November 26, 2020

Windmill Dream Ontario 206 LP
c/o Zibi Project
6 Booth Street (Albert Island)
Ottawa, ON K1R 6K8

Attn: Brad Rodgers, Sr. Project Manager
brodgers@zibi.ca

Dear Mr. Rodgers:

Re: Environmental Noise Addendum
Zibi Block 206 – Chaudière Island, Ottawa
Gradient Wind File 16-100-Noise Addendum

Gradient Wind Engineering (Gradient Wind) has been retained by Windmill Dream Ontario 206 LP to conduct an environmental noise assessment (GW16-100-Evncironemtnal Noise Final, dated July 24, 2020). This addendum letter is do address comments received from the City of Ottawa in an e-mail correspondence dated November 20, 2020. The comments are summarized below, followed by our response to each;

City of Ottawa: Page 3: "Control Guidelines (ENCG) specifies that the recommended indoor noise limit range (that is relevant to this study) is 50, 45 and 40 dBA for retail, living rooms and sleeping quarters, respectively, as listed in Table 1. However, to account for deficiencies in building construction and control peak noise, these levels should be targeted toward 47, 42 and 37 dBA." – I do not understand this rational. Due to building deficiencies it should have higher not lower. Please note lower value than the required as per guideline will not be acceptable to us. Please revise this and make changes where needed any portion of the study accordingly.

Gradient Wind: In-field measured partition assemblies can perform worse than laboratory tested assemblies due to minor construction deficiencies. To account for this, we are targeting lower indoor noise levels, which results in a higher standard of building construction, thus exceeding the ENCG minimum standard. Targeting a higher indoor noise level will result in an exceedance of the ENCG criteria.

It should be noted that plane of window noise levels do not exceed 65 dBA, therefore Ontario Building Code (OBC 2012) standard windows and exterior walls will be sufficient to achieve the target indoor noise level.

City of Ottawa: Page 7, Table 4: Please explained here how did you calculate assigned values in the column "Total"?

Gradient Wind: Octave band sound power levels in Table 4 are presented in linear sound (dBZ) and total sound power levels are presented in A-scale sound (dBA). The A – Scale is correlated to human hearing which is less sensitive to lower frequency noise. These terms are further defined in Section 4.1. The chart below shows the relative difference between dBZ and dBA

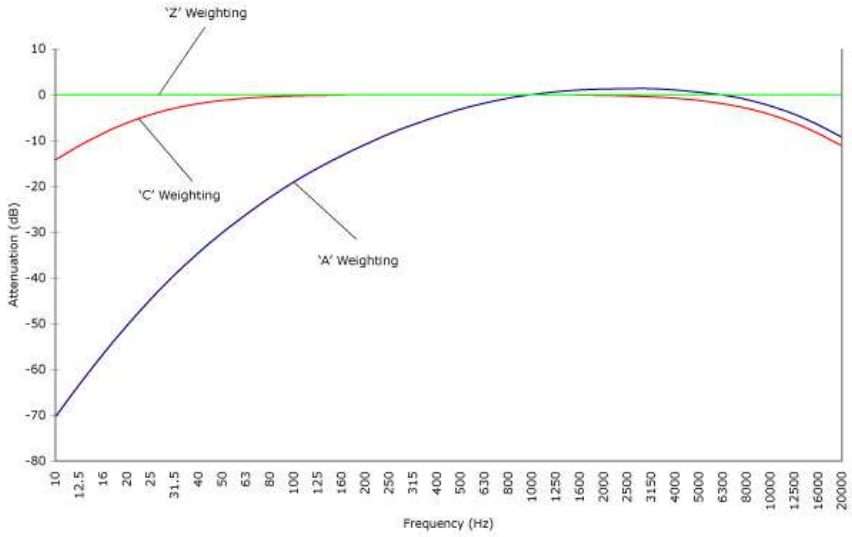

CHART 1: RELETIVE ATTENUATION BETWEEN A-WETING AND Z WETING

Total sound power is the logarithmic summation of all individual octave bands (63-8,000 Hz). The following equation is used to calculate the total sound power in dBA.

$$L = 10 * log_{10}(10^{\left(\frac{P_{63\,Hz}}{10}\right)} + 10^{\left(\frac{P_{125\,Hz}}{10}\right)} + \cdots)$$

Where:
L = Total sound power in dBA
P = Sound power at each octave band to be added in dBA

Table 4 of our report has been copied below, with octave band levels converted to dBA for reference.

TABLE 4: EQUIPMENT SOUND POWER LEVELS (dBA)

Source ID	Description	Frequency (Hz)								
		63	125	250	500	1000	2000	4000	8000	Total
S1	T1	66	79	84	90	87	83	78	68	93
S2	T2									
S3	T3									
S4	T4									
S5	FAN SF-A1	50	58	67	74	71	67	64	57	77
S6	FAN EF-A	57	67	68	68	68	66	62	54	75
S7	FAN SF-G1	55	65	69	67	70	71	69	65	77
S8	FAN SF-01	53	65	72	73	68	69	64	57	78
S9	FAN EF-01									
S10	Outfall	26	38	43	51	55	53	48	39	59

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. 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

Joshua Foster, P.Eng.
Principal

Gradient Wind File #16-100-Noise Addendum