

September 6, 2019

Christian Campanale
Campanale Homes
1187 Bank Street
Ottawa, Ontario
K1S 3X7

Dear Mr. Campanale:

Re: Environmental Noise Brief
2 Via Modugno Place, Ottawa
GWE File No.: 19-169 – Noise Brief

1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Campanale Homes to undertake an environmental noise assessment of the proposed mixed-use development at 2 Via Modugno Place in Ottawa, Ontario. The study was requested by the City of Ottawa, as the subject property is within 100 meters (m) of a major collector and a bus rapid transit corridor, namely Longfield's Drive and the Transitway. The study site is also within 300 m of a VIA Rail corridor. The site is also within the Airport Vicinity Development Zone (AVDZ). This environmental noise brief summarizes the methodology, results and recommendations related to our assessment. The noise assessment was performed, based on Gradient Wind's past experiences with adjoining developments and consideration of the City of Ottawa¹ and Ministry of the Environment, Conservation and Parks (MECP)² guidelines. Our study was based on site plan drawings provided by Paul A. Cooper Architect.

2. TERMS OF REFERENCE

The focus of this noise assessment is a proposed mix-use development comprising of a 3-storey building. The 'L' shaped footprint of the building will front along Via Modugno and Via Campanale. Parking will be provided behind the building. The first-floor houses commercial retail units. The second floor is accessed

¹ City of Ottawa – Environmental Noise Control Guidelines, January 2016

² Ministry of the Environment and Climate Change (MOECC) – Environmental Noise Guideline, Publication NPC-300, August 2013

by an exterior walkway which leads to dwelling units. Each dwelling will be two-stories with a roof top terrace located on the third floor. As the terraces are less than 4 m in depth, they are not considered to be Outdoor Living Areas (OLA). A communal amenity area is also planned on the opposite side of the parking area. As this area is not readily accessible from the building, it is not considered to be an OLA. Furthermore, this area is well sheltered from the surrounding sources. Along Via Campanale the building will feature a skywalk section to allow access for vehicles to the site underneath.

The site is bordered by Via Modugno Place to the north with Campanale's commercial development at 605 Longfields Drive beyond, Campanale's Station Building to the east, Via Campanale Avenue to the south with the 619 Longfields residential development beyond, and Via Campanale to the west. The major sources of surface transportation noise include Longfields Drive to the east, and the Transitway and VIA Rail line to the west. Figure 1 illustrates a complete site plan with surrounding context.

3. BACKGROUND, DISCUSSION AND CONCLUSIONS

Gradient Wind has previously completed environmental noise studies for surrounding developments in the area. Below is a list of noise studies completed for Campanle Homes and other developers.

- Transportation Noise & Vibration Assessment 455 Via Verona (GWE15-016 – Noise), dated February 26, 2015
- Noise Study Amendment Longfields Station Building (GWE16-062 – Detailed STC), dated September 1, 2016
- Transportation Noise Study 619 Longfields Drive (GWE16-116 – Traffic Noise), dated July 7, 2017
- Stationary Noise Assessment 605 Longfields Drive (GWE17-174 – Stationary Noise), dated November 8, 2017

In review of these reports and given the site is farther setback from the surface transportation sources than the previous developments, noise levels from surface transportation is expected to be less than 65 dBA. As such, standard building components which comply with Ontario Building Code (OBC 2012) standards will be sufficient to ensure indoor sound level criteria are maintained. The dwellings will require provisions for air conditioning. If installed, air conditioning would allow occupants to keep windows closed and maintain a comfortable and quiet indoor environment.

Since the development is within the Ottawa Airport Vicinity Development Zone, building components will need to be designed using the Prescribed Measures for Aircraft Noise, as outlined in Part 6 of the ENCG. In addition to building components, forced air heating with provision for central air conditioning (or similar mechanical systems) is required to address aircraft noise.

Sources of stationary noise surrounding the subject property are a Transitway station to the northwest, a transformer station west of the development, HVAC equipment from the Station Building to the east, and sources associated with the 605 Longfields Drive development. Gradient conducted a stationary noise analysis for the 605 Longfields Drive development, showing that the condenser units located at the northeast side of the building will have no significant impact on the subject property. The noise report for the 619 Longfields Drive development used the following equation to determine impacts from the Transitway station:

$$L_p = 82.48 - 20 \log (D)$$

Where D is the distance between the source and receiver.

Given the setback distance of 75 m when measured from Google Earth to the west property line, noise from the Transitway station is expected to be 45 dBA, which meets the nighttime sound level limit as per the ENCG. The HVAC noise from the Station Building was considered by other consultants and using similar massing to the proposed building was found to comply with the ENCG sound level limits.

In order to address the noise issues of the site, the following warning clause will be required on all Purchase, Sale, and lease agreements:

“Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing roadway traffic may, on occasion, interfere with some activities of the dwelling occupants, as the sound levels exceed the sound level limits of the City and the Ministry of the Environment and Climate Change. This dwelling unit has also been designed with the provision for adding air conditioning at the occupant’s discretion. Installation of 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, Conservation and Parks.

To ensure that provincial sound level limits are not exceeded, it is important to maintain these sound attenuation features.”

To address aircraft noise, the following warning clause will be required on all Purchase, Sale, and lease agreements:

“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.

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.”

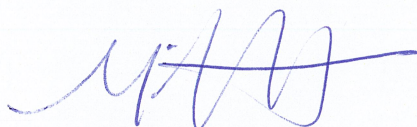
As the development is within 300 meters of the VIA Rail line, the following warning clause will be required on all Purchase, Sale, and lease agreements:

"VIA Rail Canada or their assigns or successors in interest have rights-of-way within 300 meters from the land subject hereof. There may be alteration to or expansions of the railway facilities on such rights-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwellings. The railways will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid rights-of-way."

This concludes our assessment and report. If you have any questions or wish to discuss our findings, please advise us. In the interim, we thank you for the opportunity to be of service.

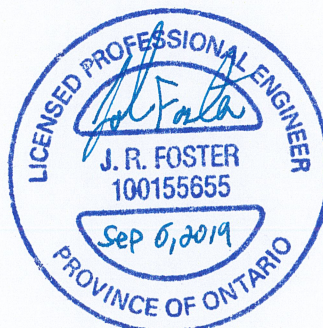
Sincerely,

Gradient Wind Engineering Inc.



Michael Lafortune, C.E.T.
Environmental Scientist

Gradient Wind File #19-165 – Noise Brief



Joshua Foster, P.Eng.
Principal

