

Committee(s):	Date(s):
Planning and Transportation	15 December 2020
Subject: Thermal Comfort Guidelines	Public
Report of: Interim Chief Planning Officer and Development Director	For Decision

Summary

The Thermal Comfort Guidelines have been prepared to introduce a new technical tool into planning to enhance the understanding of the microclimatic qualities of the City's public spaces as well as a methodology to assess the impact of new developments on the microclimate of the City's streets, parks, public roof gardens and terraces and other public spaces.

The technique involves merging wind, sunlight, temperature and humidity microclimate data at a seasonal level to gain a holistic understanding of Thermal Comfort, how a microclimatic character of a place actually feels to the public.

The intention is to adopt the Thermal Comfort Guidelines as a Planning Advice Note, sitting alongside the Planning Advice Notes for Sunlight, Solar Glare, Solar Convergence and Wind Microclimate Guidelines. The Thermal Comfort Guidelines will be added to the website and be used to inform all relevant development proposals.

Recommendation

Members are asked to adopt the Guidelines as a Planning Advice Note

Main Report

Background

In 2017, the City of London Corporation published Planning Advice Notes on wind, solar glare, solar convergence and sunlight to provide guidance to City developers. Further guidance on Wind Microclimate was published in 2019. Work is underway to refine these Guidelines further. These Advice Notes provide technical guidance to developers which complement policy in the City's Local Plan and Transport Strategy. The Advice Notes clarify what information is required by the City Corporation to deal with microclimate issues in relation to individual proposals.

The Local Plan is accompanied by a number of other planning documents that provide guidance, to enable a greater understanding to users of the Plan when applying Local Plan policies. This Advice Note contains guidance which expands on the emerging policies on microclimate issues (relating to Thermal Comfort) in the City of London Draft Local Plan; in particular Strategic Design Policy S8, Policy DE2, Policy DE3 and Strategic Policy S12.

These policies seek to optimise micro-climatic conditions, addressing solar glare, daylight and sunlight, wind conditions and thermal comfort. They require developers

to take account of the potential microclimate and thermal comfort impacts from tall and major building development at an early stage in the design process. The draft Local Plan indicates that where tall buildings are acceptable in principle, their design must ensure safe and comfortable levels of wind, daylight and sunlight, solar glare and solar convergence within nearby buildings and the public realm within the vicinity of the building.

It is expected that thermal comfort studies will be conducted in parallel with the wind microclimate and sunlight studies to contextualize the results in terms of overall thermal comfort.

The Universal Thermal Climate Index (UTCI) metric will be utilized for predicting thermal comfort in the City of London. This technique is a new initiative within the British planning system (indeed probably globally) and the Guidelines were developed through a collaboration between academic, technical specialists and Microclimate Engineering consultants' review.

Proposals

It is proposed that the Thermal Comfort Guidelines be published as a further microclimate Planning Advice Note and published on the City Corporation's website. Developers will be asked to have regard to the guidance on undertaking thermal comfort assessments on relevant projects. The Guidelines will continue to be refined and any future major changes to the Advice Note will be brought back to this Committee for consideration

An understanding of Thermal Comfort conditions enables new developments to be designed to deliver new public spaces of the highest microclimatic quality. It informs the location of:

- new pocket parks and public spaces
- optimum location for cafés, bars and restaurants including outside seating for those uses,
- roof level public gardens and terraces,
- play areas,
- pop up street markets,
- event, performance and public art spaces,
- areas of seating and areas to relax and dwell away from more intense pedestrian flows,
- landscaping and tree planting including selection of species etc., and
- vehicular and servicing entrances (to avoid areas of good Thermal Comfort quality).

Thermal Comfort modelling can identify the areas at ground floor level which have particularly poor Thermal Comfort qualities through the year, such as areas of shaded and relatively windy character. Consequently, this understanding enables developments to incorporate roof level public realm in the form of public roof gardens, roof terraces and winter gardens, areas which have higher Thermal Comfort qualities which the public can enjoy.

In doing so these Guidelines can be key in improving the quality of outdoor spaces, which is a vitally important consideration for the health and wellbeing of the public. New developments through their bulk, shape, and alignment can be developed to address the Thermal Comfort qualities of their surroundings.

Comfortable outdoor spaces with good Thermal Comfort qualities also improve the experience of walking, cycling and other forms of active travel, helping to deliver a pedestrian and cycling priority City and reducing the use of private vehicles which in turn delivers a more humane, gentler and cleaner City. Thermal Comfort can inform areas for timed closures and public realm enhancement schemes and is considered a key part of delivering Healthy Streets as part of the City's Transport Strategy.

London has a temperate oceanic climate, with relatively narrow range of annual temperatures, providing a good baseline potential for outdoor comfort compared to other parts of the world which experience more extreme heat and cold stress. Increasingly, the outdoor spaces are being used for relaxation and socializing by both workers, residents and visitors.

In addition, the Guidelines include research into the implications of the forecast global temperature increases as part of Climate Change and Global Warming. In doing so, future scenarios of heat stress areas during the summer months have been identified which in turn can inform shading and cooling proposals, such as the location of new mature trees to shade spaces in the hotter summer months or the facing materials of new buildings around these spaces including the cooling effect of vertical greening as well as other landscaping features such as fountains and water features. In this way, Thermal Comfort modelling can help in making the City more resilient to Climate Change.

Corporate and Strategic Implications

The Thermal Comfort Guidelines Planning Advice Note provides technical guidance in support of the City of London Local Plan, Transport Strategy and Climate Action Strategy.

The production of any further Advice Notes on the City's microclimate will be delivered with existing staff resources and the existing Local Risk budget. Any requirements for additional budget allocation, will be brought back to this Committee for consideration.

Conclusion

The Members are recommended to adopt the Guidelines as a Planning Advice Note

Appendices

Appendix 1 – Thermal Comfort Guidelines for Developments in the City

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