

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

and

IN THE MATTER OF BILL BARWIG, P.Eng.

Engineers and Geoscientists BC File No. T16-036

CONSENT ORDER

WHEREAS on December 16, 2017, a Notice of Inquiry was issued to Bill Barwig, P.Eng. ("Mr. Barwig") pursuant to s. 32 of the *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the "Act");

AND WHEREAS the Association of Professional Engineers and Geoscientists of British Columbia (the "Association"), also doing business as Engineers and Geoscientists B.C., and Mr. Barwig wish to resolve this matter by consent in order to avoid the need for a disciplinary inquiry;

MR. BARWIG ADMITS THAT:

- A. He demonstrated unprofessional conduct, incompetence, or negligence in connection with the engineering services he provided to a business located in Pitt Meadows, B.C. relating to the design of a raft foundation (the "Raft Foundation"), the particulars of which are as follows:
 - i. his structural design for the Raft Foundation was deficient, insofar as it was under-designed with respect to reinforcing steel size and bar spacing, resulting in a design that provided inadequate support for the intended load;
 - ii. his design was based empirically on his experience with a similar project, but he failed to reconcile differences in design conditions between the two projects;
 - iii. his design was based on the existence of an interaction purportedly supported by literature (*Brzev and Pao*), but he failed to analytically apply the theory presented in that literature to his specific design; and
 - iv. he departed from the standard methodology for analysis and design of a raft foundation, absent the support of rigorous and peer reviewed analysis to justify such departure.
- B. The conduct set out above at paragraph A (i – iv) is contrary to Principles 1, 2 and 3 of the Association's Code of Ethics.

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- C. 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 project documentation 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 structural engineering work using a written quality control process appropriate to the risk associated with the work; and
 - iii. failing to ensure that documented independent reviews were conducted of his structural designs prior to construction, by members or licensees having appropriate experience in designing structures of a similar type and scale, and not involved in preparing the design.

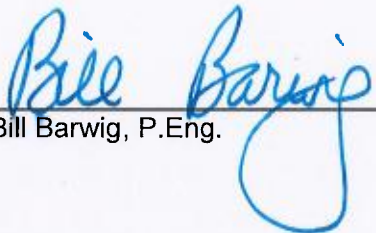
THEREFORE by consent, this Order is made pursuant to section 32.1 of the Act:

1. Mr. Barwig's membership in the Association is suspended for a period of two months, commencing on March 12, 2018.
2. The following conditions are imposed on Mr. Barwig:
 - A. Following the end of his suspension, Mr. Barwig's structural engineering design practice will be restricted for at least 4 months to structures falling under the BCBC definition of Part 9 structures.
 - B. Mr. Barwig must, before this restriction is lifted and at his own cost, successfully pass the examination titled "07-Str-B5 Foundation Engineering" (the "Education Requirement");
 - C. If Mr. Barwig does not fulfill the Education Requirement, his practice will remain restricted until he has done so; and
 - D. At least 3 months after and no later than 6 months after the lifting of the restriction imposed above, Mr. Barwig will undergo a Practice Review conducted by the Association and will pay the costs associated with the Practice Review.
3. Mr. Barwig shall pay \$6,000 towards the Association's legal costs within 30 days of the date this Consent Order is approved.
4. In the event that Mr. Barwig fails to comply with any of the terms of this Consent Order, his membership in the Association will be suspended until every default has been remedied in accordance with the terms of this Consent Order.

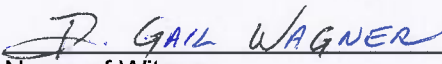


5. The full text or a summary of this Consent Order will be published by the Association in print and electronic publications including on the Association's website.
6. This Consent Order has the same force and effect as an Order made under section 33(2) of the Act and may be dealt with under section 34 of the Act if conditions in the Consent Order are not met.
7. Mr. Barwig agrees that he has had the benefit of independent legal advice regarding this Consent Order.
8. The Association and Mr. Barwig agree that this Consent Order may be executed in counterparts and delivered as an electronic document.

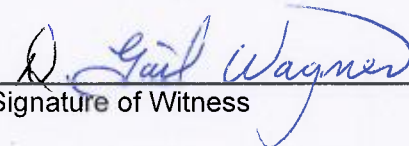
This Consent Order is approved and accepted by Mr. Barwig and the members of the Discipline Committee Review Panel this 8th day of March, 2018.



Bill Barwig, P.Eng.




Name of Witness




Signature of Witness



Ron Yaworsky, P.Eng.
Member, Discipline Committee



Christopher Arthur, P.Eng.
Member, Discipline Committee



John Haythorne, P.Eng., LLB, FEC, FGC (Hon.)
Member, Discipline Committee