UNIVERSITY ENDOWMENT LANDS

AREA B GEOTECHNICAL & STORMWATER REQUIREMENT

POLICY

PURPOSE:

The purpose of the Area B Geotechnical and Stormwater Requirement Policy (the "Policy") is to inform owners, designers, and builders about the University Endowment Land's (UEL) Geotechnical and Stormwater Management requirements for proposed development in Area B. For the purposes of this Policy, "development" includes any proposal requiring a building permit, development permit or zoning amendment(s).

BACKGROUND:

In 2019, the UEL commissioned a Hydrogeological and Geotechnical Investigation (the "Investigation") into Area B slope stability and protection. The Investigation conducted by the UEL's engineering consultant (AECOM) found concerns about slope stabilization and slope erosion surrounding the sea cliffs and Salish Creek (a deep ravine creek with identified fish habitat, located on the eastern edge of Area B) due to the effect of surface drainage and groundwater discharge and/or sea wave action. A recommendation stemming from the Investigation is to involve a professional geotechnical engineer from an early stage of new developments to acknowledge the slope stabilization and slope erosion issues and to advise on the geotechnical and drainage components of the development. Additionally, landscaping and irrigation systems (if required) should be designed to minimize deep infiltration.

APPLICATION:

For all of Area B:

1. No irrigation shall occur between October 15th and April 30th.
2. All new developments shall utilize low water landscaping or xeriscaping.
3. For all proposed developments, the property owner will retain a registered Professional Geotechnical Engineer or Professional Geologist (Qualified Professional or QP) to perform the following tasks:
    a) At the **Development Permit Application** stage, the QP will provide a signed and sealed acknowledgment clearly stating that:
        i. A review of the available geotechnical and hydrogeological information has been completed. At a minimum, this includes the AECOM *Area B Slope Stability and Protection – Geotechnical Data Report April 2019* available on the UEL website. In addition, the UEL may provide further information regarding the sea cliffs/Salish creek slope stability/erosion issue for review;
        ii. The QP has a full understanding of the issues pertaining to slope regression surrounding the sea cliffs and Salish Creek;
        iii. The QP has a full understanding of the surface drainage and groundwater effect on the ongoing sea cliffs and Salish Creek slope instability;
        iv. The property owner has been clearly informed of the geotechnical and hydrogeological risks inherent to the property;

v. The QP has completed a visual inspection of:

- the slope erosion and instability issues at the sea cliffs and Salish Creek (north of Chancellor Blvd.);
- the location and site conditions of the proposed development in relation to the global slope erosion/instability issues.

b) The QP will also conduct a geotechnical assessment of the drainage requirements for the site, including an assessment of any proposed drainage systems and their effect on surface runoff, groundwater recharge and geotechnical conditions.

4. All proposed landscaping/surface/building drainage systems for any additions, new construction and hard surface landscaping must be in accordance with the UEL Works and Services bylaw which sets out requirements for Integrated Stormwater Management Plans.

For properties in Area B north of Newton Wynd or east of Acadia Road (see Figure 1):

5. In addition to the requirements listed above, all new developments require a geotechnical report at the Building Permit Application Stage, including:

   a) Site-specific geotechnical and hydrogeological investigations;

   b) Analysis of the effect of the proposed Stormwater Management and Site Drainage Plan (SMP) and design on surface runoff, groundwater recharge and geotechnical conditions;

   c) Stabilization of high-risk slopes;

   d) Analysis of the design; and

   e) Confirmation that the new development will not adversely impact the on-going slope regression at the sea cliffs and Salish Creek.

6. The QP will provide letters of assurance of professional design and commitment for field review (Schedule B) and field review and compliance (Schedule C-B).

7. In all cases, permits will not be issued until the Manager has reviewed and accepted the required documentation, prepared at the cost of the applicant.

MINIMUM REQUIREMENTS FOR PROFESIONAL GEOTECHNICAL ENGINEERS:

Geotechnical Reports must be prepared, sealed and signed by a registered Professional Geotechnical Engineer or Professional Geologist (Qualified Professional or QP) in good standing. QPs must also follow the "Guidelines for Legislated Landslide Assessments for Proposed Residential Developments in BC" by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). These guidelines provide direction to QPs who must assess life risk tolerance and assure the land is safe for the intended use.

The applicant must ensure the QP is aware of the minimum standards included in this Policy.

Digitally signed by Jonn Braman
Date: 2020.08.20 11:14:11 -07'00'

Jonn Braman, Manager
University Endowment Lands

Digitally signed by Kamelli Mark
Date: 2020.08.20 09:16:06 -07'00'

Kamelli Mark, Deputy Manager
University Endowment Lands

Figure 1: Area B Geotechnical and Stormwater Requirement for Policies 1-5

LEGEND:
Area of Applicability for policies 1-5

Source: iMapBC, 2019