ONE BATTERSEA BRIDGE

WIND MICROCLIMATE TECHNICAL NOTE

October 2024

WIND MICROCLIMATE

TECHNICAL NOTE

One Battersea Bridge

Promontoria Battersea Limited

October 2024

GIA No: **18043** Letter Ref: **JW/18043**

DATE / REF
OCTOBER 2024
JW/18043

ADDRESS
THE WHITEHOUSE
BELVEDERE ROAD
LONDON SE1 8GA

CONTACT
TEL 020 7202 1400
FAX 020 7202 1401
MAIL@GIA.UK.COM
WWW.GIA.UK.COM

By Email
dol@rockwellproperty.co.uk

Promontoria Battersea Limited
c/o Dominic O'Loghlen

Dear Dominic,

Re: One Battersea Bridge Wind Microclimate

Introduction

GIA have reviewed the proposed scheme amendments set out in the model provided by Farrells Architects on 13 September 2024 and landscape drawings provided by Exterior Architecture on 25 September 2024, and undertaken testing using Computational Fluid Dynamics (CFD) to ascertain the likely impact of the changes to the scheme relative to those reported in the Wind Microclimate Assessment Report (dated April 2024) which was submitted with the original planning application.

Changes from Previous Assessment & Assessment Methodology

The key updates to the proposed scheme are a reduction of the height of the main tower by 5 floors and an increase of the height of the podium by 1 floor. The original and updated schemes are shown in Figure 1. These have both been tested in CFD within a 400m radius of surrounding context.

The tests were both performed including landscaping and mitigation measures, so are of the same specification as Configuration 3 from the April 2024 Wind Microclimate Assessment Report (which was tested in a physical wind tunnel as part of the original assessment).

With the exception of using CFD instead of physical wind tunnel testing, all other methodological factors are consistent with those which are set out in the April 2024 Wind Microclimate Assessment Report.

The wind mitigation measures as tested were identical to those reported for the April 2024 Wind Microclimate Assessment Report.

The exact locations of the proposed trees within the landscape has been updated to match the updated landscape drawings. The sizes and types of the trees was kept consistent with those reported for the April 2024 Wind Microclimate Assessment Report.

CFD Assessment of Wind Impacts of Scheme Updates

A comparison of the windiest season comfort levels at ground level for the scheme as tested for the original planning submission and the updated scheme is shown in Figure 2.

It is apparent that conditions are generally consistent between the two schemes, although conditions around the north of the site (in the region highlighted in Figure 2) have been made calmer by the updates to the design. This is noticeable in the highly localised (and therefore acceptable given they are away from key sensitive receptors) regions of "uncomfortable" conditions being of substantially lesser extent for the updated scheme.

It should be noted that there are also localised regions of "uncomfortable" conditions off-site on Battersea Bridge to the west of the site. This is a pre-existing region of windiness and not attibutable to the proposed development,

A comparison of the summer comfort levels at ground level for the scheme as tested for the original planning submission and the updated scheme is shown in Figure 3.

As with the windiest season conditions, conditions are generally consistent between the two schemes, especially

off-site. The regions of proposed amenity are highlighted in Figure 3. It is apparent that there is a greater extent directly north of the proposed development which is now suitable for sitting.

A comparison of the summer comfort levels at terrace level for the scheme as tested for the original planning submission and the updated scheme is shown in Figure 4.

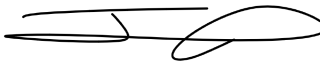
It is apparent that the updated scheme would afford a significantly greater expanse of the podium level terrace which is suitable for sitting rather than standing (i.e. a beneficial impact).

Conclusion

The wind microclimate conditions for the updated scheme are generally consistent with those of the scheme which was tested as part of the planning application as originally submitted. Those regions where conditions are different show beneficial impacts of the updated scheme. As such, the wind tunnel conditions reported in the April 2024 Wind Microclimate Assessment Report remain valid and represent a worst-case scenario for the expected wind conditions around the completed and operational development.

