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**RE: SUPPLEMENTARY INFORMATION AND RESPONSE TO GOLDER ASSOCIATES
THIRD PARTY REVIEW TECHNICAL MEMORANDUM NO. 18114915-001-TM-REV0**

1.0 INTRODUCTION

The Municipality of North Cowichan (MNC) retained Golder Associates to review two reports prepared for the preliminary design stage of the Vancouver Island Motorsport Circuit Phase II. The detailed design stage will include detailed civil design drawings, a Construction Environmental Protection Plan (CEMP), Construction Schedule, Operational Plans, Fire Interface Plans etc.

Aquaparian Environmental Consulting Ltd (Aquaparian) has reviewed the technical memorandum prepared by Golder Associated Ltd (Golder) which included the following scope of work for the Municipality of North Cowichan:

- Evaluation Criteria: Review of applicable municipal, provincial and federal environmental legislation, regulations and policy to confirm that a reasonable level of information and standard of care was taken in the Environmental Impact Assessment (EIA) prepared by Aquaparian for Phase II of the Vancouver Island Motorsport Circuit;
- Analysis of Assessment: Identify potential gaps in the EIA based on the opinion and experience of R.P.Bio(s) with Golder; and
- Recommendations: Provide recommendations to the Municipality and include suggested Development Permit conditions for the project.

Aquaparian appreciates the third party review that confirmed the EIA satisfies the Municipality's environmental requirements for the Development Permit process as well as the additional recommendations included in the memo primarily focussing on the scope of the Construction Environmental Management Plan (CEMP) which has not yet been prepared. As understood, the project information that was made available to Golder by the Municipality of North Cowichan was limited to the EIA, the Riparian Areas Regulation Assessment for Menzies Creek and one site visit.

Also as understood, the Municipality intends to make the Golder memo a public document. As such, Aquaparian would like to provide additional information to address some of Golder's comments to ensure that there are no perceived information gaps and to provide some clarification on site specific recommendations for the CEMP that will be produced for the construction phase of the project pending all required approvals.

2.0 SUPPLEMENTARY INFORMATION

The following supplemental information has been provided to respond to Section 4 of the Golder memo conclusions and recommendations.

Operational Phase: Golder noted limited information was provided for the operational phase of the project and recommended additional detailed assessment of the potential operational effects on biological (flora/fauna), physical (groundwater, hydrology, noise, water quality, and soils) and heritage and cultural receptors. This project is at the preliminary design stage. Operational requirements would typically be produced at the detailed design stage.

The proposed Phase II development is to be an extension of the existing VIMC facility which is used by high-end street legal vehicles that are maintained to a high level and the circuit is used on an intermittent basis during daytime hours. Sound levels are monitored and a maximum limit has been determined and is enforced. Operational impacts requiring mitigation for Phase II are expected to be similar to the existing Phase I circuit located on the adjacent parcel. The operational activity is limited to vehicles driving on the paved surface at speeds higher than a typical road but not passing one another. The following comments provide a summary of operational considerations:

- A wildlife exclusion fence aligned along both sides of the circuit will be designed at the detailed design stage to prevent animal collisions on the circuit. The existing perimeter fence is to prevent trespassing onto the property which has been an issue in the past.
- Amphibian fencing along the watercourse crossing locations suggested by Golder to prevent potential impacts to migrating amphibians will be included in the detailed design.
- Hydrology and water quality have been addressed by the civil engineering stormwater management design completed by J.E. Anderson & Associates.
- Groundwater and soils are not expected to be impacted as the vehicles will be restricted to the paved circuit and gravel run-off lanes adjacent to the paved surface. Drivers are monitored at all times. Parked vehicles are in controlled and monitored parking areas. Spill contingency plans and equipment will be in place for the operational phase as part of the overall facility management plan. As such, the risk of a spill impacting groundwater resulting from equipment failure, accident or malfunction is deemed to be less than a typical public road or parking lot.
- Extensive noise studies of the existing circuit have been completed by RWDI, previously Wakefield Acoustics Ltd, consulting acoustical engineers. The Cowichan noise bylaw No. 3723 identifies a limit of 60dBA for continuous noise and 80dBA for non continuous noise. Noise monitoring has shown that noise (dBA) from the circuit during operation is



approximately the same as the Cowichan Highway traffic noise as well as other noise generating activities including air planes and wood cutting equipment. Noise monitoring is ongoing and will continue to be monitored and mitigated. Additional noise mitigation is proposed in the Phase II design. As approximately 75% of the site will remain forested, and the circuit use is intermittent, operational noise impacts to migratory birds is expected to be low and limited to potential avoidance of nesting in the immediate alignment vegetation. Avoidance behaviour is difficult to predict as animals can become acclimated to human activity.

Construction Environmental Management Plan: Aquaparian will be preparing a CEMP for the construction phase of the project at the detailed design stage as has always been intended. This document will be produced once there is confirmation that the project is moving forward. The list of components identified in the Golder review is standard inclusion in the CEMPs we have prepared for similar and more complex projects in the past.

Restoration Plan: Restoration Ecologists are not the only QEP capable of preparing a restoration plan for this project. For example, a Landscape Architect in conjunction with an R.P.Bio experienced in habitat restoration would also be suitable or someone with a forestry background. Topsoil stripped for the construction areas of the project will be retained and replaced in restoration areas in preparation of replanting. The seed bank in the soil is expected to regenerate understory species to supplement additional plantings that will be required during site restoration.

