



# Geotechnical Report Requirements

A geotechnical report (the “Report”) is required to confirm that the land may be used safely for the intended use without undue risk of hazards. The Report shall be prepared at the cost of the applicant.

Geotechnical Reports must be prepared by a professional engineer or geoscientist who is experienced in geotechnical engineering (the “professional”). The professional must be registered and in good standing with the Engineers & Geoscientists of British Columbia (“EGBC” – Formerly “APEGBC”). The professional shall inspect the property, supervise the geotechnical site investigations and the Report shall clearly state all relevant restrictions, conditions and/or limitations to the proposed development of the land. The geotechnical site investigations and the Report shall be completed in accordance with good professional practice, EGBC guidelines and other relevant requirements. Any report prepared in support of a land development application or building permit must contain the following:

## **1. Identification of the subject Property**

The legal address as printed on a current state of title, and a civic address if one is assigned.

## **2. Intended use of the subject property**

Description of the intended use of the property that corresponds to the proposed development being considered by the Cowichan Valley Regional District. Include the duration of engagement. (*e.g. The intended use of the property is the construction of one single family dwelling, accessory buildings and an onsite liquid waste water system*).

## **3. Identify any hazards which may affect the safe development of the land including, but not limited to:**

Flooding • subsidence • ground water flows • land slip • mud flows • earthquake • erosion • avalanche

## **4. Provide recommendations to reduce the risk of damage to the land, buildings or infrastructure and in regards to:**

- further geotechnical investigations and reports;
  - restricting the use of the land, buildings or infrastructure;
  - remediation of any unstable or potentially unstable soils; and
  - further reports during the maintenance period.
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5. Evaluate the development or building plans for the property using relevant Regional District bylaws; the Official Community Plan; Natural Hazard Area designations contained within the Official Community Plan; Flood Management Bylaws; [Hazard studies undertaken by the CVRD available on our website](#) and land use regulations contained within the zoning bylaw to determine the suitability of the land to accommodate the use intended.

6. Establish a safe setback line from any watercourses, steep slopes or hazard areas to protect the land, buildings, infrastructure and inhabitants from the risk of injury or damage that may, in the opinion of the Professional, be caused by the hazards of flooding, erosion, land slip, rock fall, subsidence, earthquake, mud flows or any combination thereof. The recommended setback cannot diminish the minimum setback requirements established by Regional District Bylaws.

## **7. Identified Hazards**

The Professional shall:

- Describe the method of hazard or risk analysis used;
- Refer to an appropriate and identified provincial, national or international guideline for level of safety;
- Compare the guidelines with findings of his/her investigation;
- Make a finding on the level of safety on the property based on the comparison;
- Quantify the risks of geotechnical failure or any substantial hazard;
- Make recommendations to reduce hazards and risks; and
- Report on the requirements for future inspections of the property and recommend who should make those inspections.

## **8. The Professional's recommendations and conclusions of the Report must:**

- Acknowledge that the Regional District, Land Use Staff and Building Inspectors may rely upon the Report when making a decision on development of the land or construction of a building or other structure;
  - Certify the land is safe for the use intended with the probability of a geotechnical failure resulting in property damage of less than 10 percent (10%) in 50 years; with the exception of geohazards due to a seismic event which are to be based on a 2 percent (2%) probability of exceedance in 50 years;
  - With respect to flooding, certify that the development in riverine areas must meet the 1:200 year return for flooding or certify the development in marine areas must meet the 1:100 year return for sea level rise.
  - Identify any deficiency in the design of the buildings, the proposed water, sewerage, drainage, access and infrastructure or the construction standards intended for the development;
  - Prescribe the geotechnical works and any changes in the standards of the design of the development which are required to:
    - a) ensure the land, buildings and infrastructure are developed safely for the use intended and,
    - b) to maintain the safety of the land, buildings and infrastructure as a condition of the approval of the development.
  - Certify "the land safe for its intended use".
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## 11. The professional report must include the following attachments:

- When in respect to flooding; “[EGBC Appendix I Flood Assurance Statement](#)”.
- When in respect to land slide; “[EGBC Appendix D Landslide Assessment Assurance Statement](#)”.
- In any case; “[CVRD Hazard Assurance Statement](#)”.

## 12. Safety and Suitability

The professional report shall include the following language in closing:

This report has been prepared in accordance with standard geotechnical engineering practices, and at the expense of *(insert name of owner)*. *(insert name of engineer or engineering firm)* has not acted for or as agent of the Cowichan Valley Regional District in the preparation of this report.

*(insert name of engineer or engineering firm)* certifies that the land may be used safely for the use intended *(insert description of project)* if the land is used in accordance with the conditions specified in this report.

*(insert name of engineer or engineering firm)* acknowledges that this report may be used by the Cowichan Valley Regional District as a precondition to the issuance of a permit and that this report and any conditions contained in this report may be included in a restrictive covenant under Section 56 of the [Community Charter](#) and filed against the title to this subject property.

## 10. Submission

The Report and two duplicate copies shall be provided to the Regional District for consideration of the approval of the application. If the Report identifies any hazards or site conditions which, in the opinion of the Professional or the Regional District, may impact the safe development of the land or an adjacent property unless restrictions on development are established, the Report together with a Section 219 covenant may be required to be registered on the title of the property pursuant to the [Land Title Act](#).

Registration of a covenant and/or the approval of an application do not warrant or represent that the land may be developed and used safely without risk of damage from hazardous conditions. Notwithstanding the registration of a covenant, a further Report could be required by the Regional District if there is a change in the conditions or some other circumstances arise which are substantially different than those anticipated by the Report.

## 11. Relevant Informative Note:

Be advised that separate Geotechnical Reports may be required throughout the Development Process that are specific to the Development being proposed. For example; a Geotechnical Report that certifies land is “safe for its intended use” when subdivision is being proposed will not be satisfactory if resubmitted when a Building Inspector requires a report when “safe for its intended use” means constructing a structure on a specific parcel. This matter has been addressed by the BC Supreme Court (*Compagna v. Nanaimo (City)*, 2016 BCSC 1045) and subsequently the BC Court of Appeals (*Compagna v. Nanaimo (City)*, 2018 BCCA 396)

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