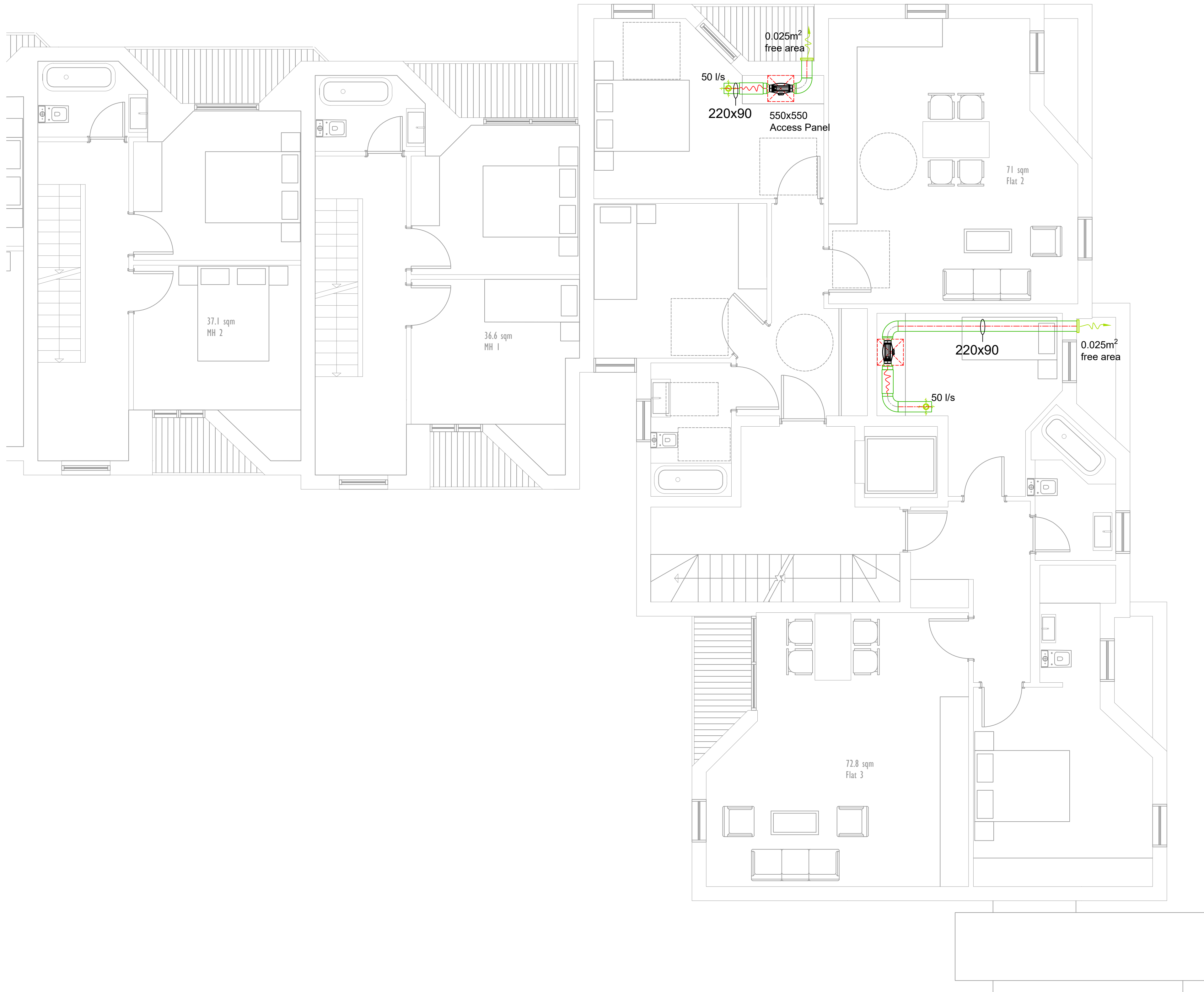


APPENDIX M

GENERAL NOTES:

1. This drawing is not an Architects drawing and must not be interpreted as such.
2. Do not scale off this drawing.
3. This drawing must not be used for construction or installation purposed unless stated.
4. All dimensions must be verified on site before completing shop drawings or setting out the work.
5. This drawing to be read in conjunction with the relevant technical specifications.
6. This drawing is to be read in conjunction with Architectural and Structural Engineers drawings.

