



Daniel Norman
7245 Bell McKinnon Road
Duncan, BC V9L 6A8

March 9, 2022

RE: Letter of Opinion: Riparian Areas Protection Regulation and Proposed Development at 7245 Bell McKinnon Road, North Cowichan, BC

On December 10, 2021, I visited 7245 Bell McKinnon Road with the owner, Daniel Norman, to review the condition of the Riparian Assessment Area (RAA), determine the Streamside Protection & Enhancement Areas (SPEAs), on the property and provide an opinion with regard to the compliance of the proposed development on the property with regard to the provincial Riparian Areas Protection Regulation (RAPR) for inclusion with the rezoning application for the property. Figure 1 and Photos X-X present the proposed development and RAA and SPEAs.

The proposed development activities and construction footprint are all outside the SPEA of the waterbodies on and adjacent to the property. The proposed development is construction of:

- secondary dwelling
- septic system
- rock pit for stormwater management
- connection to electrical service from the shop

Environmental protection measures will be implemented to ensure there is no encroachment to the SPEA, and the no sediment-laden water or pollutants enter the waterbodies.

Protecting ecological features

- Temporary fencing (e.g. orange snow fencing) will delineate the SPEA in the areas of the proposed construction.
- Locations of SPEA, no-go zones, retained trees and vegetation, and sensitive areas are flagged and communicated to all personnel, including sub-contractors and trades.
- Avoid placing soil/gravel piles and heavy construction materials around roots of trees to be retained, or otherwise cutting into root zones or compacting soils by driving and parking vehicles on root zones. Protective tree fencing is recommended for delineating protected areas.

Erosion & Sediment Control

- Minimize vegetation removal
- Excavations conducted during forecasted dry weather, where possible
- Install of sediment barriers (e.g. sediment fences) around perimeter for the construction area
- Do not direct water runoff from the site or dewatering from excavations directly into waterbodies. If dewatering of excavations is required, the Environmental Monitor must be consulted to determine where runoff can be directed or if sediment settling facilities (tanks, berms) are required.
- Cover exposed soils, if needed (e.g. poly, tarps, mulch, seeding, 'rough and loose' treatment)
- Ensure soil and debris stockpiles are placed away from the SPEA and sediment-laden water cannot flow into the waterbodies.
- Contact Environmental Monitors immediately with any concerns.

Spill Prevention and Response

- Equipment is inspected for leaks prior to beginning work.
- Spill response kits (capable of addressing the volume of fuel/oils/chemicals on site) are on site when any heavy machinery is working, and operators are trained in their use.
- Equipment refueling is at a designated location and >30 m from aquatic ecosystems or isolated from stormdrains.
- Fuel generators must be placed in a spill-proof container capable of addressing the maximum volume of fuel involved (e.g. plastic bin, or other impermeable containment area such as poly-lined bermed depression).
- Store all fuel cans in spill-proof containers (e.g. as above).
- Concrete wash-water and wet concrete is highly alkaline and toxic to fish and other aquatic organisms. All concrete wash-water from equipment, trucks and/or hand tools needs to be directed to a settling area away from runoff paths to the waterbodies. Freshly poured concrete needs to be covered when rain is forecasted or runoff needs to be isolated from waterbodies during the curing process.
- In case of spills, the following general steps are recommended:
 1. Stop source of spill/prevent further spillage (turn off valves, right overturned containers)
 2. Block spill from reaching aquatic environment or pathways to waterbodies
 3. Block spill from spreading
 4. Call Environmental Monitors
 5. Clean up spilled materials

Environmental Monitoring

At a minimum, environmental monitoring should include:

- A pre-construction meeting on-site with the QEP and the contractor.
- Site visits, and for low risk activities, as determined by the QEP, photographs/videos sent by the contractor or owner to coincide with key construction activities and based on weather conditions to ensure all development activities remain outside of the SPEA and E&SC protective structures are in good working order:
 - After environmental protection measures are installed (e.g. site flagging, and sediment fencing)
 - During excavation
 - Heavy rainfall events (e.g. >15 mm) until such time that the QEP is satisfied that the erosion & sediment control and other protective structures are containing heavy rainfall as designed and no sediment laden runoff is leaving the site
 - Emergencies (e.g. spills).
- A post-development visit to inspect works for the conformance statement and post-development report.

SUMMARY

All development activities are proposed outside the SPEA, and it is my opinion that the proposed development will be in compliance with the RAPR, provided environmental protection measures are implemented during construction.

A RAPR Assessment Report will need to be completed, submitted to, reviewed and accepted by the province, and submitted to the municipality for the future Development Permit application for construction of the proposed development.

