



7.4 Overheating analysis

Analysis

The overheating strategy for the proposed residential development has been carried out in line with the GLA overheating guidance and CIBSE TM59. The strategy relies on passive measures such as low g-values and external shading elements including inset balconies. Overheating will be further mitigated through fully openable windows. The commercial areas will be cooled via FCUs. The overheating assessment for these spaces has been carried out following CIBSE TM52 guidance and assessing the PMV/PPD thermal comfort criteria.

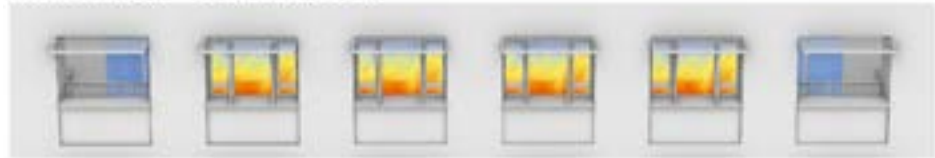


Southwest facade

no shading 4713 KWh



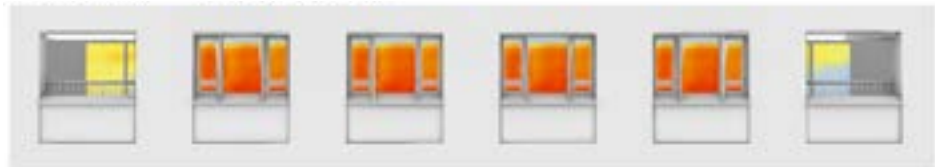
with shading 3167 KWh (-33%)



horizontal only 3463 KWh (-27%)



vertical only 4116 KWh (-13%)



West facade

no shading 3836 KWh



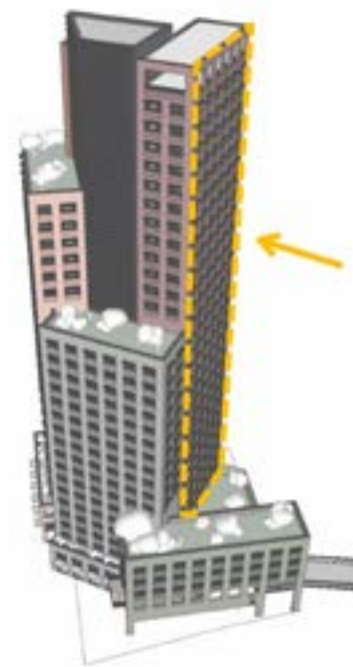
with shading 2668 KWh (-30%)



horizontal only 2921 KWh (-24%)



vertical only 3388 KWh (-12%)



Southeast facade

no shading 3741 KWh



with shading 2051 KWh (-46%)



horizontal only 2387 KWh (-37%)



vertical only 3121 KWh (-16%)



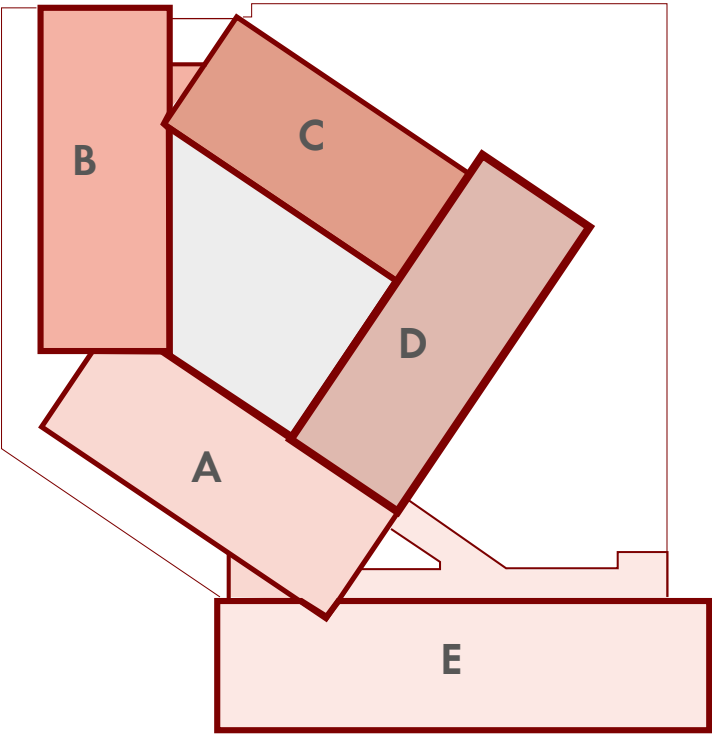
Design development studies testing facade solar exposure

Solar shading

Extensive studies were carried out with regard to the employment of solar shading. Each elevation was assessed with a combination of horizontal and vertical solar shading elements employed. The results together with daylight analysis levels informed the design decisions of what shading elements were appropriate for each orientation.