HW - Hot Water	NRV - Non Return Valve
HL - High Level	S/C - Stop Cock
LL - Low Level	C/V - Control Valve
TA - To Above	DRV - Double Regulating Valve
TB - To Below	LSV - Lock Shield Valve
FA - From Above	IV - Isolation Valve
FB - From Below	STR - Strainer
SS - Stub Stack	HTG - Heating
AAV - Air Admittance Valve	CW - Cold Water
SVP - Soil Vent Pipe	TD - To Danish
DCV - Double Check Valve	F - Flow
SV - Solenoid Valve	R - Return
NRV - Non Return Valve	
PRV - Pressure Relief Valve	
Pipes Hidden H/L	-----
Pipes Hidden L/L	-----
Pipes Exposed H/L	-----
Pipes Solid L/L	-----



REV	MODIFICATIONS	DATE
-	-	-

CARNELL
WARREN

A S S O C I A T E S

DUKE HOUSE, DUKE STREET, WOKING, GU215BA
PROJECTS@CARNELLWARREN.CO.UK 01483 730995

PROJECT Hornsey Police Station

TITLE

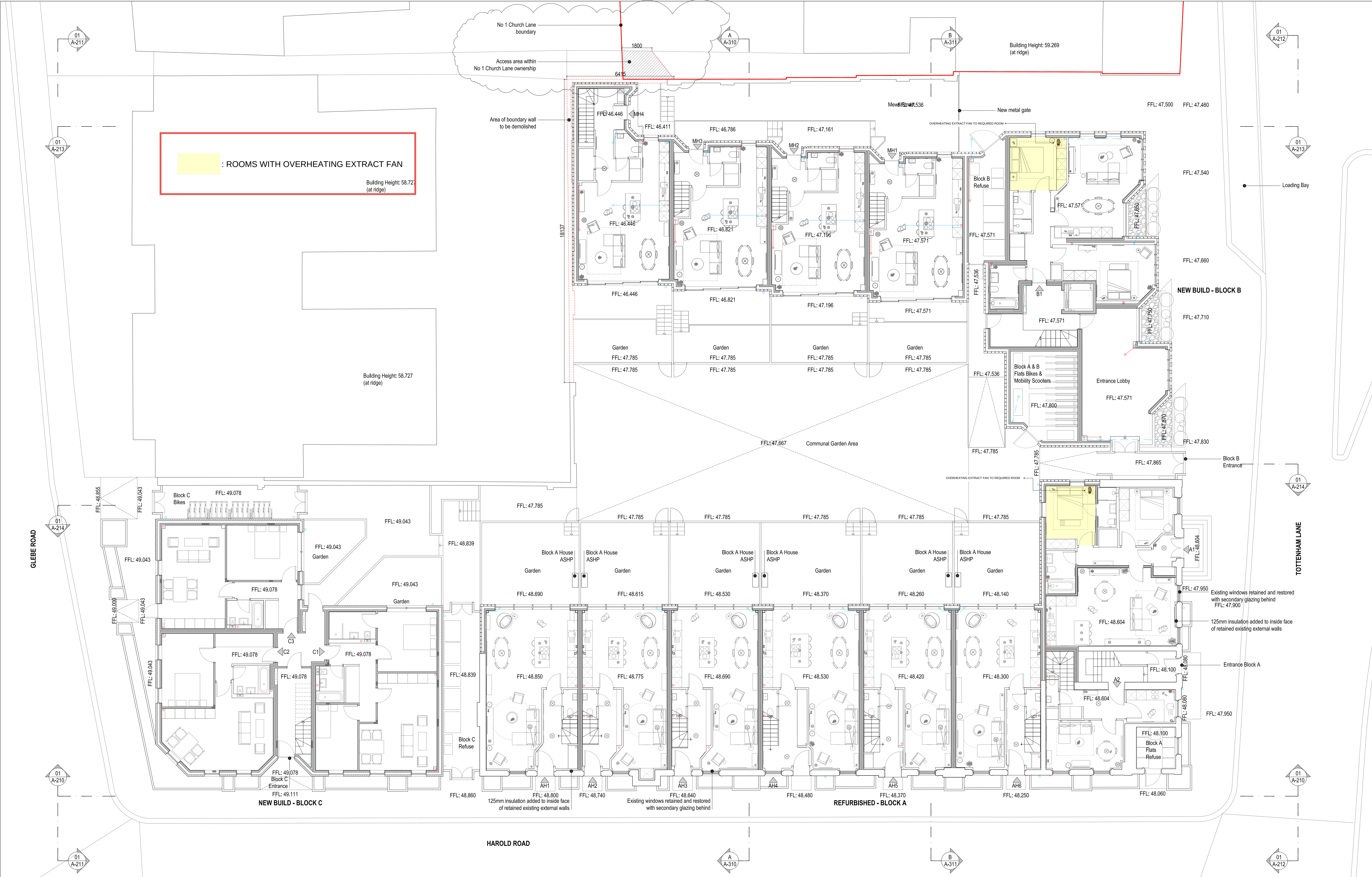
Typical Flats Ventilation Layout

CLIENT
Dixon8 Limited

SCALE @ A1 DATE June '23 DRN AP

DRAWING NO.	REV.
1982/M/201	*

APPENDIX N



DISCLAIMER:

