

Bridgewater Place

Executive Summary

Traffic - Water Lane, Victoria Road, Neville Road

This report is intended to validate the wind mitigation measures provided at Bridgewater Place and to verify that the mitigations have improved the wind environment around the building, at ground level, to a safe level of wind speed.

It should be noted that at the time of drafting this report there is no accredited principles in the UK regarding the safe wind speed in cities for vehicles.

The report measures the wind speed and assesses the risk according to the Lawson Safety Criteria. This index identifies the safe mean wind speeds for various pedestrian and cycling conditions. It is our understanding that the criteria set out in the Lawson Safety Criteria are currently the precedents accepted by Leeds City Council planning department when assessing new planning applications, through third party peer review.

With reference to the safe wind speed for vehicles, the latest reference document to discuss this is the draft version of The Wind Microclimate Guidelines For Developments In The City Of London 2018 Edition, which stipulates that:

“The Lawson criteria do not cover wind effects on other activities such as recreation (e.g. sailing) or impact on vehicles. More research needs to be conducted to expand the applicability of the criteria for such cases. While the safety criteria above include cyclists, more research is also needed to fully understand wind impacts on cyclists as this may depend on other factors such as the variation of wind speed or wind direction across a cycling route, instead of absolute wind speed at a given location”

Based on the Lawson Safety Criteria, the wind mitigation measures have been assessed by wind tunnel, CFD and onsite measurement. In all measurement points along Water lane and the Victoria Road junction. The results indicate that there are no locations that exceed the criteria of 15m/s mean wind speed. Based on the Lawson Safety Criteria, this is the limit above which the wind presents a safety risk, especially to more vulnerable members of the public and cyclists.

In the absence of accredited principles for wind speed for vehicles, assumptions have been made on the basis that those appropriate for cyclists are also appropriate for vehicles.

As this meets the requirements required for any planning application in the city, we are satisfied that on the basis of the Lawson Safety Criteria, which is accepted for the purpose of this exercise by Leeds City Council Planning Department to be a suitable criteria, the risk to pedestrians, cyclists and therefore vehicles is sufficiently reduced to allow the traffic restrictions to be lifted.

It must be recognised that there is a residual risk, like anywhere in the city that is based on the same Lawson Criteria, where a combination of scenarios could coincide and result in a safety risk and an accident, and we cannot warrant that this will not occur.

We would recommend that Leeds City Council approve the mitigation measures and the recommendations of this report.