

**IN THE MATTER OF THE ENGINEERS AND GEOSCIENTISTS ACT,
R.S.B.C. 1996, CHAPTER 116**

and

IN THE MATTER OF BJARNE CARLSEN, P.Eng.

Engineers and Geoscientists BC File No. T16-067

CONSENT ORDER

Background and Facts

1. On January 22, 2018, a Notice of Inquiry was issued to Bjarne Carlsen, P.Eng. ("Mr. Carlsen") by the Association of Professional Engineers and Geoscientists of British Columbia (the "Association"), also doing business as Engineers and Geoscientists B.C., pursuant to s. 32 of the *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the "Act").
2. The Association and Mr. Carlsen wish to resolve this matter by consent in order to avoid the need for a disciplinary inquiry.
3. Mr. Carlsen has indicated that it is his desire to retire from the profession of engineering.

Admissions

4. Mr. Carlsen admits that:
 - (a) he demonstrated unprofessional conduct in connection with engineering services he provided to the owner of a residential property in Summerland, BC, relating to a composite lock-block wall and rock-fill slope (the "Project"), the particulars of which are as follows:
 - i. he failed to conduct adequate slope stability and factor of safety analysis for the Project, including by:
 1. basing his analysis on an incorrect slope angle of 34°;
 2. failing to account for known groundwater flow conditions when he based his analysis on a chart in Evert Hoek and John Bray, *Rock Slope Engineering*, 2nd ed (London: The Institution of Mining and Metallurgy, 1977) that was intended for use with slopes that have no groundwater flow conditions; and
 3. basing his analysis on graphical aids from *Rock Slope Engineering* that the publication indicated should be mainly used for checking the sensitivity of the factor of safety to a range of conditions;

- ii. the July 31, 2007 geotechnical report that he prepared in connection with the Project (the "Report") failed to incorporate the wire mesh fence that he subsequently proposed be built at the toe of the Project's slope to address the risk of rocks under 100lbs falling down the slope;
 - iii. he failed to consider the impact of the relocation of the Project's lock block wall from the crest of the slope to the toe of the slope (the "Relocation") on slope stability and factor of safety calculations and characterized this Relocation as a minor change when in fact it was a significant change;
 - iv. he failed to obtain approval for the Relocation from the Authority Having Jurisdiction; and
 - v. he have failed to retain or has been unable to produce important documentation relating to the engineering services he provided, including, but not necessarily limited to, inspection reports, slope stability and factor of safety calculations or communications regarding approval of the Relocation;
- (b) the conduct set out above at paragraphs 3(a)(i – v) is contrary to Principles 1 and 2 of the Association's Code of Ethics;
- (c) he failed to comply with section 20(9) of the Act by failing to affixing his stamp or seal to the Report, which was prepared and delivered in his professional capacity; and
- (d) he failed to comply with section 14(b) of the Association's Bylaws, in particular by failing to establish and maintain documented quality management processes for his practice, including by:
- i. failing to retain, for a minimum period of 10 years, complete documentation relating to the Project which might have included, but would not be limited to, correspondence, investigations, surveys, reports, data, background information, assessments, designs, specifications, field reviews, testing information, quality assurance documentation, and other engineering documents;
 - ii. failing to conduct regular, documented checks of his engineering work using a written quality control process appropriate to the risk associated with the work; and
 - iii. failing to ensure a documented independent field review of the Project during implementation or construction.

Disposition

5. This Consent Order is made pursuant to section 32.1 of the Act:
6. Mr. Carlsen agrees to resign his membership in the Association effective June 30, 2018 (the "Date of Resignation") and agrees not to re-apply for membership or licensure.

7. During the period from the date of execution of this Consent Order to the Date of Resignation:
 - (a) Mr. Carlsen must make reasonable arrangements for the orderly transfer of his ongoing professional engineering project files to other professional engineers;
 - (b) Mr. Carlsen must limit his practice to those project files that he is currently engaged on and not take on any new project files or other engineering work;
 - (c) to the extent that Mr. Carlsen performs any professional engineering during this period of time, his professional engineering work must be peer reviewed pursuant to the Association's Discipline Committee Ordered Peer Review Policy; and
 - (d) the peer reviewer required under paragraph 6(c) must be approved in advance in writing by the Association's Registrar.
8. Mr. Carlsen must pay \$7,000 towards the Association's legal costs within 30 days of the date of this Consent Order.
9. In the event that Mr. Carlsen fails to comply with any of the terms of this Consent Order during the period from the date of the execution of this Consent Order to the Date of Resignation, his membership in the Association will be suspended until every default has been remedied in accordance with the terms of this Consent Order, and in any event, Mr. Carlsen will no longer hold membership in the Association as of the Date of Resignation.
10. The full text or a summary of this Consent Order will be published by the Association in print and electronic publications including on the Association's website.
11. This Consent Order has the same force and effect as an Order made under section 33(2) of the Act and may be dealt with under section 34 of the Act if conditions in the Consent Order are not met.
12. Mr. Carlsen agrees that he has had the benefit of independent legal advice regarding this Consent Order.

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13. The Association and Mr. Carlsen agree that this Consent Order may be executed in counterparts and delivered as an electronic document.

This Consent Order is approved and accepted by Mr. Carlsen and the members of the Discipline Committee Review Panel this 28 day of MAY, 2018.



Bjame Carlsen, P.Eng.

P. CARLSEN

Name of Witness



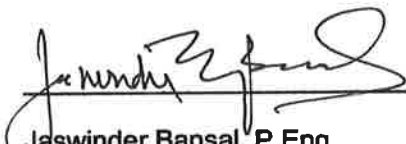
Signature of Witness



Frank Denton, P.Eng., FEC
Member, Discipline Committee



Bruce Nicholson, P.Eng.
Member, Discipline Committee



Jaswinder Bansal, P.Eng.
Member, Discipline Committee