

25th July 2025

Anthony Scholes,
Principal Planning Officer,
Planning Section,
Reading Borough Council.

Dear Anthony,

Former John Lewis Depot: Wind Microclimate Peer Review

Architectural Aerodynamics Limited (ArcAero) has been appointed to carry out an independent review of the July 2025 pedestrian level wind microclimate assessment submitted in support of the planning application for the proposed Former John Lewis Depot development in Reading. The wind microclimate assessment was undertaken by RWDI and is documented in their full report (Ref: RWDI #2401982, dated July 4, 2025). This review is based on the contents of these documents.

The review is intended to advise on the suitability of the method of assessment, the criteria used for the study, the results obtained, and the conclusions derived. Where appropriate, comments and questions are raised within the following sections.

1. Suitability of Methodology Applied

- 1.1. The wind microclimate assessment employs CFD in order to conduct a quantitative assessment of the expected suitability of wind conditions based on the LDDC variant of the Lawson criteria. This is considered to be in line with the industry standard in the UK and therefore deemed appropriate for this study.
- 1.2. 18 wind angles with intervals of 20-degrees were used for this study, a suitable number of wind angles.
- 1.3. The “target wind profiles” showing the variation of approach wind speed and turbulence intensity with height have not been provided. **Please provide the targeted and simulated profiles of wind speed and turbulence intensity for the CFD simulation.**
- 1.4. The methodology described within the report, which includes details of the turbulence model used is considered to be appropriate. However, no views of mesh were provided within the report to verify if an appropriate amount of refinement was applied to critical regions. **Please provide images of the proposed development within the computational mesh.**
- 1.5. A sufficient series of scenarios have been assessed as part of the studies. These include:

- Existing Site with Existing Surrounding Buildings
- Proposed Development with Existing Surrounding Buildings
- Proposed Development with Cumulative Surrounding Buildings

1.6. A number of cumulative buildings were included within the cumulative surrounding buildings scenario, these are:

- Central Club (Planning Reference: PL/22/1364); and
- Yield Hall Place (Planning Reference: PL/22/1916 and PL/22/1917)

This is considered to be appropriate.

1.7. It is understood that the Weibull parameters used in the assessment are based on the London Heathrow airport. This is considered to be an acceptable approach.

2. Review of Conditions Predicted

- 2.1. Conditions for the Existing Site with Existing Surrounding Buildings scenario are substantially suitable for pedestrian safety and comfort. Safety exceedances are predicted to occur on Bridge Street nearby The Oracle. These findings are considered plausible since existing landscaping was not modelled in the assessment.
- 2.2. The wind microclimate for the Proposed Development with Existing Surrounding Buildings scenario is predicted to substantially meet the criteria for safety and all areas on the ground level and balconies within the Site are suitable for the intended uses. The results as presented are plausible and accepted.
- 2.3. The wind conditions within the surrounding areas remain materially the same as those in the baseline scenario. This is considered plausible and accepted.
- 2.4. With the introduction of cumulative surrounding buildings, conditions within and around the site are expected to be materially similar to the existing surrounding buildings scenario, with improvements to the wind conditions to the north along The Oracle and Bridge Street would be slightly calmer. Conditions around the corners of the Yield Hall Place scheme are expected to be windier, with strolling conditions likely due to localised corner acceleration. This is considered plausible due to the similar wind conditions observed in the area when comparing the Existing Site and Proposed Development within Existing Surrounding Buildings scenario.

Summary

The assessment represents a plausible appraisal of the wind microclimate upon the introduction of the proposed development. A couple of queries and requests for clarification have been raised, but the assessment and associated predictions appear reasonable, and as such it is expected that provided satisfactory clarification and / or further details are provided, the conclusions can be considered to be acceptable.

Yours Sincerely,



Mr Ezzad Hamdan
Project Engineer
Architectural Aerodynamics



Ms Hayati Hashim
Line Manager – Wind Engineering
Architectural Aerodynamics