TO: Natasha Rea, City of Brampton

FROM: Ecoplans, a member of MMM Group Limited

DATE: June 2014

RE: Opinion regarding acceptability of the additional response materials in addressing natural environmental aspects prepared by Beacon Environmental September 26, 2013

In our opinion, while the additional materials prepared by Beacon Environmental and as supported by the information prepared by Golder Associates are helpful in addressing many of our outstanding comments, they are not sufficient to address all of the questions and concerns we have raised. A number of comments, including some key comments, are not addressed in the responses. Uncertainties and concerns remain around identification of impacts, generation of targets, mitigation, monitoring and availability of contingency mitigation. Ultimately, the Adaptive Management Plan (AMP) is the tool to address these aspects. However, the response materials are not yet sufficiently detailed or comprehensive to provide the necessary assurance that impacts can be identified and addressed during (or following) quarrying through implementation of the AMP.

We accept that our comment response document was lengthy and appreciate the effort Beacon made to group the various comments in similar themes. However, it appears that many of our comments are not addressed, or are only partially addressed in the responses. In several cases, the Golder material provides information that helped to address a comment (e.g., distribution and characteristics of pools along the Main Tributary). However, a number of comments, including some key items (e.g., rationalizing stream targets against baseflow data collected in July 2011) are not addressed.

We understand that operating in shale and for the short season proposed reduces the potential for impacts and provides more time to respond to potential issues, and that for the most part, the on-site features not as sensitive or significant as they could be. However, reliance on projected impacts being within the range of historical conditions and on the tolerance/resilience of features to stressful seasonal conditions (particularly w.r.t the stream community) remains concerning. This concern is exacerbated based on our understanding from Genivar that at least some of the conditions and targets established by Golder were deemed acceptable on the basis that Beacon considered the potential implications to natural features acceptable.

The importance or relevance of some features and potential for some residual impacts continue to be downplayed or treated in a simplistic fashion. These aspects are an important underpin of the AMP. Qualifiers are frequently used in discussing potential for impacts, again understandable at this stage, but requiring closure through the AMP. Specific gaps and associated suggestions continue to be dismissed without sufficient rationale or explanation.

The general reliance on modelled outputs (particularly to generate targets) is understandable to a point, however it does not appear that all of the actual data are being used, or that the available tools (specifically the AMP) are being used to support the modelled-based approach. Furthermore, it appears that even into operation, modelling rather than actual data continue to play the more prominent role (e.g., in adjusting targets). 'Lumping' (e.g., ignoring seasonal aspects) and failing to recognize sufficiently the functional aspects of groundwater and the variable groundwater/surface water conditions along the tributary (from both baseflow and thermal perspectives) continue to be of concern in relation to the operation of the proposed single point discharge system for the tributary. We note the reference to a back-up pump, but do not understand how it would be used.

Knowing the tributary functions as a hydrologic divide and understanding more about the nature of the wetlands and surface water dominance reduce our concerns to a large extent. However, questions around the use of very broad hydroperiod approaches to monitor and identify potential impacts and the lack of mitigation and contingency measures persist (e.g., why not monitor wetlands and seeps in the same manner as the Black Walnut Deciduous Forest?).

We understand the challenges associated with detailing the rehabilitation plan at this stage given the protracted timeline to implementation, and that more information is available in Tod-Hunter's report. However, appropriate detail is still lacking in both describing the plan and addressing its ultimate refinement and implementation (e.g., describing aquatic communities and habitat for fish or other aquatic biota, considering seasonal water level fluctuations, identifying potential for residual post-quarrying effects).

Ultimately, we continue to be optimistic that our outstanding concerns can be addressed and the quarry can be designed and operated so as to manage potential for impacts to natural environmental features at an acceptable level. Uncertainties are fully understandable and acceptable at this stage. However, this conclusion relies on a thorough and comprehensive AMP that fully recognizes and addresses the uncertainties, provides for adjustment based on actual data rather than modelled output, enables comprehensive identification of potential impacts, and contains the necessary contingences that can be used- if they are required. The current AMP requires considerable expansion and detailing to provide the necessary assurances.