SLR Consulting (Canada) Ltd.
100 Stone Road West, Suite 201, Guelph, ON N1G 5L3

June 15, 2023

Latch Developments Ltd.
2 Bloor Street West, Suite 700
Toronto, ON M4W 3E2

SLR Project No.: 241.30533.00000

RE: 1989 Appleby Line – Burlington, ON
Addendum Letter & Drawing Review – Pedestrian Wind
Confidential and without Prejudice

SLR Consulting (Canada) Ltd. (SLR), provides this letter at the request of Latch Development Ltd. This letter provides our opinion on the potential effect the recent design changes to the proposed 1989 Appleby Line development in Burlington may have on the pedestrian wind conditions in the vicinity of the development. SLR originally conducted a quantitative pedestrian wind study using wind tunnel testing in May 2022 in support of the combined Official Plan Amendment (OPA) and Zoning Bylaw Amendment (ZBA) application for the development. Our report of May 2022 summarized the pedestrian wind comfort conditions on the site and in the surroundings.

Updated Architectural Information

Updated architectural drawings (received June 12, 2023) in support of the upcoming settlement report were compared to the original drawings used for the construction of the wind tunnel model (received May 13, 2022). The following relevant differences were noted between the two sets of drawings:

- Previously the proposed development included two 20-storey towers (each 65 m tall, excluding the mechanical penthouse) connected by a six-storey podium with a one-storey element along the south facade. Currently, the proposed development includes a 22-storey tower (71 m tall) along Appleby Line and a 17-storey tower (56 m tall) along Imperial Way, connected by a six-storey podium with a one-storey element along the south facade.
- Previously, the long axis of the South Tower was parallel to Appleby Line. The current design has the South Tower rotated slightly counterclockwise and this tower now parallel to the other tower.
- Previously, the southwest edge of the one-storey element was flush to the south tower; now there is a small tower step-back due to the tower orientation and slight footprint reduction (i.e., less than 1 m) of the south tower.
- On the 7th floor outdoor amenity space, 2.2 m tall screens are added around the perimeter of the terrace.

Detailed Comments

In general, most of the changes to the proposed development are minor and will have a negligible influence on the expected wind conditions surrounding the development. For instance, for taller buildings, the addition or reduction of two or three storeys will have minimal influence on wind conditions at grade level. Therefore,

the changes in tower heights are considered minor and the wind conditions presented in our May 2022 report are expected to be applicable. The change to the South Tower orientation and the tower step-back are also considered minor. Therefore, the wind conditions at grade level presented in our May 2022 report are expected to remain applicable. SLR will work with the design team to develop localized wind control measures for windy areas prior to the SPA submission.

The addition of the 2.2 m tall wind mitigation screens along the east and west sides of the 7th floor outdoor amenity is a positive design feature, as these screens will partially reduce the impact of easterly and westerly winds that channel through the gap between the towers and accelerate across the terrace. With these wind mitigation screens in place, wind conditions on the terrace are predicted to be comfortable for standing or better in the summer and fast walking or better during the winter months. We also expect the elimination of the previously reported safety issue on the terrace with the inclusion of the wind mitigation screens. Additional mitigation measures for the 7th floor amenity terrace will be determined with the design team prior to the Site Plan Approval (SPA) submission; the efficacy of these features will be confirmed through additional wind tunnel testing. Note, these screens are also expected to be beneficial to the 2nd floor terrace, as wind conditions are expected to improve to be suitable for standing year-round.

Overall, the wind conditions surrounding the site are expected to essentially remain the same as those presented in our May 2022 report. SLR will work with the design team to develop additional wind control measures as the design evolves.

Conclusions

The design changes included in the latest architectural drawings will have minimal influence on wind conditions at grade level. The updated architectural drawings include features that are favorable for wind comfort and safety conditions on the 7th floor outdoor amenity terrace. To confirm the efficacy of these features and refine their design details, we recommend conducting updated pedestrian wind comfort analyses as the planning submission progresses.

Yours sincerely,

SLR Consulting (Canada) Ltd.



Nishat Nourin, M.Eng., P.Eng.
Microclimate Engineer
C: 240-614-6055
nnourin@slrconsulting.com

Tahrana Lovlin, MAES, P.Eng.
Principal, Microclimate
O: 226 706-8080 x224
tlovlin@slrconsulting.com