

March 31, 2023

**Smart Living Properties**  
226 Argyle Avenue  
Ottawa, ON K2P 1B9

Re: Roadway Traffic Noise Addendum Letter  
112 & 134 Nelson Street, Ottawa  
Gradient Wind File No.: 21-227-Addendum Letter

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Smart Living Properties to undertake a roadway traffic noise assessment to satisfy the requirements for Site Plan Control for the proposed residential development located at 112 & 134 Nelson Street in Ottawa, Ontario. This addendum letter addresses a comment received from the City of Ottawa in March 2023, pertaining to noise impacts from the surrounding properties, as detailed below.

**City of Ottawa:**

- A Stationary Noise Report shall be conducted to investigate the noise impacts from the neighbouring Hydro Substation onto the proposed development.

Gradient Wind conducted a site visit on March 27, 2023, to make observations of the surrounding properties and collect stationary noise measurements of the City of Ottawa Hydro Substation. This facility is the primary property of concern, located at 365 and 351 King Edward Avenue and operating with an Environmental Activity and Sector Registry (EASR # R-010-7112400299). The EASR identified the only significant contaminant discharged from the facility is noise from 2 power transformers and exhaust fans. No significant sources of air quality emissions (i.e., gaseous) are discharged from the facility. The facility operates 24 hours/day, 7 days/week, 365 days/year. The main process which occurs at the facility is the conversion of incoming high voltage to a lower outgoing voltage via the use of power transformers on site located outside the building.

The EASR report outlines the future stationary noise impacts from the facility to existing noise sensitive properties at the time of the assessment. The report concludes the future stationary noise impacts to the surroundings will fall below the City of Ottawa Environmental Noise Control Guidelines (ENCG) Class 1

exclusionary limit of 45 dBA. It should be noted that 112 Nelson Street was not included as it was zoned “General Industrial” at the time of the assessment and was not classified as a noise sensitive property; the subject site served as a multi-tenant commercial building.

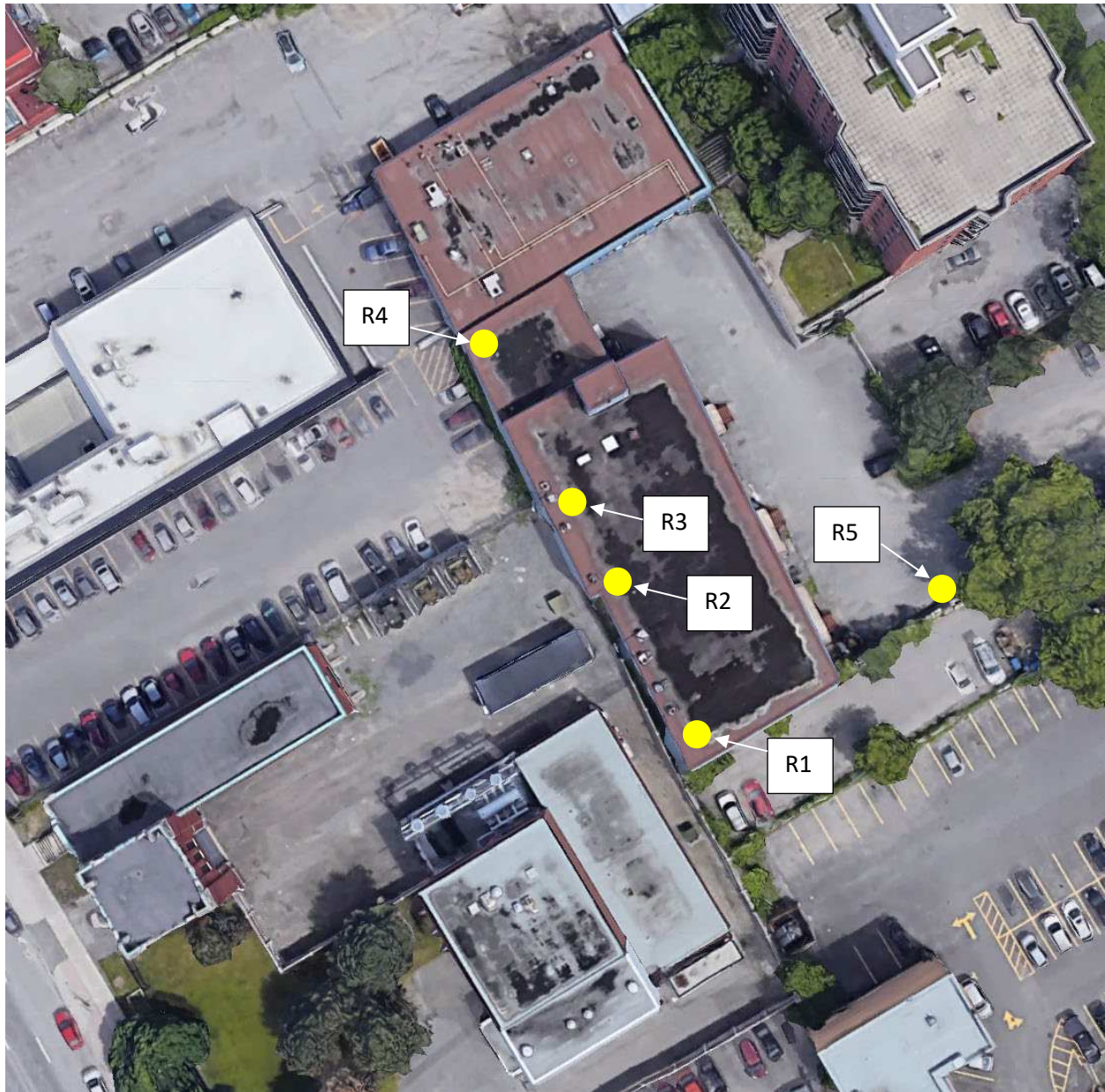
In order to verify that stationary noise impacts from the adjacent facility are compliant with Ministry of the Environment, Conservation & Parks MECP NPC-300 and ENCG sound level criteria, the noise emissions from the facility were determined through on-site measurements. Measurements were recorded using a Brüel & Kjær (B&K) integrating sound level meter Type 2250, equipped with a Type 4189 Class 1 microphone. The meter was mounted on a tripod with the microphone set at a height of approximately 1.5 m above the roof deck / grade of 112 Nelson Street. Four measurements were collected on the roof along the west property line, and one measurement was conducted at grade near the building’s east elevation to determine ambient noise levels without influence from King Edward Avenue. Wind conditions on site were observed to not have a significant effect on the noise measurements, and the weather was clear with an air temperature of 5°C.