Yours sincerely

For and on behalf of GIA



Jon Winchester

Director
jon.winchester@gia.uk.com

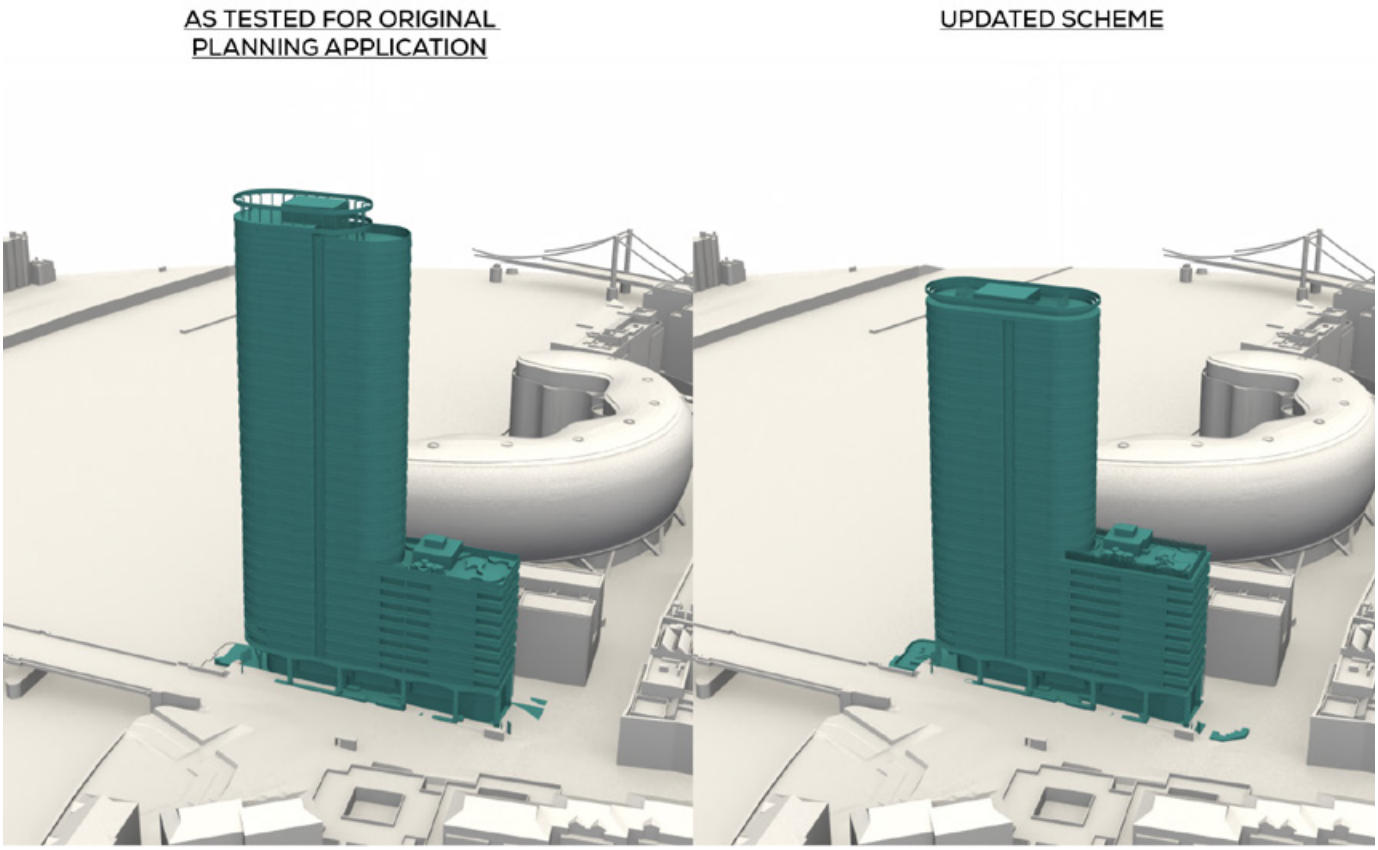


Fig. 01: Updates to Proposed Development