DFO: A DFO project review request has been drafted and put on hold while further design considerations have been ongoing for the watercourse crossings. The previously proposed culvert crossing design has been replaced by a free span bridge design that will avoid disturbance and realignment of the existing stream channels. The abutments of the bridge are to be located outside the stream channels and outside the floodplain adjacent to the channels where they occur; as such no in-stream work will be required for the installation. This new design will be submitted to DFO as a project review request. Due to this design change, the stormwater management design of the site has also been revised to include additional detention ponds outside the riparian development permit areas within the site.

MFLNRO: A Section 11 Approval application was previously submitted for the culvert stream crossing design. The new bridge crossing design will be resubmitted to replace the previous application design. Clear span bridges are typically submitted as a Notification application to the province. The province will determine if the new design constitutes a Notification or an Approval.

Fauna: Roosevelt elk and the perimeter fence. The existing perimeter fence does not completely surround the subject parcel which is open in the northeast section where the terrain is steep. The intent of the perimeter fence is to prevent public trespassing which has been an issue in the past for the existing facility and people continue to cut the fence wires to gain access to the subject parcel. As previously identified, evidence of elk use was limited within the parcel and they appear to prefer the older forests stands to the west of the parcel and north of the parcel above the BC Hydro Right-of-Way. This elk herd appear to be wide ranging throughout the Cowichan River Valley utilizing all habitat types from farmer's fields to forested areas.



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Species at Risk: As identified by Golder, the CEMP is to provide guidance to avoid impacts to species at risk and identified a number of easily recognizable species or groups of species (elk, bats, birds, amphibians, reptiles etc) and three invertebrates that are not commonly known.

Unlike some of the other provinces, British Columbia still does not currently have provincial Species at Risk legislation though the province has been mandated to do so. The province is in the process of public input to the proposed legislation. The Federal *Species at Risk Act* (SARA) applies to species occurrences on federal lands and only applies to SARA listed aquatic species and bird species occurring on private lands. Any additional protections on private land therefore fall to municipal governments and are not typically species-specific but rather focus on sensitive ecosystem protections with the creation of Development Permit Areas; in this case riparian. The project has been designed to avoid impacts to the Menzies Creek ravine reach as it was determined to have the highest riparian habitat values within the property.

Golder listed three species of invertebrates (two slugs and one snail species) as potentially occurring in the project area with a recommendation of completing pre-disturbance checks by a QEP trained in their identification. The following information is provided on these species as most people are not familiar with them:

- **Blue-grey tail dropper** – Provincially Blue-listed (Imperilled / Special concern), SARA Schedule 1 – Endangered. Small slender slug. It ranges from southern British Columbia south to Puget Lowlands in Washington and through the Cascade Range into Oregon and northern California. This includes the Coast Range, Oregon and Washington Cascades, Puget Trough, Klamath Mountains of southwestern Oregon and northern California, western Idaho and southern Vancouver Island, British Columbia. Occurs in coniferous and mixed-wood forests from mid-seral to mature age classes, including Douglas-fir, shore pine, and aspen dominated stands, and Garry oak woodlands. Microhabitat features include abundant coarse woody debris, pockets of deep forest duff, and moist forest-floor conditions. Dispersal abilities very limited, tens of hundreds of meters per generation, thought to be relatively sedentary with poor dispersal abilities. The closest known location for this species is 12km away near the base of Mt Tzouhalem in a moist bigleaf maple stand with sword fern and Oregon grape understory. The probability of this species occurring in the subject parcel is deemed to be low. Habitat attributes suitable for this species are limited within the subject parcel.
- **Warty jumping slug** – Provincially red-listed (Imperilled), SARA 1-Special Concern. A small, robust, grey to tan slug with length up to about 3 cm. Ranges from Vancouver Island, British Columbia through Washington to Multnomah and Clatsop Counties, northwestern Oregon. In Canada, known from the southern end of Vancouver Island only. The species exists at the northern limits of its distribution on Vancouver Island. These slugs are probably relatively sedentary and have poor dispersal abilities, thought to have low mobility and dispersal ability. This species occupies moist forests from young seral stages to old growth and from low to mid-elevations. It is often found in forested riparian areas along creeks or rivers. Moist forest floor conditions appear to be more important than forest age or type. Required microhabitat features include coarse woody debris, pockets of deep leaf litter, or other moist shelter sites such as provided by root-masses of sword ferns. It occurs sporadically in coniferous, deciduous and mixed-wood forests. The closest mapped occurrence is 7km away at Keating Lake, Shawnigan District in 1999 found in a recently logged and older second growth mixed-wood forest.



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Bigleaf maple present and sword fern understory. The probability of this slug occurring in the subject parcel is deemed to be low. Habitat attributes suitable for this species are limited within the subject parcel.

- **Pacific sideband** – Provincially yellow listed (apparently secure with some cause for concern); Not SARA listed. This species, and its several subspecies, occurs along the Pacific coast from southeastern Alaska to northern California, generally west of the crest of the Cascade Range. Found in deciduous, coniferous or mixed forests; also in open woods and grassy areas; have been observed in trees as high as 6.7 m. This species is found throughout Vancouver Island. This snail may be found in moist forest habitats in the subject parcel, but this species is not threatened or endangered.

Cultural Heritage: Aquaparian completed a request for known information for the site as a standard practice to gather background information for the property. Any further requirements for archaeological information or assessment are beyond the scope of Aquaparian.

Regards,

AQUAPARIAN ENVIRONMENTAL CONSULTING LTD



Sarah Bonar B.Sc., R.P.Bio.

Principal

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