



Unit 1, Tilers Road
Milton Keynes, Buckinghamshire
MK11 3LH, United Kingdom

Tel: +44 (0)1908 776970
Fax: +44 (0)1582 470259
E-mail: solutions@rwdi.com

MEMORANDUM

DATE:	2020-06-16	RWDI REFERENCE #: 1901994
TO:	Joseph Harding	EMAIL: Joseph.Harding@berkeleygroup.co.uk
FROM:	David Hamlyn Andrew Proud	Email: David.Hamlyn@rwdi.com Andrew.Proud@rwdi.com
RE:	Peer Review Responses Vastern Road Reading, UK	

Introduction

During 2019 RWDI were retained by Berkeley Homes to conduct a pedestrian level wind microclimate assessment of the proposed Vastern Road development in Reading, UK (hereafter referred to as the 'Proposed Development'). Following a peer review of RWDI's methodology by BRE (report appended to this document), and subsequent response from RWDI, this document seeks to provide a reply to the outstanding points.

Further to the above, BRE have also undertaken a review of the Technical Addendum relating to the likely wind conditions at the Proposed Development in the context of cumulative schemes. The points raised by the reviewer in relation to this document have also been addressed below.

RWDI Replies – Technical Report

The following includes a list of issues considered outstanding by the BRE with associated responses from RWDI.

BRE Comment	RWDI Response
The failure by RWDI to consider the upper 20m/s safety threshold. If this threshold is not considered then appropriate mitigation measures cannot be developed. Without this, it will be necessary to carry out a full quantitative assessment of mitigation measures. This could potentially be conditioned by Reading Borough Council.	RWDI consider the '15m/s threshold' (that is winds exceeding 15m/s for more than 0.025% of the time annually) to be the limit for pedestrian safety and the assessment has been conducted as such, with areas expected to have winds exceeding this threshold identified as potential safety concerns and requiring of wind mitigation measures. Exceedance of the higher '20m/s threshold' would necessitate the



	<p>exceedance of the lower '15m/s threshold' and has therefore inherently been accounted for. Text has been added to the technical report to acknowledge the existence of a higher threshold than that adhered to in the RWDI assessment.</p>
<p>The use of a limited seasonal approach to wind conditions on balconies. This matter results from a fundamental disagreement between BRE and RWDI on best practice. The appropriateness of the RWDI approach needs to be considered by RBC and the developer.</p>	<p>RWDI has extensive experience of microclimate assessments within the administrative bounds of Reading Borough Council (RBC) using this approach.</p>
<p>The RWDI response indicates that the wind conditions at the entrance to Sovereign House will remain unsuitable for entrances. This is unacceptable. Appropriate mitigation measures need to be developed to reduce the wind speeds in this area.</p>	<p>Figure 6 and Figure 10 of the Wind Microclimate Technical Report indicate wind conditions at the entrance to Sovereign House would be suitable for sitting and standing use during the windiest season (areas with a green and blue fill respectively). These conditions would be suitable for an entrance location. Wind conditions suitable for strolling use would be located on northern pavement of Vastern Road to the south of the entrance to Sovereign House. While windier than in the baseline scenario (Figure 4) These conditions would be suitable for a pedestrian thoroughfare. Further to the above, the assessment has been undertaken devoid of landscaping. As such, the inclusion of existing landscaping west of the entrance to Sovereign House would be expected to provide further shelter to the existing entrance and eliminate walking use conditions in a maintenance space west of the entrance in the context of cumulative schemes.</p>

RWDI Replies – Technical Appendix

Following a peer review of RWDI’s methodology by BRE (report appended to this document), this document seeks to provide responses to the points raised by the reviewer.

BRE Comment	RWDI Response
<p>The results indicate that the wind conditions at ground level and podium level will be suitable for the intended pedestrian activity at all locations except for the podium café seating</p>	<p>The majority of the café seating area would be suitable for sitting use during the summer season. Standing use conditions at the northern edge of the café terrace are highly</p>



<p>area where conditions during the summer in one area will be suitable for standing. It is stated that with the proposed landscaping scheme the conditions would be expected to become suitable for sitting. This has not been demonstrated.</p>	<p>localised and would be expected to be eliminated by the introduction of landscaping to reduce mean flow velocity around the Site and the application of any balustrade required for safety on the northern edge of the terrace.</p>
<p>The wind conditions at balcony and terrace level are mainly suitable for sitting during the summer. There are, however, several balconies where the conditions are only suitable for standing use during the summer. Where balconies are provided, then it is reasonable to expect people to be able to comfortably sit out on them during the summer.</p>	<p>Wind conditions suitable for standing use during the summer season are considered acceptable for private amenity space during the summer season, as per RWDI's methodology. This is justified by balconies being mixed use spaces and the space being used for a given activity (e.g. sitting) by the occupant when conditions permit. Communal amenity space is required to have a more stringent sitting use during the summer season.</p>

Yours truly,

David Hamlyn

Senior Project Manager

Andrew Proud

Project Engineer