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Sent Via Email: jwilkinson.mpp.co@liberal.ola.org

Ministry of the Environment
77 Wellesley Street West
11th Floor, Ferguson Block
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Attention: The Honourable John Wilkinson, Minister of the Environment

Subject: Highland Companies Application to Establish a Quarry for Mining Limestone

Please find below my concerns with regards to the Highland Companies' application to the *Ministry of Natural Resources* to establish a quarry for mining limestone in the Township of Melancton.

- As the largest quarry application ever in Canada (covering over 2,000 acres in Dufferin County to a level 200 feet below the existing water table), this proposal brings with it a high potential for serious negative environmental, social, and economic impacts.
- Of particular concern to the Regional Municipality of Waterloo (RMoW) in which I reside is the impact on the Grand River Watershed. As the *Grand River Conservation Authority (GRCA)* has submitted, the proposal has the potential to impact ground water resources within this watershed (April 26, 2011). In a subsequent report, they stated, "There is insufficient information provided in the reports to assess the potential impacts to the Grand River watershed" (May 19, 2011).
- This is supported by how the site of the proposed quarry would be situated on a Karst system "...that is formed on limestone, gypsum, and other rocks by dissolution that is characterized by sinkholes, caves, and underground drainage regions" (U.S. Geological Survey [USGS] 2001, p. 1). As such, "Quarrying may intersect active ground-water conduits..." that "...may cause aboveground and underground hydrologic systems to dry up" (USGS 2001, p. 13).
- According to Environmental Consultant, Wilfred Ruland, in general there has been a lack of attention to the Karst stream system (Ford 2011, p. 3). Such

conclusions are reiterated by other water experts, who observe how the proponent's background study covers only the quarry area itself plus its immediate surroundings, employs an invalid conceptual model (Frind 2011), and provides well locations that are not shown on Site Plans (Hunter and Associates 2011, p. 14). With regard to the latter point, *Hunter and Associates* has noted that the proponent has failed to report all hydrogeological testing and monitoring despite requests for submission (2011, pp. 14, 16).

- While currently the proposed quarry extends into only a very small area of the Grand River headwaters watershed, the perpetual pumping being suggested as mitigation brings with it great risks. This is both due to 1) *the potential for mechanical breakdowns* due to human error, vandalism, or acts of nature, and 2) *the challenges of ensuring sufficient funds are available* to pay such mitigation efforts. Further to point two, *Hunter and Associates* (2011) has highlighted how “The Applicant does not include any financial or sustainability analyses for the annual and perpetual costs of quarry water management system operation and maintenance” (p. 16).
- Despite such concerns, the proponent has failed to provide the unmitigated base case (worst) scenario for agency and public consideration. This needs to be considered for the proposal to be fully assessed.
- All of this points to a potential for a “**Worst case...[involving] abandonment of the quarry water management system, slow quarry flooding (many decades) with propagation of drawdown impacts outwards to the Niagara Escarpment to the east and south, into the Grand River (Lake Erie) watershed to the west and into the Noisy River watershed to the north**” (Hunter and Associates 2011 [italics added], p. 16).
- The RMoW relies on the Grand River and underground wells within this watershed for its drinking water. If water flows to these sources is disrupted, the drinking water of over 500,000 residents and hundreds of businesses would be affected.
- The possibility also exists for changes to water quality due to contaminants (i.e. from the typical dissolving of some of the explosives used for blasting rock, changes in pH balance caused by nutrient alterations, carcinogenic Benzo(a)pyrene from fuel exhaust, and phosphate and nitrate loading due from good droppings). No plans exist in their proposal for checking bacteria levels in water. Already the Grand River contains high levels of sediments and pollution which affect residents' drinking water and contaminate the Great Lakes (Emerson 2009, p. 7).
- The proposed mega quarry would be situated in prime agricultural farmland that is an important source of potatoes, in addition to rhubarb, broccoli, brussell sprouts, cabbages, beans, peas, and strawberries (Hunter and Associates 2011).

According to the *National Farmers Union*, “once aggregates are removed from under prime agricultural land, it is not possible to rehabilitate that land to the same value as it had as 'gravel-bottom', well drained land, especially for higher value crops, like potatoes” (April 2011). These lands fall within the 100-mile radius in which many in the RMoW seek to source their food for reasons of increasing food security and reducing food miles traveled in order to lower greenhouse gas emissions. Thus, the loss of these lands would constitute a loss of an important food source to this area and is of concern to residents here.

Given the uncertainties surrounding, and potentially serious impacts of, the proposed quarry, I would like to formally request that a full provincial environmental assessment (EA) be conducted under the provincial *Environmental Assessment Act*. The conducting of an EA would also allow for consideration of alternatives to the proposal, including the ‘do-nothing’ option. This may be a valid consideration, depending on the level of demand for the aggregate, whether substitutes can be found for the product, and the location of markets where it would be destined.

Thank you very much for your consideration.

Sincerely,

Alisa McClurg
BA, BES, MES

cc:

Premier McGuinty – dmcguinty.mpp.co@liberal.ola.org

Hon. Linda Jeffrey - Minister of Natural Resources - ljeffrey.mpp.co@liberal.ola.org

Encl.

Sources

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GRCA (May 19, 2011). "Re: Official Plan and Zoning By-law Amendment Application. The Highland Companies proposed Quarry Melancthon Township."

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