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NOTES:
- RWP
- SVP
- SVP From Above

North

SCALE

BAR 1:100

0 1 2 5 10m

05	05/04/24	Structural amendments following SE drawings
04	28/03/24	FFL's updated. Ownership line for 1 Church Lane & access added
03	02/02/24	Boundary wall demolition added
02	27/11/23	Ground Floor FFL's added
01	23/11/23	Technical information added to Block plans
00	20/09/23	Issued to Consultants

No.	Date	Issues and Revisions
-----	------	----------------------

ES	CB	11	01/08/24	1 Church Lane Access Amended
ES	CB	10	24/07/24	Levels added to context
ES	CB	09	24/07/24	Issued to Council Design Amendments
ES	CB	08	17/06/24	Amendments to Block B lift shaft
ES	CB	07	23/05/24	Issued to Party Wall Surveyor
ES	CB	06	13/05/24	Issued For Construction. Levels amended as bubbled

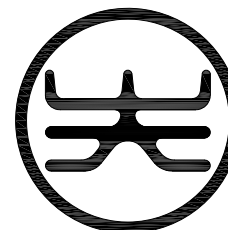
By	Check	No.	Date	Issues and Revisions
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ES	CB
ES	CB
ES	CB
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ES	CB

ARCHANAÆUM

Co No: 10498892

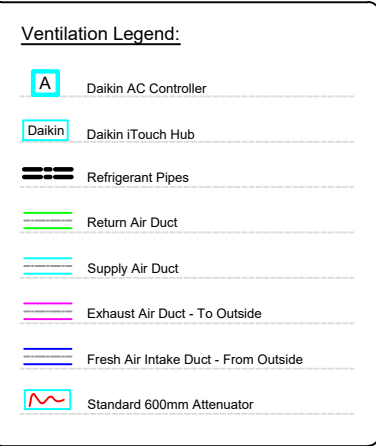
www.archanaeum.com



Project Name: HORNSEY POLICE STATION
Project Number: 044
Status: CONSTRUCTION
Description: PROPOSED GROUND FLOOR PLAN
Scale: 1:100 @ A1, 1:200 @ A3

Drawing Number: 044 A-110C

Revision: 11



GENERAL NOTES:

- This drawing is not an Architects drawing and must not be interpreted as such.
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- This drawing to be read in conjunction with the relevant technical specifications.
- This drawing is to be read in conjunction with Architectural and Structural Engineers drawings.

HW - Hot Water	NRV - Non Return Valve
HL - High Level	S/C - Stop Cock
LL - Low Level	C/V - Control Valve
TA - To Above	DRV - Double Regulating Valve
TB - To Below	LSV - Lock Shield Valve
FA - From Above	IV - Isolation Valve
FB - From Below	STR - Strainer
SS - Stub Stack	HTG - Heating
AAV - Air Admittance Valve	CW - Cold Water
SVP - Soil Vent Pipe	TD - Tundish
DCV - Double Check Valve	F - Flow
SV - Solenoid Valve	R - Return
NRV - Non Return Valve	
PRV - Pressure Relief Valve	
Pipes Hidden H/L	-----
Pipes Hidden L/L	-----
Pipes Exposed H/L	-----
Pipes Solid L/L	-----

OVERHEATING EXTRACT
FAN TO REQUIRED ROOMS

KITCHEN EXTRACT
THROUGH AIRBRICK

EXHAUST AIR THROUGH
AIRBRICK

INTAKE AIR THROUGH
AIRBRICK

MVHR AS VECTAIRE EVO250DC
750W x 650D x 250H

ALL DUCT WORK IN
ENTRANCE HALL TO BE
FIRE RATED

T2	MVHR Unit and ductwork updated.	05/08/2024
T1	Architects layout updated.	23/05/2024
T0	TENDER ISSUE	19/12/2023
REV	MODIFICATIONS	DATE

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PROJECT
HORNSEY POLICE
STATION

