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March 23, 2017

SupErb Construction Ltd.
2345 Delinea Place
Nanaimo, BC
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Attention: Chris Erb,

Email: chris@chriserb.ca

**Re.: Noise Monitoring Report
Noise Study – Vancouver Island Motorsport Circuit**

Mr. Erb,

As requested, I provide herein a summary of the approach and findings of the noise study which RWDI conducted for SupErb Construction Ltd. in October, 2016 in relation to noise created by the operation of the Island Motorsport Circuit located just off Highway 18 in North Cowichan B.C. I also provide some background information about RWDI and, in particular, about RWDI's Victoria office, which, prior to June, 2016, was Wakefield Acoustics Ltd., a local acoustical consulting firm that was acquired by RWDI at that time.

Noise Study Approach

The approach taken during the 2016 community noise study of the Island Motorsport Circuit was as follows:

- Continuous noise monitoring was conducted at three locations to the south of Highway 18,
- One of these locations was close to Highway 18 and two were positioned so as to represent some of the nearest residences to the motorsport circuit, namely 6259 Mina Drive and 4245 Sahtlam Road.
- Noise monitoring was conducted both on day which featured track use (with several cars on the track) and on a day when the track was not in use at all.
- One of the sound level meters used (at the Sahtlam Road site) stored a digital recording of the sound environment at that location. This permitted the subsequent identification of the sources of various noise events.
- The noise monitoring was intended to permit comparison of the noise levels being created by the motorsport circuit with the daytime limits contained in the Cowichan Noise Bylaw No. 3723 (namely 60 dBA for continuous noise and 80 dBA for non-continuous noise), and also to permit comparison of noise levels and patterns observed on the "track day" with those observed on the "non-track day".



Outcomes of Noise Study

The principal outcomes of the noise study were as follows:

- Noise levels created by motorsport circuit operations on the “track day” never approached the limits contained in the Cowichan Noise Bylaw of 60 dBA for continuous noise and 80 dBA for non-continuous noise.
- The noise created by motorsport activities on the “track day” did not significantly influence the overall noise exposures experienced at the two residential sites.
- The noise environment at the Mina Drive site was dominated by traffic noise from Cowichan Valley Highway on both days, while that at the Sahtlam Road site was largely dominated by aircraft noise during the track day and woodworking noise during the non-track day.
- Attended noise monitoring at the Mina Drive site revealed that overall noise exposures were dominated by Highway 18 traffic and that maximum noise levels, or L_{max} , created by highway traffic (particularly logging trucks) substantially exceeded those created by motorsport circuit activities.
- Analysis of the digital sound recordings made at the Sahtlam Road site, indicated that the L_{max} created by track activities were lower than the L_{max} created by other noise sources in the community (i.e., aircraft, woodworking).

In conclusion it may be stated that, while noise from motorsport circuit activities was, at times, clearly audible in the community (particularly at the Sahtlam Road site), and the audibility and intrusiveness of these noises are enhanced by their character (tonality and variability), they do not dominate, not even significantly contribute to, the overall noise exposures of residents in the community.

RWDI and Wakefield Acoustics Ltd.

RWDI is a multi-disciplinary science and engineering consulting firm with Canadian offices in Victoria, Vancouver, Calgary, Guelph, Ontario and offices and testing facilities in the USA, UK, India, Hong Kong and Singapore. RWDI provides consulting services in acoustical design and noise and vibration control to clients across Canada and around the world. RWDI purchased Wakefield Acoustics Ltd. in June of 2016.

I received a Master of Applied Science degree in Engineering Acoustic from UBC in 1973. During the 1970's I worked with and was a partner in an acoustical consulting firm in Vancouver. I formed Wakefield Acoustics Ltd. (WAL) in Victoria in 1988 to provide consulting engineering services in noise and vibration control and acoustical design to clients on Vancouver Island and throughout B.C. Prior to forming WAL, I served for eight years as “Sound Studies Engineer” within the B.C. Ministry of Transportation and Highways (MoTH). While at MoTH in the 1980's, I developed the policy that is used to assess the community noise impacts of provincial highway projects and to identify where mitigation efforts are warranted. Recently WAL assisted the Ministry in updating its noise policy. WAL has been involved in the community noise impact assessment and mitigation design of most of the major highway projects that have occurred in BC since the 1990's including the Nanaimo Bypass, the Inland Island Highway, the Sea to Sky Highway and the South Fraser Perimeter Road. More recently WAL has conducted the environmental noise assessment for the George Massey Tunnel Replacement Project and is currently (as RWDI) doing the same on the Pattullo Bridge Replacement Project for TransLink.

VANCOUVER ISLAND MOTORSPORT CIRCUIT – NOISE STUDY SUMMARY

RWDI #1603594

March 23, 2017



In 2003 WAL developed City of Victoria's Noise Bylaw No, 031-12 and quite regularly provides training in noise bylaw enforcement (including measurement) to bylaw officers from Victoria and other municipalities.

WAL's community noise consulting work also extends to railways and port operations and over the past few years WAL has been retained by the Vancouver Fraser Port Authority (Port Metro Vancouver) to assess the environmental noise impacts of the planned Roberts Bank Terminal 2 (RBT2) container port expansion at Tsawwassen. In 2015 WAL developed project noise assessment guidelines for use by Port Metro Vancouver's many tenants when proposing/planning new projects on port lands.

I trust this has provided all the information you require at this time. Please do not hesitate to contact me should you have any questions regarding the contents of this letter.

Yours truly,

A handwritten signature in black ink, appearing to read 'Clair W. Wakefield'.

Clair W. Wakefield, M. A. Sc. P. Eng.
Senior Consultant