

Reference Town Files: OPA-02-2020, ZBA-11-2020, 26T-18-01: Rand Estate Development.

Dear Lord Mayor and Councilors:

A Concern Regarding Downstream Flooding: 100 Year Flooding Needs to be Considered.

It is likely that properties built downstream on One Mile Creek will incur more frequent, severe and costly damage if the Rand Estate Development, as currently proposed, is allowed to proceed. Studies undertaken by the Niagara Peninsula Conservation Authority show that under 100-year flood conditions, flow rates of water in the Creek will become three times greater than experienced in the normal two-year storm flooding and twice as great as the infrequent five-year storm flooding. References:

<https://npca.ca/images/uploads/common/NPCA-Watershed-Plan-NOTL.pdf>

<https://friendsofthemilecreek.org/one-mile-creek-watershed-strategy-2005/>

Under current conditions, water levels on our properties at 164 Johnson Street and 275 Gate Street are projected to rise over 1.5 meters and cover almost all of the Gate Street property. Experience shows that removing trees on development properties like the Rand Estate Development and covering the properties with roofs and roads increases the flow of water and damage to homes and properties.

The current flood plain level in this area of NOTL is 83.84 meters, more than 1.5 meters above the current creek level. Foundations for homes must be above that level and many are built to prevent basement flooding when 100-year floods occur. As experienced in Toronto during Hurricane Hazel, and as we see on a regular basis on TV news coverage, storm waters can be heavily damaging to properties and can cause the loss of life.

Culverts for One Mile Creek are Undersized and Cannot Handle any Increase in Volume.

Any increase in water volume, particularly under storm conditions, will cause damage to downstream properties primarily because the culverts under the roads are undersized. The NPCA study recommended that the culverts be enlarged or twinned when they are in need of replacement. The Town has not adopted this recommendation. In fact, the culvert under Johnson Street at Gate Street was replaced a year ago and was not twinned or increased in size.

Surge Tanks to Offset Increased Runoff as Proposed by the Developer are Likely to be Inadequate.

Council needs to clearly understand the impact of flooding under 100-year flood conditions on downstream properties. Unless full scale hydraulic studies are conducted by knowledgeable professionals and adequate surge capacity is provided, damage will occur. It is likely that sufficient surge capacity cannot be provided and there will be a need to scale back the size of the proposed development. Of concern is the high-water level in the area proposed development and its impact on water retention. It is surprising that a development is being considered on land with a high-water table and that requires 8-10 feet of fill to make it commercially viable.

We request that council members become fully informed about severe downstream flooding risks and consequences before considering the approval of the Rand Estate Subdivision Development.

Respectfully submitted by,
William and Patricia Garriock