Haringey's Key Overheating Planning Application Requirements

General requirements

Overheating assessments should be undertaken for any buildings where people spend a significant amount of time, and developments of these types should comply with these requirements policy, including:

- Prisons and other buildings such as immigration detention centres where people are not permitted to leave
- Offices
- Schools, nurseries and any other educational facilities
- Care homes, sheltered housing and assisted living facilities
- Healthcare facilities
- Temporary residential accommodation
- Student and co-living accommodation
- Warehouse living
- All buildings where vulnerable people are accommodated

Habitable rooms in which people will be sleeping must be modelled in line with the CIBSE TM59 requirements. Any communal areas or other types of habitable room spaces that are not classified as Use Class C3 Residential Dwellings must be modelled under the CIBSE TM52 requirements.

Dynamic Thermal Modelling Assessment Requirements

Planning applications must submit the following information:

1. Submission of a **Dynamic Thermal Modelling Assessment**, with TM49 weather files for the London Weather Centre, under the high emissions 50% percentile scenario.
    a. In line with TM52 for non-residential developments
    b. In line with TM59 for residential developments and bedrooms
2. Model and report on **ALL weather files and patterns** to demonstrate a robust understanding on how the building may perform and what the overheating risk will be:
    a. Mandatory compliance with Design Summer Year (DSY) 1 (2020s weather pattern, high emissions, 50% percentile)
    b. Implement mitigation measures to comply as far as feasible with DSY 2 and 3 (2020s weather pattern, high emissions, 50% percentile) within the proposed development *
    c. Future compliance with DSY1 with the 2050s and 2080s future weather patterns (high emissions, 50% percentile) through a retrofit plan with measures that can be implemented within the building design **
3. Demonstrate the development has followed the London Plan's **Cooling Hierarchy to design the development and to introduce mitigation measures**, providing justification where measures have not been found feasible.
4. Demonstrate the **appropriate and robust inputs** into the dynamic model:

    a. Occupancy and equipment heat loads in line with TM59 for residential developments and bedrooms
    b. Occupancy and equipment heat loads in line with CIBSE Guide A for non-residential areas
    c. Model a representative number of dwellings across the development and common areas that are most likely to overheat: at least 50% rooms on the top floor, 75% of rooms with south or south-west aspect, rooms close to noise/air pollution or crime sources, and at least 15% in each building
    d. Model any non-residential habitable spaces (without active cooling)
    e. Model any habitable communal area and any worst-case corridors with heating infrastructure that has minimised heat losses
    f. Construction fabric u-values and g-value(s) of proposed fenestration, air tightness and whether MVHR is proposed
    g. Pipework heat losses within communal corridors and dwellings, outlining the flow temperatures, insulation thickness, efficiencies of pipe network, pipe diameters (please request the information requirements)
    h. Naturally ventilated habitable spaces detailing opening angles and free areas, only if the necessary measures to mitigate air pollution, noise disruption and opportunity for crime are implemented.
    i. Details of the mechanical ventilation, if relevant.
5. Demonstrate **which spaces have been modelled** within the development, providing a clear statement on the numbering system and annotate on floorplans and/or 3D visualisations (with north arrow) to show where these are located.
6. **Report results** of the dynamic modelling in line with the TM52/TM59 compliance criteria, clearly setting out the baseline scenario and additional modelled scenarios to test mitigation measure(s) required to pass the overheating assessment.
    a. Baseline scenario
    b. Baseline scenario + mitigation measure 1
    c. Baseline scenario + mitigation measure 1 + measure 2, etc.
    d. Full results reported in a table that is colour coded and clearly sets out the maximum hours above Criteria A and B in order to pass the requirement, and a summary of the number of rooms that pass.
7. **Technical details** of the mitigation measures proposed, such as:
    a. Brise Soleil or other external shading measures – type of material, size, location to be installed which should be indicated on a detailed plan and elevation plan(s).
    b. Internal blinds – shading coefficient, how the blinds will be fixed, the outward-facing backing colour
    c. MVHR, whether this has a summer by-pass and its airflow
    d. Thermal mass – how exposure to thermal mass will be maximised and how night-time excess heat will be released.
8. Confirmation of **who will manage overheating risk** in the future, such as the managing company.

*Compliance as far as feasible should include consideration for the potential risk mitigation of the measure (prioritising measures that are more effective through the Cooling Hierarchy), and implications for design of the building, capital cost, cost to occupant, usability and maintenance.

We would expect that mitigation measures that can be implemented now and will reduce the overheating risk meaningfully, that these should be built out.

** The retrofit plan should demonstrate how these measures can be installed and who will be responsible for overheating risk. A strategy should be designed as to how measures can easily be retrofitted when the weather patterns increase temperature. This should ensure, for example, that the structure can accommodate the fitting of additional shading or ventilation measures. The report must also identify who will own the overheating risk.

References

CIBSE (2013) TM52 The limits of thermal comfort: Avoiding overheating in European buildings
CIBSE (2015) Guide A Environmental Design
CIBSE (2017) TM59 Design methodology for the assessment of overheating risk in homes

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