Assessment of the wind microclimate around buildings is important both for pedestrian comfort and safety as well as impacts on the buildings themselves. BRE helps at all stages of the design process from concept through to the planning stage and input to Environmental Impact Assessments (EIA) We provide advice on mitigation measures and can help to provide practical design solutions that are technically and commercially viable.

Our clients include:
- Architects
- Civil and Structural Engineers
- Environmental Consultants
- Developers and Building Owners
- Building Services Engineers
- Local Authorities

**Wind tunnel modelling**

Wind tunnel testing provides reliable and rapid assessments of wind effects on and around buildings. Using wind tunnels we can simulate accurately natural wind conditions in environments ranging from open country to city centres. This enables us to determine:
- The impact a new development will have on the local wind environment and any consequent affect on pedestrian comfort and safety.
- Optimum positioning of HVAC inlets/exhausts, and smoke vents.
- Cladding and structural wind loads and structural dynamic response and accelerations.

**Desk studies**

BRE’s wind consultants study existing data and using their knowledge and experience, advise clients on the likely impact of the development on the wind environment and whether it is necessary to undertake more detailed assessments.

**Expert witness services**

BRE experts have wide experience of preparing expert witness reports and giving evidence in court proceedings and Public Enquiries in cases of wind environment around buildings, wind damage to buildings, deaths and injuries resulting from wind effects on people, etc.
BRE was commissioned to carry out wind tunnel measurements to determine the wind microclimate around a new development on Gibraltar. Because the Rock dominates the wind flow around Gibraltar it was necessary to initially characterise the wind conditions using a 1:2500 scale model of the whole of Gibraltar. This was tested in our large 4.3m wide wind tunnel. Once the wind conditions were measured then a larger scale 1:250 model of the development was tested using an accurate simulation of the wind conditions determined from the 1:2500 scale model.

For more information

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