



July 28, 2017

Kevin Yemm
Richcraft
2201 St.Laurent Blvd, Suite 201
Ottawa, Ontario
K1G 4K1

Dear Mr. Yemm:

Re: Request for Noise Study Update
146 Mountshannon Drive, Nepean
GWE File Ref.: 11-033

Gradient Wind Engineering Inc. (GWE) was retained by Richcraft to provide a transportation and aircraft noise study update for the proposed recent changes to the site plan for a residential development located at 146 Mountshannon Drive in Nepean, Ontario. GWE, formally Gradient Microclimate Engineering, previously conducted a detailed noise assessment and provided recommendations as described in the report entitled *Traffic Noise Assessment & Control*, dated December 15, 2011.

The proposed changes to the site plan included:

- Change in unit type for blocks along Mountshannon Drive from uni-directional townhouse blocks to back to back townhouses, with access to units at the east or west faces;
- Blocks on the southern edge of site are fewer and contain less units (from 20 to 12 and 9 for each building);
- Location of southern buildings and parking areas have changed;

- Blocks at the center of the site have been divided into five smaller buildings (from two 16-unit buildings to three 12-unit buildings, one 8-unit building, and a storage/garbage building) with various orientations;
- Blocks on the northern side have been altered from two 16-unit buildings to three 12-unit buildings. These have also been re-oriented;
- Reconfiguration of accessory building.

GWE has reviewed the updated site plan and confirms there would be no changes to the conclusions or recommendations of our original Traffic Noise Assessment & Control Report dated December 15, 2011. The report concluded that noise levels from surface transportation sources would range between 39 and 63 dBA across the site. The site is also situated in the Airport Vicinity Development Zone, with expected aircraft noise ranging between NEF/NEP 25 to NEF/NEP 30. The recommended noise control measures included forced air ventilation systems with provisions for central air conditioning, specification for bedrooms and living room window to have a minimum STC 25, and warning clauses on title.

Since the noise report was originally authored, the City of Ottawa has updated their Environmental Noise Control Guidelines in January 2016 to reflect the new provincial noise guidelines, NPC-300. The conclusions and recommendations of the original study are consistent with the updated guidelines, and with windows closed, indoor sound level criteria can be maintained. However, the new guidelines do provide updated text for warning clauses. Therefore, within the context of the new guidelines the following addendums to the noise study are proposed:

1. To address aircraft noise, the Prescribed Measures as outlined in Part 6 of ENCG should be considered during the detailed design of the development.
2. All building on site will have a forced air heating system with provisions for central air conditioning (or similar mechanical system).
3. The following warning clauses addressing impact of surface transportation and aircraft noise will be required on all agreements for Agreements of Lease, Purchase and Sale.

The following Warning Clause for surface transportation will be required:¹

¹ City of Ottawa, Environmental Noise Control Guidelines, January 2016, Part 4, Table A1, page 20.

“Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the units, sound levels due to increasing roadway traffic may, on occasion, interfere with some activities of the occupants as the sound levels exceed the sound level limits of the City and Ministry of the Environment.

To help address the need for sound attenuation, this development has been designed with forced air heating with provision for central air conditioning (or similar mechanical systems). Installation of central air conditioning will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the City and the Ministry of the Environment.”

The following Warning Clause for aircraft noise will be required:²

“Purchasers/building occupants are forewarned that this property/dwelling unit is located in a noise sensitive area due to its proximity to Ottawa Macdonald-Cartier International Airport. In order to reduce the impact of aircraft noise in the indoor spaces, the unit has been designed and built to meet provincial standards for noise control by the use of components and building systems that provide sound attenuation. In addition to the building components (i.e. walls, windows, doors, ceiling-roof), since the benefit of sound attenuation is lost when windows or doors are left open, this unit has been fitted with a forced air heating system, all components of which are sized to accommodate the future installation of central air conditioning-by the owner/occupant.

Despite the inclusion of noise control features within the dwelling unit, noise due to aircraft operations may continue to interfere with some indoor activities and with outdoor activities, particularly during the summer months. The purchaser/building occupant is further advised that the Airport is open and operates 24 hours a day, and that changes to operations or expansion of the airport facilities, including the construction of new runways, may affect the living environment of the residents of this property/area.

² City of Ottawa, Environmental Noise Control Guidelines, January 2016, Part 4, Table A3, page 24.

The Ottawa Macdonald-Cartier International Airport Authority, its acoustical consultants and the City of Ottawa are not responsible if, regardless of the implementation of noise control features, the purchaser/occupant of this dwelling finds that the indoor and/or outdoor noise levels due to aircraft operations are offensive.”

This concludes our addendum letter. If you have any questions of our findings please do not hesitate to contact us.

Yours truly,

Gradient Wind Engineering

A handwritten signature in black ink that reads "Josh Foster".

Joshua Foster, P.Eng.
Partner

GWE 11-033 Noise Study Update