

## Guidance on Wind Assessments

Tall buildings have the potential to create adverse wind effects, resulting in a detrimental impact on pedestrian comfort and in the most extreme cases can cause safety issues.

Wind assessments help to understand the effects a building will have on the local wind environment and can suggest ways to mitigate any adverse impacts. Consideration of wind is important to help create a pleasant and useable local environment.

Wind microclimate assessments should be considered at an early stage of the development so that any mitigation can be successfully integrated.

Wind Assessments should be carried out in the following cases:

Building Height	Recommended Wind Microclimate Study
Up to 8 storeys	Wind studies are not required. However there may be exceptions to this, for example where there are sensitive pedestrian activities (transport hubs, hospitals etc); the site is particularly exposed or there are known wind issues in the area.
8 to 16 storeys	Computational (CFD) simulations OR wind tunnel testing *
Above 16 storeys	Computational (CFD) simulations AND wind tunnel testing

\*If results of CFD show that wind tunnel testing is required then this must be carried out before validation

### Technical Requirements

- The wind study should include an analysis of pedestrian wind comfort for the following different development scenarios:
  - o The existing site
  - o The proposed development with existing surrounding buildings
  - o The proposed development with any approved new developments
- Relevant sensitive points around the site should be analysed, including but not limited to building entrances, walkways, amenity areas, bus stops, cycle paths and road crossings.
- CFD simulations and wind tunnel models should include all buildings within a 400m radius of the site

### Presentation of Results

Results should be based upon the Lawson Wind Comfort Criteria which classifies wind speeds at any particular point around a building in relation to an activity that

would comfortably be able to be achieved in such a wind climate, such as sitting, standing, walking and uncomfortable.

### **Mitigation**

Any proposed mitigation should be presented in the report and include an analysis of the impact of the mitigation

### **Further Information**

The City of London have produced detailed guidance on wind microclimates which provides useful information on technical requirements and presentation of results

<https://www.cityoflondon.gov.uk/services/environment-and-planning/planning/design/Documents/city-of-london-wind-microclimate-guidelines.pdf>