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October 24, 2016

Tom Lammer
Rykur Holdings Inc.
24 Crestwood Place
Guelph, ON
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Tom@LammerGroup.com

**Re: Pedestrian Wind Assessment
75 Dublin Street North
Guelph, Ontario
RWDI Reference No. 1700834**

Dear Tom,

As per your request, Rowan Williams Davies & Irwin Inc. (RWDI) has prepared this letter to comment on the pedestrian wind conditions around the proposed 75 Dublin Street North development located in Guelph, Ontario. This qualitative assessment is based on our knowledge of the local wind climate, current design drawings and surrounding information, as well as on our experience and professional judgment.

SITE & BUILDING INFORMATION

The development site is located at the northeast corner of Cork Street West and Dublin Street North in Guelph, Ontario (Image 1). The development site is currently occupied by open tennis courts.



Image 1 – Aerial View of Existing Site and Surroundings

The proposed development is five storeys and 17.25m in height, plus a penthouse. It has a rectangular footprint, with a chamfered southwest corner, and it setbacks at the 4th and 5th floors, creating several roof terraces (Images 2a and 2b). Pedestrian areas include the main entrance to the building, entrances to the ground floor units, sidewalks and roof terraces.

The proposed development is surrounded by one or two-storey buildings in all directions (Image 1). There is a taller church to the southeast and downtown Guelph to the northeast. There is a local grade change in the area, with the site being 7 to 15 m higher in elevations than the adjacent street intersections. Therefore, the site and proposed development are fully exposed to the prevailing westerly winds.



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Image 2a – View from Dublin and Cork

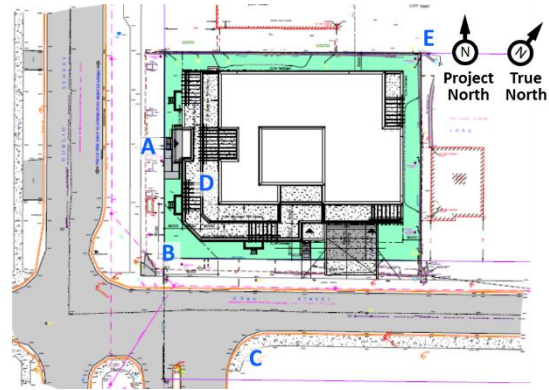


Image 2b – Site Plan

METEOROLOGICAL INFORMATION

Long-term meteorological data from Waterloo – Wellington International Airport were used as a reference for wind conditions in the area. The airport is located approximately 13 km southwest of the site and has the most comprehensive wind records in the area. The distributions of wind frequency and directionality for summer (May through October) and winter (November through April) seasons are shown in the wind roses in Image 3. When all winds are considered, winds from the northwest and southwest quadrants are predominant in the summer as indicated for the left wind rose. The right wind rose shows the winter data, indicating the predominance of winds from the southwest through northwest directions, with secondary winds from the east direction. In general, wind speeds in the winter are considerably stronger than those in the summer, as indicated by the yellow and red bands.