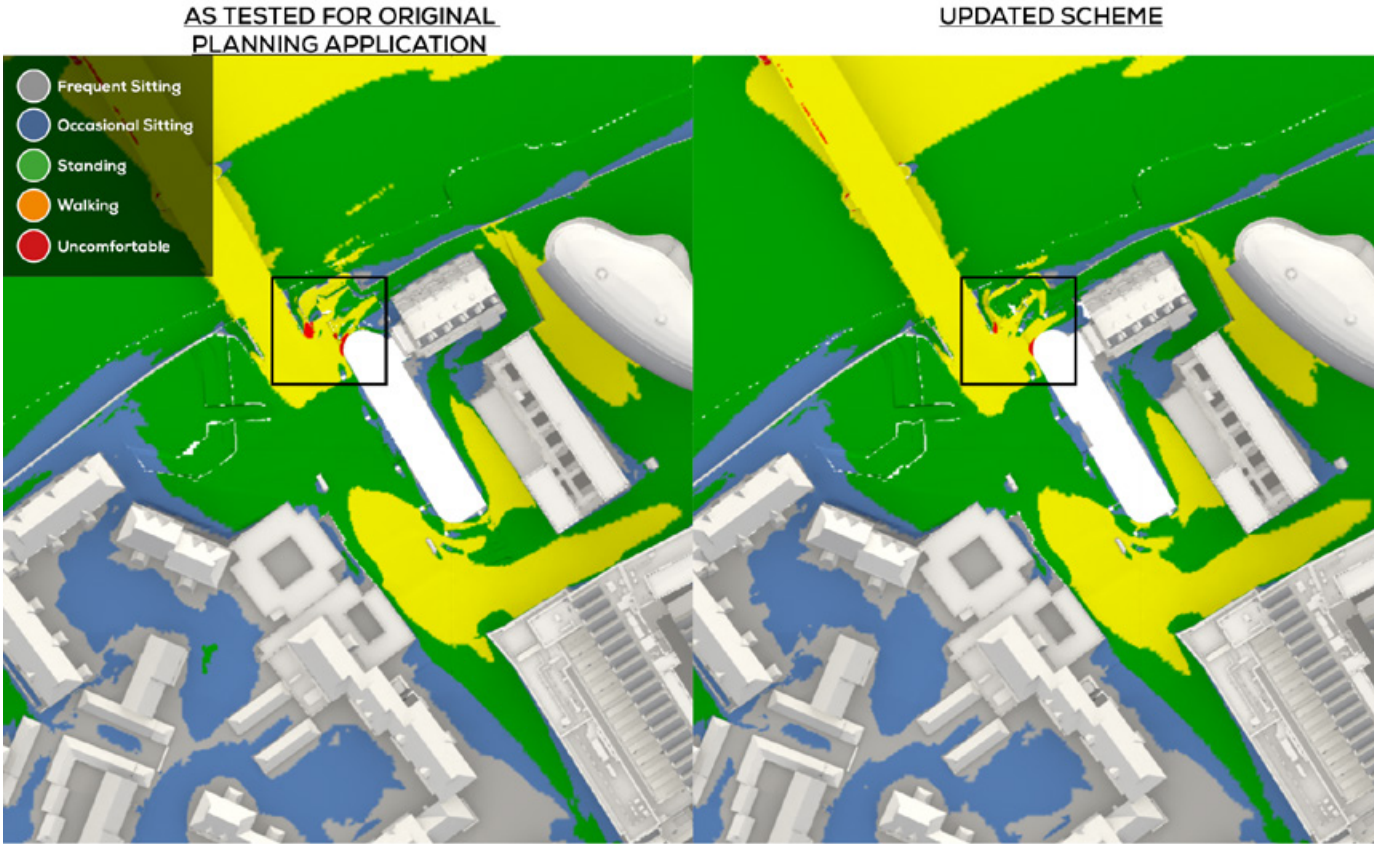


Fig. 02: Windiest Season Comfort at Ground Level, as tested for the Proposed Development with Landscaping, Mitigation and Existing Surrounds.

