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Dec. 30, 2020

Marc Abramsky

**Via Email:** marcabramsky@gmail.com

**RE: ENVIRONMENTAL IMPACT ASSESSMENT (EIA)  
Severance - 1555 Ridge Road, Prince Edward County  
Bloomfield Beach Earth Science ANSI**

It is our understanding that the intended result of your severance application is to build a house within the Provincially Significant Bloomfield Beach ANSI. This could run counter to the intent of the Prince Edward County Official Plan and accordingly, Dale Egan (Planner 1, PE County) requested an EIA be undertaken. This was reiterated in his Dec. 21, 2020 email as follows

*... development and site alteration shall not be permitted in significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.*

There are two types of ANSI recognized in the province, Life Science ANSI's and Earth Science ANSI's. Life Science ANSI's are intended to represent relatively undisturbed ecological landscapes in Ontario (e.g., woodlands and wetlands) that contain a diverse or unique mix of plants and animals. While the 65 ha. Bloomfield Beach Earth Science ANSI contains about 5 ha. of natural woodland in several fragmented blocks, it is primarily composed of farmland and pine plantations, and contains 14 developed lots. Accordingly, it is neither undisturbed, nor does it contain a unique mix of plants and animals.

We are familiar with most of the ANSI's in PE County as we developed the ANSI document (Snetsinger et al. 2001) for Site District 6E-15 (which includes PE County) on behalf of the then Ministry of Natural Resources (MNR). This document was then used by the MNR and the various municipalities within 6E-15 to incorporate significant ANSI's into their planning documents.

We did not include the Bloomfield Beach ANSI in our documentation as it is an Earth Science ANSI, and our MNR appointed task was to focus on Life Science ANSI's. We raise this point to reiterate that discussions of ecological functions, or potential ecological impacts are not germane to Earth Science ANSI's such as Bloomfield Beach.

In Ontario, Earth Science ANSI's are intended to represent unique examples of the bedrock, fossil and landforms, and these are first described in an ANSI checklist. The checklist provides the necessary information that is needed to discern why an ANSI is nominated as provincially significant, and how it could be impacted.

On Dec. 30, 2020 we received the Bloomfield Beach ANSI checklist from Catherine Warren (Ministry of Natural Resources and Forestry, MNRF) and were able to proceed with this assessment. Ms. Warren speculated that one reason why this ANSI may not have been readily available was that it was evaluated as part of the earth science "themes" within the province rather than in the site district reports. There is no specific author provided for the checklist, but we assume that the work by Harvey et al. (1976) was instrumental in the ANSI designation.

There are several criteria used during the ANSI nomination process, but the most important one is Representation, with the intent to preserve the best representative examples of a life or earth science type in a site district. For example, there could be many large, forested swamps in a site district, but only one is selected as the best swamp representative.

In the case of Bloomfield Beach, it was considered to contain the best representative features of the Trenton Stage. In this context, the Trenton Stage refers to the reworking of glacial deposits (e.g., the Picton esker associated with Ridge Road) into beach deposits by the actions of the receding Lake Trenton. Lake Trenton was formed during the end of the last glaciation, whereby glacial meltwater was blocked from entering the St. Lawrence River basin by glacial ice. This lake eventually became established in its current configuration as Lake Ontario. Examples of Trenton Stage features occur in several locations in Ontario and New York State, but Bloomfield Beach was considered to contain the best representative glaciolacustrine features.

When the Bloomfield Beach ANSI was given official significance status in 2007, but it would have been almost entirely farmland when presumably Harvey et al. assessed it in 1976. The checklist notes that sand movement in the agricultural environment present could provide "*interesting data to compare to modern shoreline processes.*" The checklist also noted that the current agricultural use of the ANSI "*could be maintained without any conflicts with earth science features.*" We provide these two quotes, to note again that ecological features were not relevant to the significance designation of this ANSI, and that the ANSI features were not sensitive to a certain level of use. Further to this, the MNRF Natural Heritage Information Center spreadsheet notes that the sensitivity class of this ANSI as "Non-Sensitive".

A second important criteria for Earth Science ANSI designation is site "Condition", whereby sites with few anthropological impacts are considered ideal. In this context, processes that occurred on the surface, such as farming, were not considered impactful, but processes that could disturb the underlying deposits could be. The checklist notes the existence of the esker feature running the length of Ridge Road but the authors elected to discard about 4/5ths of the esker from ANSI designation due to ongoing pit operations on

Ridge Road. In other words, much of the esker was experiencing anthropological impacts that were deleterious to the esker feature, and thus could not be considered in good “Condition”.

This condition aspect is also inherent in the primary recommendation from the checklist in that extraction of sand and gravel extraction should be discouraged. In our opinion, this was the primary reason why Bloomfield Beach was nominated. It was understood in 1976 that sand extraction (a valuable commodity) could eventually include all the sand deposits on Ridge Road, and the eventual ANSI designation could be used to preserve at least part of this Trenton Stage feature. We do note that some sand extraction has taken place within the ANSI at a site further east of the proposed severance in the mid to late 1970’s, but not on the industrial scale that has occurred further north on Ridge Road.

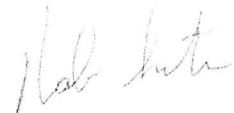
Other criteria in an ANSI checklist that are used to determine whether a site should be nominated include Biodiversity, Rare Species, and Ecological Integrity. However, these can only apply to a Life Science ANSI, and thus are not relevant to the discussion of impacts for the Bloomfield Beach Earth Science ANSI.

Will building a house and all that this entails (driveway, septic system, lawn) represent a negative impact to the features of the Bloomfield Beach ANSI that make it significant: Representation and Condition?

In our opinion, it will be possible to build on the proposed severance parcel and be consistent with the Provincial Policy Statement and the PE County Official Plan. To achieve this and have no negative impact to key Bloomfield Beach ANSI features we make the following recommendations.

1. The house should be built as slab on grade and not include a dug basement.
2. The driveway should not be paved.
3. The well should be drilled, not dug.
4. The septic system should be built on top of grade, rather than excavated below grade. If a below grade excavation is required for the septic system by the Health Unit, then the excavated material should be spread out into the old extraction site within the ANSI further east on Ridge Rd. The purpose of this would be to partly honor another recommendation in the checklist in that “*abandoned pits could be rehabilitated to provide a cross-section for interpretive processes.*”

Respectfully Submitted,



Rob Snetsinger  
Ecological Services

## References

Harvey, E.T., Blachut, S.P., and Cross, J.M. 1976. An evaluation of raised beaches in the Ontario and Huron Basins for Nature Reserves. Provincial Parks Branch, Ontario Ministry of Natural Resources, Toronto. Earth Science Series. File 7606.

Snetsinger, M.A, R. Snetsinger, and D. Kristensen. 2001. Life Science Areas of Natural and Scientific Interest (ANSI) in Site District 6e-15. Prepared by Ecological Services on behalf of the Ministry of Natural Resources, Kingston Office.