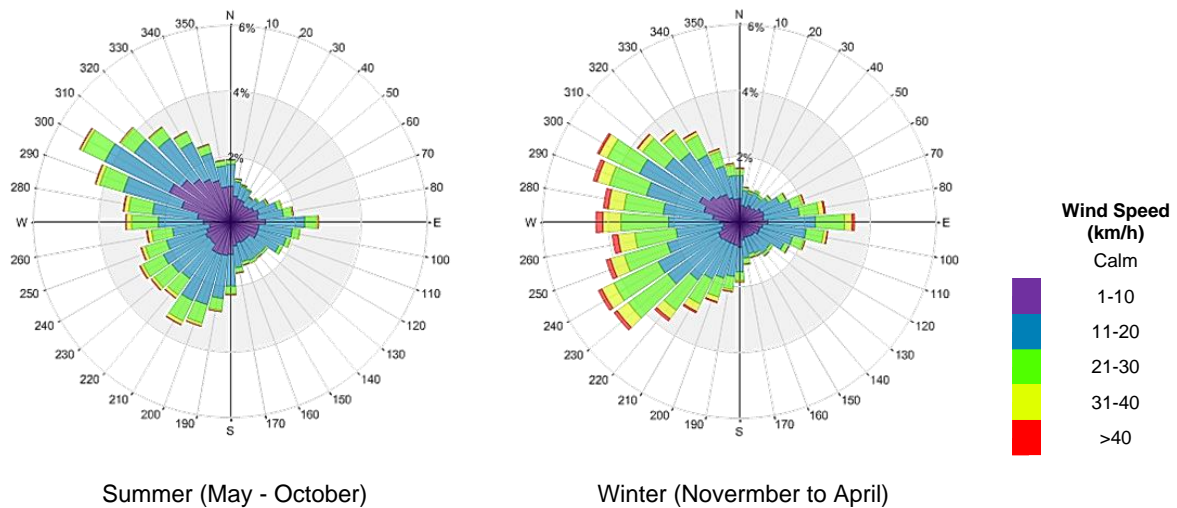


Image 3 – Directional Distribution (%) of Winds (Blowing from) Waterloo - Wellington International Airport (1966-2014)



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PEDESTRIAN WIND ASSESSMENT

In order to provide an opinion on the overall wind conditions expected around the proposed development, RWDI reviewed the meteorological data, as described above. Floor plans and renderings of the project were also reviewed (received by RWDI on October 21, 2016), together with the existing surroundings. This information, in conjunction with our previous work experience in the region and understanding of current wind conditions on the site, allows us to summarize the expected wind conditions as follows:

- The site is fully exposed to the prevailing winds in the area. Winds in the winter are stronger than in the summer. Existing wind conditions around the site are expected to be comfortable for pedestrian walking or better on the sidewalks throughout the year. During the summer, lower wind speeds afford comfort for people engaged in passive outdoor activities that are common during the season on the tennis courts and nearby school playground.
- The proposed design incorporates several positive features that are favourable for wind control:
 - The Dublin Street entrance to the building (Location A in Images 2a and 2b) is recessed from the main façade and designed with a vestibule. The secondary entry/exit on Cork Street is also recessed. These entrances and other entrances to the ground units are protected by canopies;
 - The southwest corner of the building is chamfered (Location B), which will reduce the wind flow accelerations around the corner;
 - The proposed building setbacks from the adjacent public streets, and the 4th and 5th floors of the building setback further from the lower floors, reducing the potential wind impact; and,
 - Landscaping, including trees and trellises, is proposed along sidewalks and on the above-ground terraces.
- As a result, suitable wind conditions are expected at building entrances throughout the year. Suitable wind conditions are also expected for the 4th and 5th floor terraces (Location D) during the summer, when these areas are typically in use.
- Despite the chamfered building corner, increased wind speeds are predicted around the southwest corner of the building (Location B). The wind effect may extend to the area across Cork Street (Location C in Image 2b). The resultant wind conditions, however, are expected to be suitable for pedestrian walking in general. There is no change expected in the wind conditions for other pedestrian areas, including public sidewalks away from the corner and the church parking lots to the south.
- Similar wind flow accelerations are also anticipated at the northeast corner of the proposed building (Location E), but no wind impact is expected for areas away from the corner, including the school playground to the north.



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CONCLUSION

Given the local wind climate and surroundings, the project site is exposed to the prevailing westerly winds in the area. The proposed development includes several positive design features for wind control, such as recessed entrances, canopies, the chamfered southwest building corner, trellises and landscaping. As a result, suitable wind conditions are generally expected at building entrances, sidewalks and above-ground terraces. Increased wind speeds are predicted at the southwest and northeast corners, but the resultant wind conditions are expected to be comfortable for pedestrian walking in general. The potential wind impact is expected to be localized and does not extend to the church parking lots to the south and the school playground to the north.

We trust this satisfies your current requirements for the project. Should you have any questions or require additional information, please do not hesitate to call.

Yours very truly,

ROWAN WILLIAMS DAVIES & IRWIN Inc.

A handwritten signature in black ink, appearing to read 'Hanqing Wu'.

Hanqing Wu, Ph.D., P.Eng.
Project Director / Principal

A handwritten signature in black ink, appearing to read 'Dan Bacon'.

Dan Bacon
Senior Project Manager / Associate