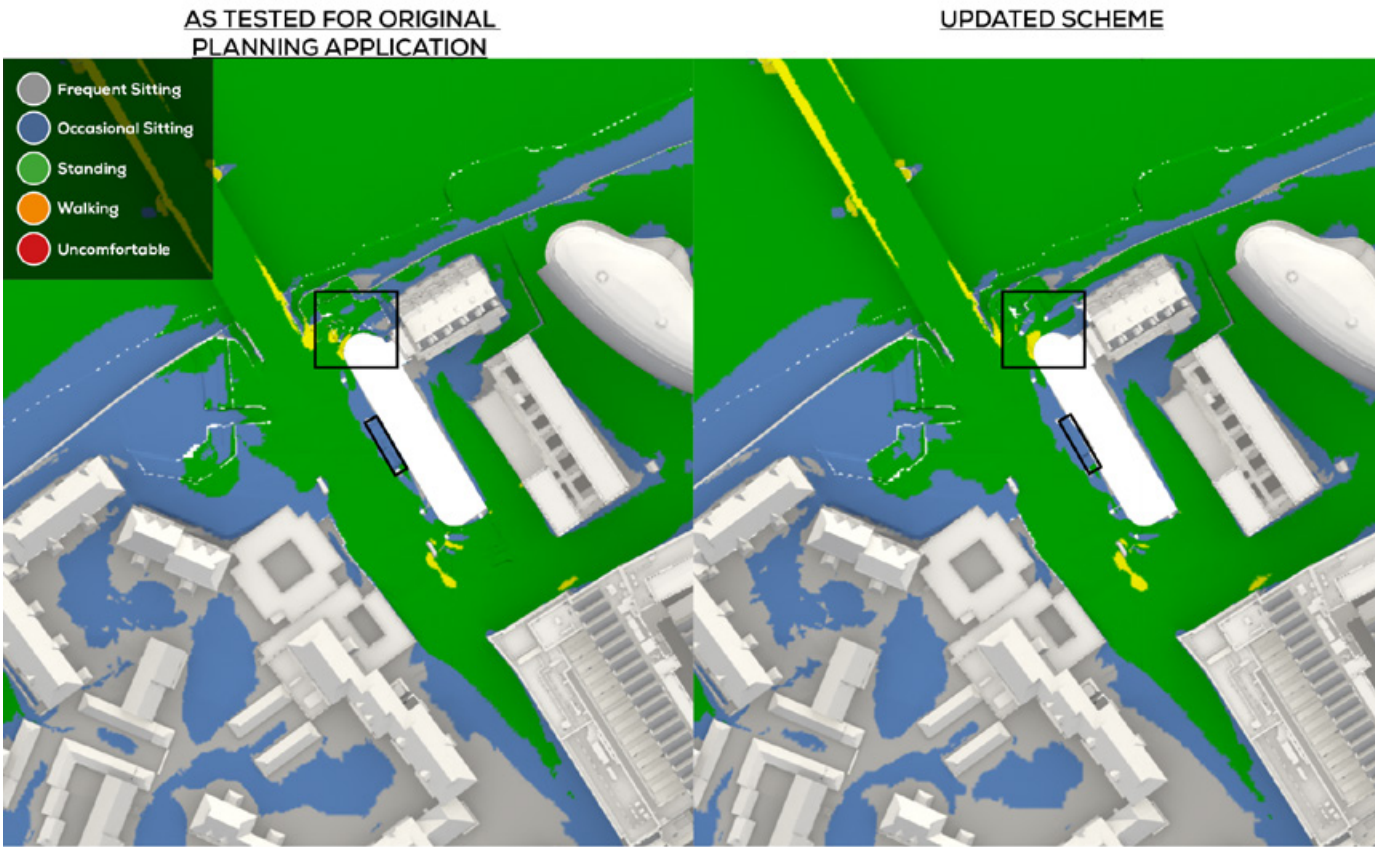


Fig. 03: Summer Comfort at Ground Level, as tested for the Proposed Development with Landscaping, Mitigation and Existing Surrounds.