TITLE
BLOCK B
FLAT B2
VENTILATION

CLIENT
DIXON8 LIMITED

SCALE @ A1
1:50

DATE
DEC '23

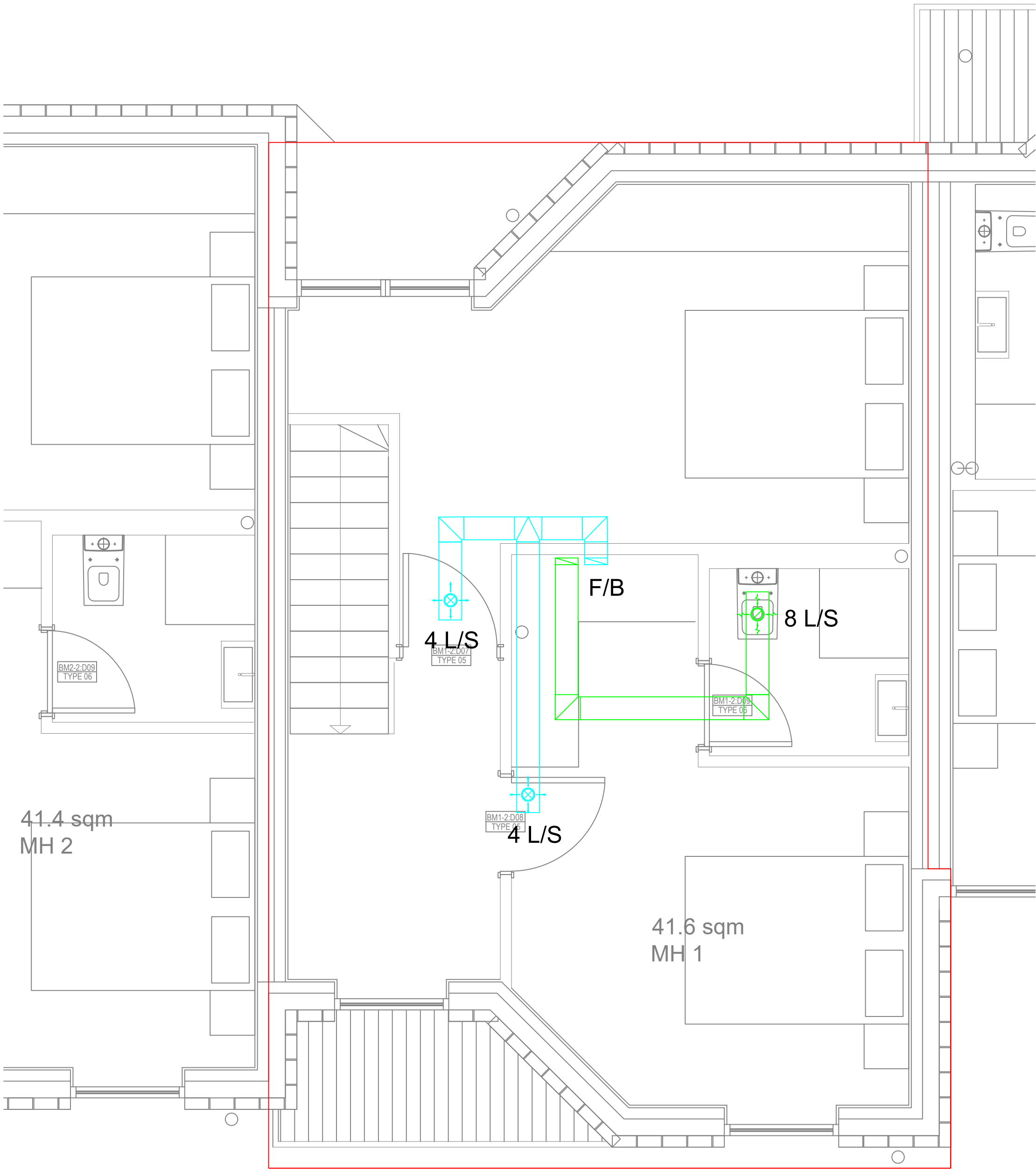
DRN
JK

DRAWING NO.
1982/M/201F

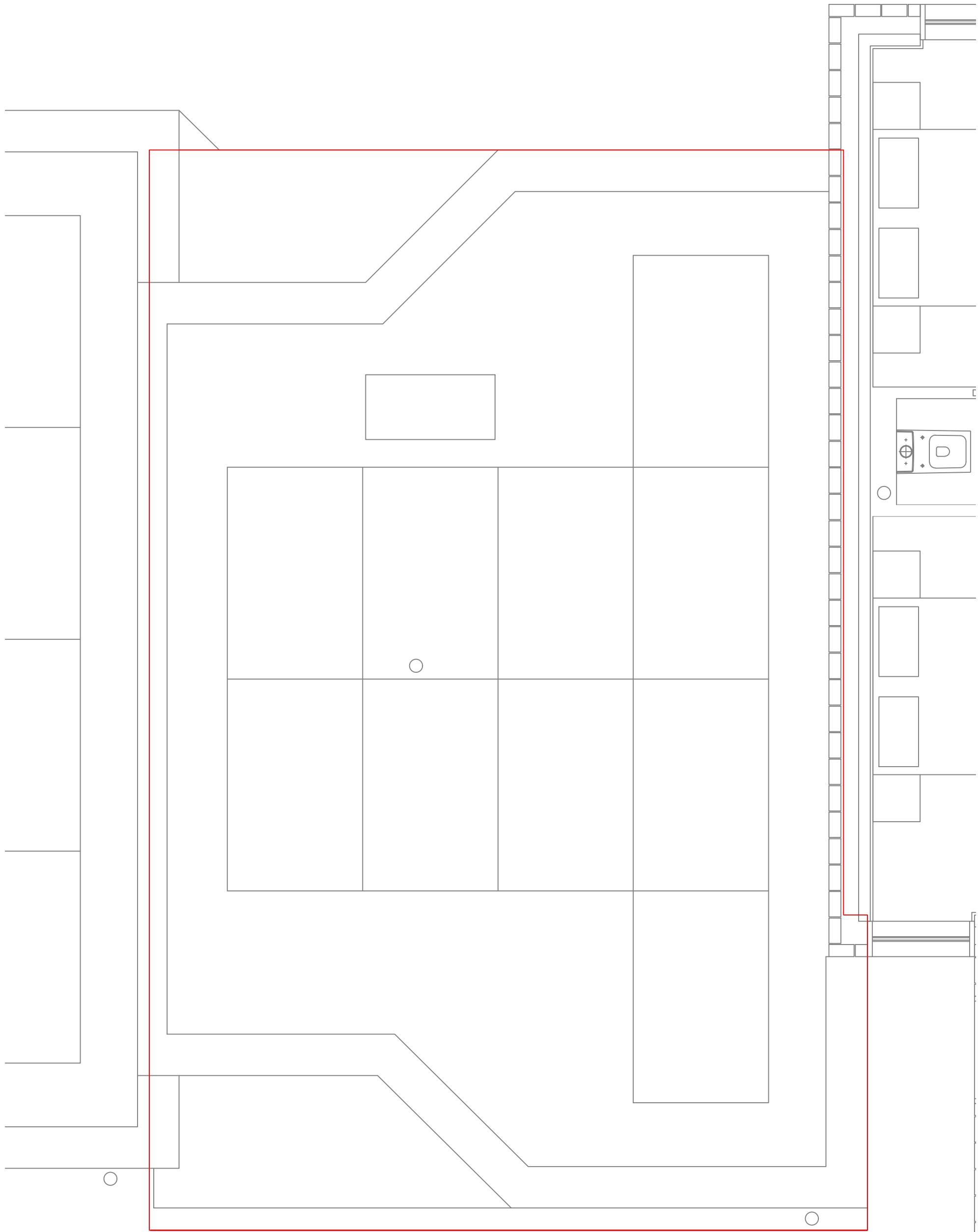
REV.
T2

Ventilation Legend:

- Daikin AC Controller
- Daikin Touch Hub
- Refrigerant Pipes
- Return Air Duct
- Supply Air Duct
- Exhaust Air Duct - To Outside
- Fresh Air Intake Duct - From Outside
- Standard 600mm Attenuator



SECOND FLOOR



ROOF

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SV - Solenoid Valve	R - Return
NRV - Non Return Valve	
PRV - Pressure Relief Valve	
Pipes Hidden H/L	-----
Pipes Hidden L/L	-----
Pipes Exposed H/L	-----
Pipes Solid L/L	-----

T3	MVHR relocated.	07/08/2024
T2	Architect layout updated.	23/05/2024
T1	Architects comments added.	14/03/2024
T0	TENDER ISSUE	19/12/2023
REV	MODIFICATIONS	DATE

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PROJECT
HORNSEY POLICE
STATION

