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January 26, 2020

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Re: Flyrock from Blasting Quarry Operations

I reside in Cataract, a small hamlet in the Town of Caledon. Recently, our hamlet received word that an aggregate producer intends to file an application seeking permission to operate a blasting quarry and mine for aggregate below the water table in a Karst terrain. The proposed quarry is situated in the southwest quadrant of Charleston Sideroad and Cataract Road.

Approximately 47 acres of the proposed quarry site are within the boundary of Cataract, and are designated Settlement Area in the Caledon Official Plan. Cataract is a community of approximately 45 homes with an estimated population of 150. Cataract is located within the Niagara Escarpment and is designated a World Biosphere by UNESCO, is adjacent to the Forks of the Credit provincial park, which includes the scenic Cataract Falls, and is within the Headwaters area of the Greater Toronto Area. The southeast quadrant of Charleston Sideroad and Cataract Road consists of wetlands, which overlook the Credit River, and a railway line. Charleston Sideroad (formerly Highway 24) is a heavily travelled east-west arterial road.

In the course of trying to familiarize myself with the potential effects and impacts of a proposed quarry in and adjacent to our hamlet, I conducted considerable research, the results of which are included in the attached research paper *Flyrock and Other Impacts from Quarry Blasting Operations*. The paper is also posted on my website: www.intval.com and is available to the general public.

While my research identified a number of adverse effects associated with a quarry operation, I was surprised by the number of flyrock incidents occasioned by blasting that resulted in property damage and injury (and sometimes death). A literature search revealed that flyrock is the most dangerous aspect of a blasting quarry operation. Perhaps more shocking and disturbing is the fact that engineers responsible for preparing a *Blasting Impact Report* for a proposed quarry don't even mention the word "flyrock," let alone address the dangerous impacts of flyrock to the health and safety of the public. (See attached Blast Impact reports prepared by three different engineers, all Professional Engineers of Ontario.)

If the blasting quarry is initiated in its proposed location, I believe that there is significant potential for damage and injury (or possibly death) from flyrock to the residents, pets,

wildlife, visitors to the hamlet, passers-by driving along Charleston Sideroad, hikers along Elora Cataract Trail and in the Forks of the Credit provincial park, customers of the Service Station (southeast corner of Charleston Sideroad and Cataract Road), which includes a mini LCBO, convenience store, auto mechanic shop with upper level apartment and gas line (southwest corner of Charleston Sideroad and Cataract Road).

Perhaps your association is unaware of the dangers to the health and safety of the public from flyrock occasioned by blasting. However, if your organization is aware of the associated dangers, what justification exists to permit members to prepare blasting impact reports without addressing and accounting for the dangers associated with flyrock, and failing to recommend appropriate setbacks from sensitive receptors (i.e., residences, populated areas, major arterial roads, etc.) reflecting a “worst case” scenario?

It seems that if an engineer ignores flyrock, there is a failure to protect the public interest and that is a violation of your association’s *Code of Ethics*, in particular,

2. *fidelity to public needs*
3. *devotion to high ideals of personal honour and professional integrity*
4. *knowledge of developments in the area of professional engineering relevant to any services that are undertaken*
5. *competence in the performance of any professional engineering services that are undertaken*

As to the omission of addressing **flyrock** in a **blasting impact report**, it also appears to point to **negligence** and **professional misconduct** under the *Professional Engineers Act, R.S.O. 1990, c. P.28*:

“negligence” means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances. R.R.O. 1990, Reg. 941, s. 72 (1); O. Reg. 657/100, s. 1 (1).

“professional misconduct” means,

- a) *negligence,*
- b) *failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible.*

An investigation and reply by your professional association into the matter of flyrock, the most dangerous aspect of quarry blasting operations, would be much appreciated by our community as well as the general public.

Respectfully submitted,



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