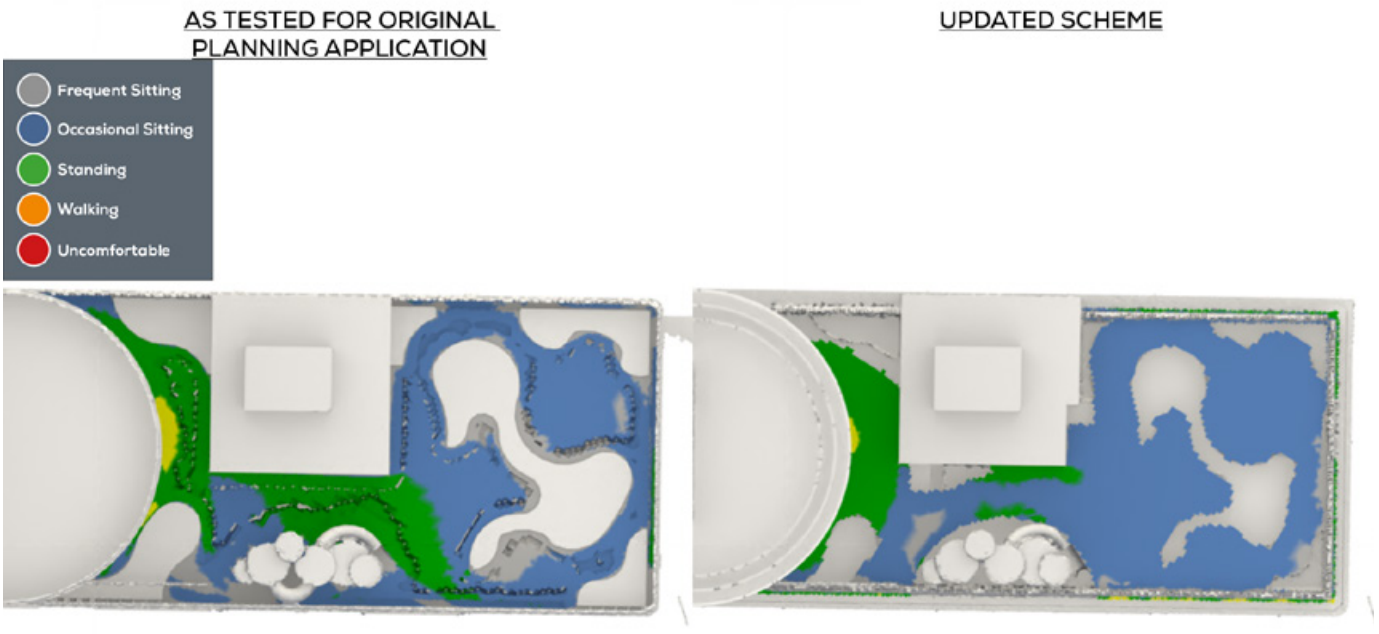


Fig. 04: Summer Comfort at Terrace Level, as tested for the Proposed Development with Landscaping, Mitigation and Existing Surrounds.

gia

What we do:

Building Surveying
Daylight & Sunlight
Light Obstruction Notices
Measured Surveys
Party Wall & Neighbourly Matters
Rights of Light
Solar PV
Wind Analysis

Where we are:

Belfast
Birmingham
Bristol
Dublin
London
Manchester

GIA SURVEYORS LIMITED incorporated and registered in England and Wales with company number **14032506** whose registered office is at **The Whitehouse, Belvedere Road, London SE1 8GA**

gia.uk.com