TITLE
MEWS HOUSE 1
GROUND FLOOR
VENTILATION

CLIENT
DIXON8 LIMITED

SCALE @ A1
NTS

DATE
DEC '23

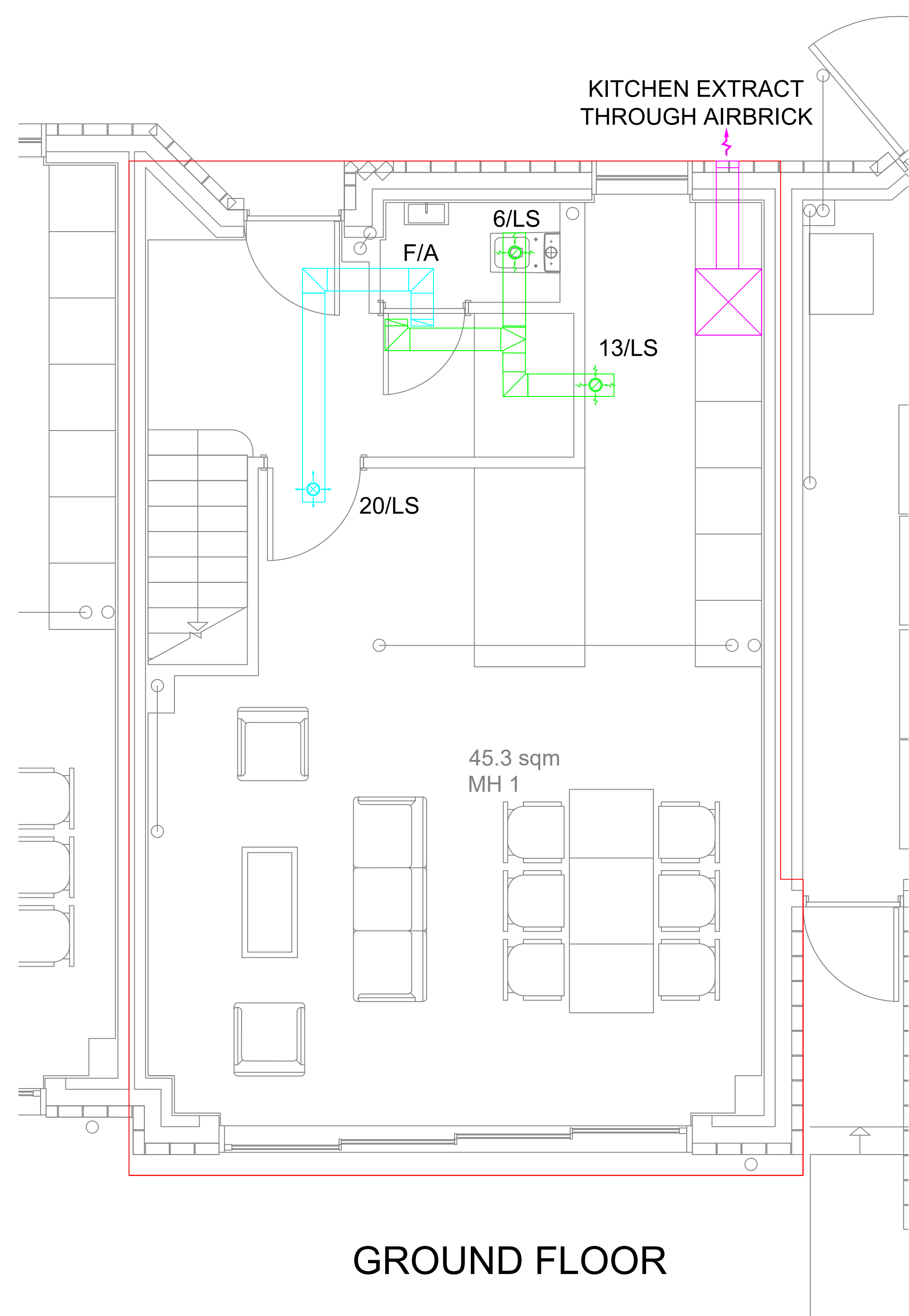