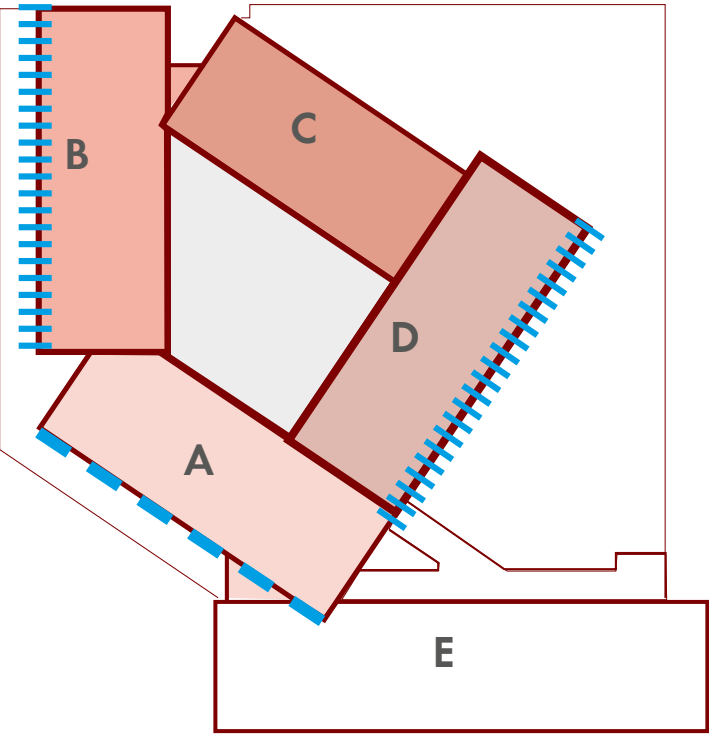
Level 1 - 8

No shading Level 1 - 8



Level 9+

- - - Horizontal & vertical shading to two sides
- ||||| Horizontal & vertical shading to one side



Employment of solar shading by orientation

7.5 Fire design

Strategy

The building will be designed in accordance with the latest relevant guidance in order to support the safety and well-being of the occupants intended to use it. A clear fire strategy will be provided so that all parties associated with the design and/or construction are certain of the standards that must be achieved throughout the project. Deviations from the strategy such as alternative materials or techniques will not be permitted without consent from the relevant fire engineer, relevant building control body and the fire service. All parties associated with the project are expected to maintain the highest levels of service and workmanship at all times.

The design intends to provide a safe environment for occupants to live in. The objective of the strategy is to ensure a minimum level of fire risk to the building users, in the event of a fire it is required to provide safe routes for occupants to escape to a place of ultimate safety. Reliance on a single measure to achieve these goals could make the strategy vulnerable should that measure fail to perform as intended. As such, the design intends to ensure that multiple measures are provided to maintain safety at all times. The strategy ensures that emergency services can access the entry point and all areas within the building without undue delay or complication. The objective is to allow fire service personnel a clear route to reach a fire compartment and conduct firefighting operations.

The strategy considers the surrounding area, adjacent buildings and public areas which are located around the site boundary. A combination of internal compartmentation, smoke ventilation, and protection to external walls will prevent fire from spreading throughout the building or to neighbouring sites. The intention of a fire statement, fire strategy and associated fire safety documentation is to provide detailed information which must be retained for the lifecycle of the building and referred to should any further works take place.

The Health and Safety Executive (HSE) was consulted and a Gateway 1 Review was held on 22nd September 2022. The applicant has always required the building to be designed with two means of escape and to fulfil the requirements of BS 9999, placing the safety of residents to the forefront.



8 Access & Movement



8.1 Public transport

Public Transport

Berol Quarter has excellent pedestrian links to public transport and is PTAL 6a / Excellent (highest possible description). It benefits from being within close proximity to:

- Tottenham Hale Railway and London Underground Station - approximately 100m south of Berol Yard / 2-minute walk for services including Stansted Express, East Anglia and the Victoria Line.
- Tottenham Hale Bus Station - approximately 150m south of Berol Yard / 3-minute walk for a multitude of bus routes.
- Bus Stop on Watermead Way - approximately 50m northeast of Berol Yard / 1 minute walk for bus no. 192.

PTAL output for Base Year
6a
Easting: 534429, Northing: 189663

