



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA

IN THE MATTER OF THE *PROFESSIONAL GOVERNANCE ACT*
S.B.C. 2018, CHAPTER 47 (the “PGA”)

and

IN THE MATTER OF MAHMOUD MAHMOUD, P.ENG.

ENGINEERS AND GEOSCIENTISTS BC FILE NO. T19-053

CITATION

**TO: Mahmoud Mahmoud, P.Eng.
c/o J.J. McIntyre at MW Law Offices.
1570-789 West Pender St.
Vancouver, BC V6C 1H2**

TAKE NOTICE that a Panel of the Discipline Committee of the Association of Engineers and Geoscientists of the Province of British Columbia, doing business as Engineers and Geoscientists BC (“EGBC”), will meet on a date to be determined, for the purpose of conducting a discipline hearing pursuant to the *PGA*. The *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the “*EGA*”) was repealed and replaced by the *PGA* on February 5, 2021. While the allegations herein are made under the *EGA*, the procedures established by the *PGA* and the current Bylaws of Engineers and Geoscientists BC will be followed as far as they can be adapted to this proceeding.

AND TAKE NOTICE that in connection with the stormwater management system (the “Greenwood SWMS”) for the project located at [REDACTED], West Vancouver (the “Greenwood Project”) and the stormwater management system for the project located at [REDACTED], West Vancouver (the “Hycroft Project”), the allegations against you are that you acted contrary to the *EGA* and the applicable bylaws as follows:

1. You demonstrated unprofessional conduct contrary to the *EGA* by reviewing and signing a report dated November 19, 2013 with subject line “RE: ROCK PIT DESIGN AND RECOMMENDATIONS [REDACTED], WEST VANCOUVER, BC” (the “Rock Pit Design Report”) that was prepared by an Engineer-in-Training under your direct supervision. As set out therein, the primary purpose of the Rock Pit Design Report was to prepare a rock pit design (the “Rock Pit Design”) for use in the Greenwood Project building permit application process. In particular, the Rock Pit Design Report and the Rock Pit Design contain the following defects and deficiencies:
 - a. the methodology and values used to derive the recommended rock pit size are not included in the Rock Pit Design Report and are not otherwise apparent in any document relied on in support of the development of the Rock Pit Design;
 - b. the Rock Pit Design Report includes the following two drawings:
 - i. Figure 1: Stormwater Management Plan – Perimeter Drain and Rock Pit; and
 - ii. Figure 2: Sump to Rock Pit.(collectively, the “Greenwood SWMP Design Drawings”)

Read together with the Rock Pit Design Report, the Greenwood SWMP Design Drawings do not contain the information necessary to construct the elements of the Greenwood SWMP depicted therein. More particularly, the Greenwood SWMP Design Drawings omit accurate locations, sizes, elevations, and material specifications.
 - c. the methodology and calculations underlying the Rock Pit Design are flawed because the runoff equation used to calculate the rock pit storage volume is not, and was not at the material time, the correct equation to use for the purpose of calculating rock pit storage volumes
2. You demonstrated unprofessional conduct contrary to section 20(9) of the *EGA* by failing to affix your seal to the Rock Pit Design Report, which is a report that was prepared by an Engineer-in-Training under your direct supervision.
3. In your capacity as geotechnical professional of record for the Greenwood Project, you demonstrated unprofessional conduct contrary to the *EGA* by failing to conduct a geotechnical investigation that was sufficient to support the development of the Greenwood SWMS, in particular:

- a. you relied on data and observations from a single test hole that was dug to a depth of approximately three feet, which is insufficient to provide an acceptable review of subsurface soils;
 - b. you failed or neglected to conduct any infiltration testing; and
 - c. you failed or neglected to review any groundwater information.
4. The existence of the defects and deficiencies identified in paragraphs 1 and 3 demonstrate incompetence on your part.
5. You demonstrated unprofessional conduct contrary to the *EGA* by signing and affixing your seal to a stormwater management plan for the Hycroft Project dated April 2, 2019 (the “April 2, 2019 Hycroft SWMP”) that contained the following defects, errors, and deficiencies:
 - a. the April 2, 2019 Hycroft SWMP includes the following note indicating that the “percolation rate is high”, which is a conclusion that was arrived at without having conducted any percolation testing:
 - i. “The water percolation is high and there is no risk due to water table because of the morphology and soil structure of the lot”;
 - b. the stormwater management objective indicated in the April 2, 2019 Hycroft SWMP does not align with the applicable stormwater management targets prescribed by the District of West Vancouver (the “DWV”) in the applicable Stormwater Management Plan Submissions Guidelines (2016) (the “2016 Guidelines”);
 - c. the April 2, 2019 Hycroft SWMP was not developed in compliance with the following requirement of the 2016 Guidelines:
 - i. “all sites shall have a storage facility to assist in attenuating rainwater runoff flows for the 10-year event under six design storm durations from 1 hour to 24 hours”;
 - d. the calculations presented in the April 2, 2019 Hycroft SWMP contain inaccurate, incorrect, and/or misleading information, including:
 - i. the impervious areas shown in the calculation table are incorrect;
 - ii. the peak flow calculations for pre-development conditions and post-development conditions are incorrect and inconsistent;
 - iii. the following alternative method for release rate calculation does not comply with the 2016 Guidelines:

1. “Another method [for release rate calculation] is limiting the release rate to 50% of the 2 year peak flow [...]”; and
 - iv. the estimated storage volume presented is improperly derived;
 - e. The pre-development and post-development impervious areas in Drawing No. 3 are inaccurate, and fail to take into account bedrock;
 - f. The design presented in the April 2, 2019 Hycroft SWMP does not meet the engineering standards for the detailed design of an onsite stormwater system, and contains, without limitation, the following defects, errors, and deficiencies:
 - i. Drawing No. 4 and Drawing No. 5 depict different drainage configurations;
 - ii. the active storage of the storage tank is unclear;
 - iii. the notes included on Drawing No. 4 are inconsistent with the notes included on Drawing No. 5 as they relate to minimum drainage/sewage pipe slope; and
 - iv. locations and details of the proposed onsite Best Management Practices are absent from the stormwater system design.
6. You demonstrated unprofessional conduct contrary to the *EGA* by failing to adequately supervise and review the work of the non-registrant (as he was then) primarily responsible for preparing the April 2, 2019 Hycroft SWMP, and by subsequently signing and affixing your seal to the April 2, 2019 Hycroft SWMP, despite the existence and extent of the defects, errors, and deficiencies identified in paragraph 5.
7. You demonstrated unprofessional conduct contrary to the *EGA* and you did not comply with Principle 2 of the Code of Ethics by signing and affixing your seal to the April 2, 2019 Hycroft SWMP when you did not possess the requisite training or experience to take responsibility for the professional assignment, in particular:
 - a. the 2016 Guidelines require a SWMP submission to include, amongst other things, “storage volume required complete with orifice dimensions (for discharge rate control) and calculations”, which is an area that was and is outside your knowledge and experience, and which you admit lacking the qualifications to have undertaken on your own.
8. You did not comply with the minimum requirements of section 14(b)(2) of the Bylaws of Engineers and Geoscientists BC (as they were then) by failing to implement regular, documented checks of the engineering and geoscience work undertaken by a non-registrant (as he was then) under your direct supervision in

respect of the April 2, 2019 Hycroft SWMP, including the absence of a written quality control process appropriate to the risk of the work.

9. You did not comply with Principle 3 of the Code of Ethics by providing a professional opinion in the form of the April 2, 2019 Hycroft SWMP without the requisite foundation of knowledge and honest conviction.
10. You demonstrated unprofessional conduct contrary to the *EGA* and you did not comply with section Principle 3 of the Code of Ethics by failing or conduct an adequate geotechnical review to support the development of the April 2, 2019 Hycroft SWMP that was signed and sealed by you, in particular:
 - a. no subsurface investigations were conducted to assess soil and groundwater;
 - b. a desktop review of the provincial database was not conducted; and
 - c. infiltration testing was not conducted.
11. Prior to signing and affixing your seal to the April 2, 2019 Hycroft SWMP, you had signed and affixed your seal to the following stormwater management calculation sheets related to the Hycroft Project that were prepared by an Engineer-in-Training under your direct supervision and reviewed by you (together, the “Hycroft SWMP Calculation Sheets”):
 - a. Stormwater Management Calculation Sheet signed and sealed by you on September 11, 2018;
 - b. Stormwater Management Calculation Sheet signed and sealed by you on January 15, 2019;

Each of the Hycroft SWMP Calculation Sheets was rejected by the DWV on the basis that it did not comply with the 2016 Guidelines. At the time of signing and affixing your seal to the Hycroft SWMP Calculation Sheets, you were unaware of the existence of the 2016 Guidelines, which demonstrates incompetence on your part.

AND FURTHER TAKE NOTICE that you, Mahmoud Mahmoud, P.Eng., have the right, at your own expense, to be represented by legal counsel at the hearing by the Panel of the Discipline Committee pursuant to section 79 of the *PGA*, and you or your legal counsel will have the full right to cross-examine all witnesses called and to call evidence in defence and reply in answer to the allegations.

AND FURTHER TAKE NOTICE that, pursuant to section 78 of the *PGA*, in the event you fail to attend or remain in attendance at a discipline hearing held under section. 75 of the *PGA*, the Panel of the Discipline Committee may, if satisfied that you have been notified

of the hearing, proceed with the hearing in your absence and make any order that the Panel of the Discipline Committee could have made in your presence.

DATED this 1 day of June, 2023.

The Investigation Committee of the Association
of Professional Engineers and Geoscientists of
the Province of British Columbia

<original signed by>

Per: Peter Helland, P.Eng.
Chair, Investigation Committee