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DRAWING NO.
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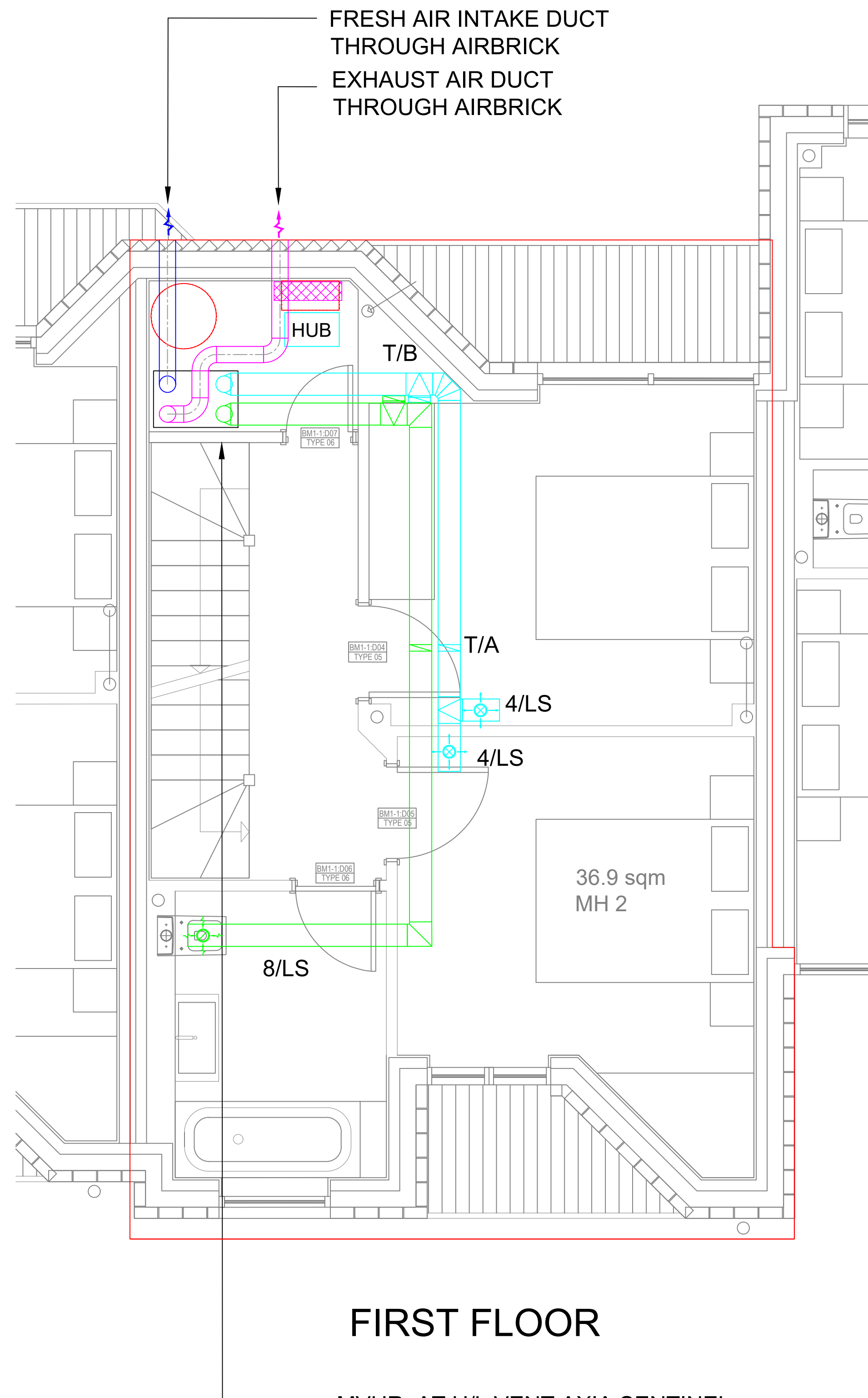
REV.
T3

