

GRADIENTWIND

ENGINEERS & SCIENTISTS

October 17, 2023

Morley Hoppner Inc.
1818 Bradley Side Road
Ottawa, ON K0A 1L0

Attn: Ken Hoppner, Partner
khoppner@morleyhoppner.com

Dear Mr. Hoppner:

Re: Pedestrian Level Wind Study Addendum
2026 Scott Street, Ottawa
Gradient Wind File 22-006-PLW

Gradient Wind Engineering Inc. (Gradient Wind) completed a computational pedestrian level wind (PLW) study to satisfy concurrent Zoning By-Law Amendment and Site Plan Control application submissions¹ for the proposed development located at 2026 Scott Street in Ottawa, Ontario. The study was conducted based on architectural drawings of the proposed development provided by Hobin Architecture Incorporated in April 2023². The current architectural drawings, which were distributed to the consultant team in October 2023³ in preparation for resubmission of the Site Plan Control application, include the following changes:

- At the ground floor, along with indoor programming changes, Building A now extends to the northwest corner and includes a recessed main entrance at the northeast corner.
- A building link has been introduced at Level 2 between the Buildings A and B.
- The central link between the two buildings at Levels 7-10, which had accommodated an outdoor amenity terrace atop the link, has been removed.

¹ Gradient Wind Engineering Inc., '2026 Scott Street – Pedestrian Level Wind Study', [April 28, 2023]

² Hobin Architecture Incorporated, '2026 Scott Street', [April 4, 2023]

³ Hobin Architecture Incorporated, '2026 Scott Street' [Oct 13, 2023]

- The building setbacks to the north at Levels 8 and 10 for Buildings A and B, respectively, no longer accommodate outdoor amenity terraces.

The original study concluded that most grade-level areas within and surrounding the subject site were predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year, inclusive of the nearby public sidewalks, walkways, Lion's Park, and in the vicinity of building access points. The two areas that were predicted to experience windy conditions were the grade-level outdoor amenity area and the secondary building access points along the west elevation of Building A. Owing to the prominent westerly winds, and the channelling effect produced by the proximity of Buildings A and B, the outdoor amenity at grade was predicted to be windy. Specifically, wind comfort conditions were predicted to be suitable for a mix of standing and strolling during the typical use period (defined as May to October, inclusive). Notably, a central region within the outdoor amenity was predicted to experience uncomfortable conditions during the winter. To improve the noted wind conditions within the outdoor amenity, it was recommended to introduce tall wind screens between Buildings A and B in addition to coniferous plantings in dense arrangements. Conditions in the vicinity of the secondary building access points along the west elevation of Building A were predicted to be suitable for standing during the summer and autumn, becoming suitable for walking during the winter and spring. While walking conditions are considered satisfactory for secondary building access points, strong wind speeds were expected to occur between Buildings A and B, as noted above. As such, it was recommended that the building access points be recessed into the façade by at least 2 m.

Furthermore, the study concluded that conditions over the amenity terraces serving Building A at Level 8 and at the mechanical penthouse (MPH) level, and over the common amenity terrace serving Building B at Level 10 were predicted to be suitable for sitting during the typical use period, which is considered acceptable. Conditions within the amenity terrace serving Building B at the MPH level were predicted to be suitable for a mix of sitting and standing, while conditions within the common amenity terrace serving the proposed development atop the building link at Level 11 were predicted to be suitable for mostly standing during the typical use period. Of note, the common amenity terraces serving Building A at Level 8 and Building B at Level 10 were modelled with 1.8-m-tall wind screens along their full perimeters. Additionally, the common amenity terraces serving Buildings A and B at their respective MPH levels, as well as the common amenity terrace serving the proposed development atop the building link at Level 11,



were modelled with 2-m-tall wind screens along their full perimeters. To improve wind comfort conditions within the common amenity terraces serving Building B at the MPH level and atop the building link connecting Buildings A and B, it was recommended to include 2.4-m-tall wind screens, glazed and solid, along the full perimeter of the terrace. Additionally, mitigation inboard of the perimeter, which could take form of 1.8-m-tall wind screens and/or other landscape elements such as planters and dense clusters of coniferous plantings and canopies located above designated seating area were recommended to further improved conditions within the terrace.

The City of Ottawa provided the applicant, Morley Hoppner Inc., with the following comments:

Comment 5.5:

“Although the City’s Terms of Reference for Wind Analysis require comfort criteria to be met 80% of the time, it appears as though the criteria is not being met within the outdoor amenity area, Lion’s Park, and at Building B’s mechanical penthouse. Please confirm/demonstrate that the proposed mitigation measures have been implemented.”

Following the introduction of the proposed development, wind comfort conditions within Lion’s Park were predicted to be suitable mostly for sitting during the typical use period, with standing conditions predicted to occur at the northwest and northeast corners of the park. The areas that were predicted to be suitable for standing were also predicted to be suitable for sitting for at least 76% of the time during the same period, where the target is 80% to achieve the sitting comfort class. Since conditions with the existing massing were predicted to be similar to those with the proposed development, and since the windiest areas with the proposed massing marginally exceed the sitting comfort criterion, the noted conditions were considered acceptable.

Regarding the outdoor amenity area at grade level and the MPH Level amenity terrace serving Building B, the wind comfort conditions are expected to improve following the implementation of the recommended mitigation measures. The recommended measures comprise tall wind screens introduced between Buildings A and B in addition to coniferous plantings in dense arrangements to improve conditions within the common amenity area at grade level, and 2.4-m-tall wind screens, glazed and solid, along the full perimeter of the MPH level terrace serving Building B, in combination with mitigation inboard of the

perimeter, which could take form of 1.8-m-tall wind screens and other landscape elements such as planters and dense clusters of coniferous plantings and/or trees located around the windiest areas.

Comment 5.6:

“Building Link, Level 11 – determined to be windy. Amenity Areas are to accommodate for sitting comfort class levels. Please revise.”

In the latest architectural design, the building link between Buildings A and B at Levels 7-10 was removed, and as such, Level 11 no longer accommodates an outdoor amenity terrace at this location.

The April 2023 and October 2023 massing designs are mostly similar, and as such, the conclusions and recommendations regarding grade-level wind conditions that are provided in the detailed PLW report remain representative of the current site massing. Regarding the outdoor amenity terraces serving Building A at the MPH level, conditions are predicted to remain suitable for sitting during the typical use period, which is considered acceptable.

Sincerely,

Gradient Wind Engineering Inc.



Justin Ferraro, P.Eng.
Principal