Please do not hesitate to contact me with any questions you may have.

Sincerely,



Lehna Malmkvist, MSc, RPBio (#1613)



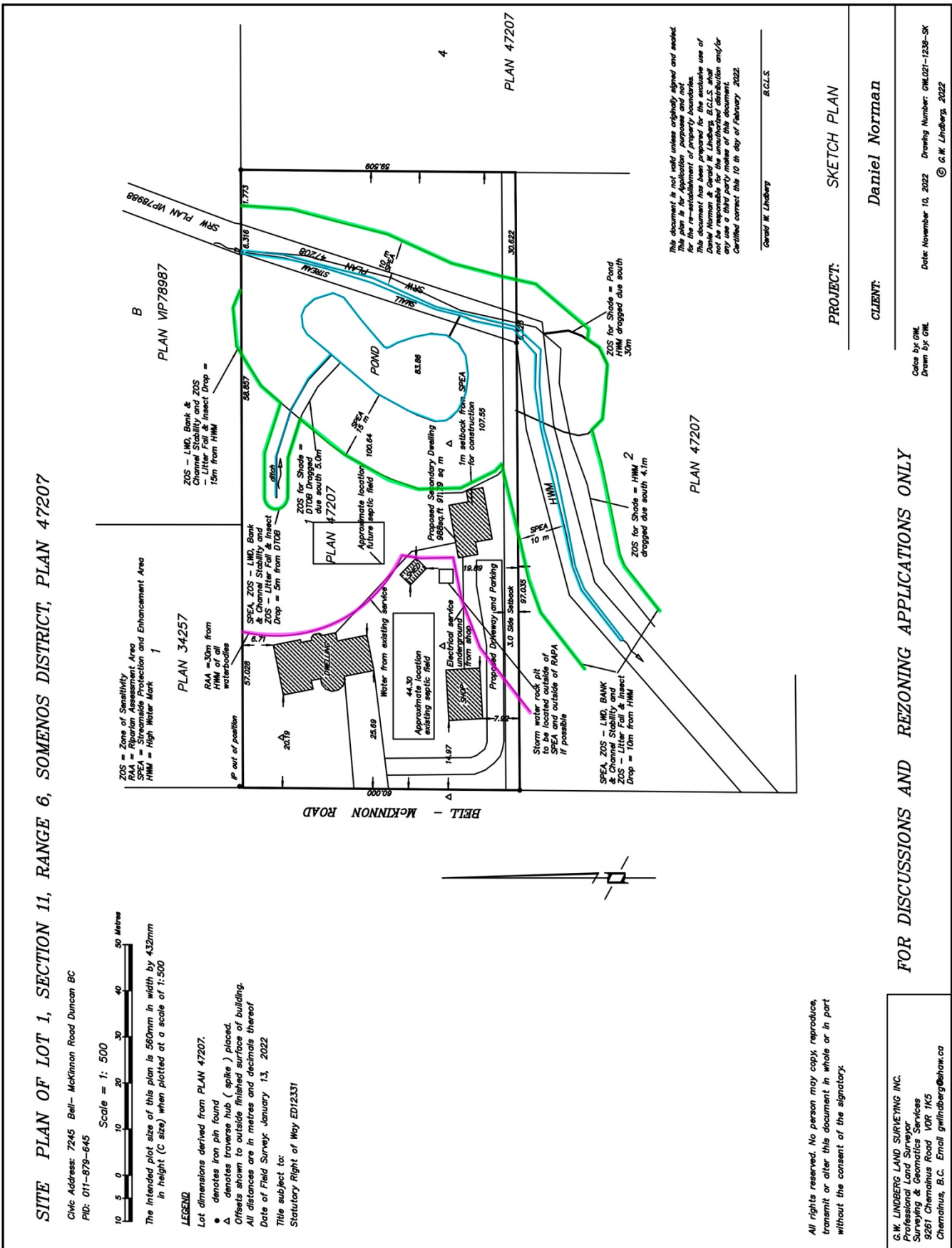


Figure 1. Site plan, including RAA, SPEA, HWM and proposed development.



Photo 1. Pond and stream channel and proposed location of the secondary dwelling outside the SPEA.



Photo 2. Pond and stream channel in the background, proposed location of the septic field, in front of the pool, outside the SPEA on the left side of the photo.



Photo 3. Pond and stream channel in the background, proposed location of the secondary dwelling, behind the shed and rock pit, to the right of the shed, both outside the SPEA.



Photo 4. Proposed location of the secondary dwelling, outside the SPEA.