Ventilation Legend:

-  Dakin AC Controller
-  Dakin Touch Hub
-  Refrigerant Pipes
-  Return Air Duct
-  Supply Air Duct
-  Exhaust Air Duct - To Outside
-  Fresh Air Intake Duct - From Outside
-  Standard 600mm Attenuator



GROUND FLOOR



FIRST FLOOR

MVHR AT H/L VENT AXIA SENTINEL KINETIC PLUS
630H x 520W x 776L
EXHAUST & SUPPLY FROM ROOF

GENERAL NOTES:

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PRV - Pressure Relief Valve	
Pipes Hidden H/L	-----
Pipes Hidden L/L	-----
Pipes Exposed H/L	-----
Pipes Solid L/L	-----

T2	MVHR relocated.	23/05/2024
T1	Architect layout updated.	23/05/2024
T0	TENDER ISSUE	19/12/2023
REV	MODIFICATIONS	DATE

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PROJECT
HORNSEY POLICE
STATION

TITLE
MEWS HOUSE
GROUND & FIRST
FLOOR VENTILATION
LAYOUT

CLIENT
DIXON8 LIMITED

SCALE @ A1
NTS

DATE
DEC '23

DRN
JK

DRAWING NO.
1982/M/202H

REV.
T2

APPENDIX O

APPENDIX O

Architecture Statement

Amendment To Original Scheme

The original planning scheme proposed external blinds as a measure to mitigate overheating within the Former Police Station building. However, following a thorough reassessment during the technical design phase, it became clear that external blinds would not be suitable for the primary elevations of the building. This review was prompted by the significant impact that external blinds would have on both the aesthetic and architectural integrity of the building, particularly in the context of the Hillfield Conservation Area. A detailed analysis of the building's characteristics and its location within the conservation area revealed that alternative, less intrusive solutions must be explored.

Upon exploring various external blind products, it became evident that none would be appropriate for the primary façades of the Former Police Station. The installation of any external blinds on these elevations would require a unit positioned above the keystone, resulting in an overly large and visually intrusive element. This would obscure key architectural details, such as the red sandstone keystones and banding, which are integral to the building's historical and architectural significance. The addition of such an element would alter the building's character and undermine its visual harmony within the broader conservation area.

Additionally, options for blinds that could be fitted within the window frames were explored. However, given the windows are arched and defined by prominent keystones, any external blind with straight lines would conflict with these defining features. Such an installation would detract from the building's architectural integrity and disrupt its aesthetic balance, potentially compromising its historical value and contribution to the character of the conservation area.



As outlined in the Hillfield Conservation Area Statement, one of the primary objectives of the conservation area is to preserve and enhance the architectural features and historical value of the

area while maintaining the uniformity of the streetscape. The Statement stresses the importance of retaining original features and materials to prevent alterations that could negatively affect the area's character. External blinds—particularly those not part of the building's original design—would undermine these objectives and detract from the building's value as part of the heritage fabric of the conservation area.

Furthermore, the introduction of external blinds would not align with the townscape values set out in the Conservation Area Statement. Alterations to the building's façade in this manner would conflict with the aesthetic qualities and cohesion of the surrounding area. The preservation of original materials, proportions, and architectural details is essential in safeguarding the building's integrity and maintaining the character of the surrounding properties.

Consideration of the Modern Elevations

The consideration of the conservation area extends to all blocks within the development, including the modern elevations. As part of a unified development, it is essential that all elevations work together to create a cohesive architectural identity. The inclusion of external blinds on the modern elevations would be at odds with the uniformity of the overall design, potentially resulting in a disjointed visual experience, especially when viewed from various vantage points. Maintaining a consistent, uninterrupted façade is critical to preserving the integrity of the entire development, ensuring its cohesion as a harmonious whole.

While the modern elevations are designed with clean lines, open glazing, and a minimalistic approach to external features, introducing external blinds would disrupt the sleek, contemporary design language. Such an addition would create visual clutter and undermine the original design intent, introducing competing lines and proportions that conflict with the building's clean, minimalist aesthetic. The original planning scheme sought to balance the heritage building with modern elements, but the installation of external blinds on the modern elevations would detract from this balance and disrupt the overall design concept.

Alternative Solutions for Overheating Mitigation

External blinds were initially proposed to address overheating concerns, but upon further review, we determined that alternative solutions can effectively meet these needs without compromising the aesthetic or architectural integrity of the building. Internal blinds or other passive cooling strategies—such as improved insulation or shading devices integrated within the building—offer viable solutions that respect the building's historic character while addressing practical requirements.

Internal Venetian blinds, for example, have been identified as an effective solution for mitigating solar gain and managing overheating risks. Updated thermal modelling confirms that internal Venetian blinds with a heat reflectance of 62% provide sufficient protection against solar gain, meeting the overheating criteria set out in CIBSE TM59. These blinds offer residents greater control over their environment, allowing for personalized shading that improves comfort. Moreover, internal blinds avoid the potential risks associated with external blinds, such as maintenance challenges and aesthetic disruption, aligning with the project's sustainability goals.

Conclusion

In conclusion, the proposed external blinds, while originally considered to address overheating, would have significant aesthetic, architectural, and practical drawbacks, particularly with respect to the primary elevations of the Former Police Station and the broader conservation area. The decision to

explore internal blinds and other passive cooling measures aligns with the objectives of preserving the historical and architectural integrity of the building, while also providing an effective solution for managing overheating. This approach will help ensure that the building remains a key contributor to the visual cohesion and character of the Hillfield Conservation Area, preserving its unique features for future generations.