The LA90 noise levels on the roof deck near the west property line at the measurement locations are presented in Table 1 below. LA90 represents the A-weighted sound level just exceeded for 90% of the measurement period. A plan of the measurement locations is illustrated in Figure 1.

**TABLE 1: NOISE PARAMETERS FROM ON-SITE MEASUREMENTS**

Receptor Number	Measurement Location	Duration of Measurement (Min)	Sound Pressure Level	
			L <sub>eq</sub> (dBA)	LA90 (dBA)
R1	Upper Roof – Southwest Corner	20	57.2	53.8
R2	Upper Roof – West Façade	21	58.1	54.7
R3	Upper Roof – Northwest Corner	20	58.9	55.3
R4	Lower Roof – West Façade	20	57.5	52.6
R5	At-Grade – East Façade	20	53.2	47.5*

\*Representative of ambient noise levels without influence from King Edward Avenue.



**FIGURE 1: MEASUREMENT LOCATIONS**

Noise levels at the measurement locations were found to range between 52 dBA and 55 dBA near the west property line. It was discovered that the Hydro Substation was not generating any noticeable noise. The dominant source of noise at the study site was observed to be roadway traffic noise along King Edward Avenue, which is a busy 4-Lane Divided Arterial. The on-site noise levels align with the theoretical noise levels outlined in Gradient Wind's transportation noise report dated July 27, 2021.

Based on a review of the facility's Noise Impact Table which forms part of the EASR documentation, the noise measurements conducted show the dominant source of noise is from roadway traffic and capture a predictable worst-case scenario. Therefore, the noise measurements collected indicate that influence from the adjacent facility is expected to fall below background noise levels produced by roadway traffic, complying with NPC-300/ENCG criteria. It should be noted that any expansion to the facility operations would be subject to an updated EASR to ensure compliance with surrounding sensitive lands.

Although stationary noise levels at the study site are expected to be in compliance with NPC-300/ENCG criteria as dictated by the background noise levels generated by roadway traffic, the following Type E Warning Clause should be applied to all Agreements of Lease, Purchase and Sale of residential units as the site is located adjacent to the Hydro Substation.

**Type E:**

*"Purchasers/tenants are advised that due to the proximity of the adjacent City of Ottawa Hydro Substation, noise from the industry may at times be audible."*

# GRADIENTWIND

ENGINEERS & SCIENTISTS

Should you have any questions, or wish to discuss our findings further, please call us (613) 836-0934 or contact us by e-mail at [joshua.foster@gradientwind.com](mailto:joshua.foster@gradientwind.com). In the interim, we thank you for the opportunity to be of service.

Sincerely,

**Gradient Wind Engineering Inc.**



Giuseppe Garro, M.A.Sc.  
Environmental Scientist

*Gradient Wind File #21-227*



Joshua Foster, P.Eng.  
Lead Engineer