

Executive Summary of Results of Technical Investigations

Brock University – East Campus Lands / Woodside Drive

In April, 2007, Brock University began a number of technical investigations relating to surface water run-off in general as well as two storm events (December 1, 2006 and late March, 2007) in the vicinity of the University's East Campus lands, specifically Woodside Drive and the surrounding area.

As part of this investigation, Brock retained the services of an environmental consulting firm and a firm of geotechnical engineers. The scope of the investigation was to review the cause of flooding at certain Woodside Drive properties, the quality of the water, the source of the water and the stability of the slope.

A summary of the findings of the technical investigation, including the immediate initial technical assessment completed April 11, 2007, is as follows:

- The areas tributary to the study area are comprised of relatively small drainage areas that are not developed except for the homes, roadways and infrastructure of Woodside Drive and Trillium Lane.
- No other development has occurred within this area for the past 68 years.
- The study area does not appear to be impacted by increased surface/groundwater flow volumes or poor water quality from the closed Glenridge Landfill site.
- The slope of the lands owned by the University are undisturbed by any man-made alterations and remain virtually unchanged from the date of the Woodside Drive development.
- There are no groundwater quality issues (evidence of contamination) in the study area.
- The escarpment slope is considered stable against a deep seated global failure and further, the existing site conditions are indicative that the slope has remained in its current stable form for decades. The slope in the study area is experiencing normal shallow soil erosion.

In relation to the two flooding events, the University's consultants found as follows:

- Intermittent flow channels are well established on the upper terrace and upper slope.
- The well defined flow channels end just south of the limestone ridge that defines the terminus of the mid-level terrace. It is likely that the soils and rock of the mid-level terrace are porous enough to allow rapid, significant infiltration of water during typical, frequent storm events, thereby eliminating the evolution of well defined channel slope side within the lower slope area.
- Storm run-off typically precedes subsurface below the mid-level terrace.
- There is no evidence of human interference with the well established flow channels in the upper terrace and upper slope area. In the opinion of the University's consultants, the diversion of any run-off from the established drainage channels would require significant earth movement as well as the partial burial of logs, something not evident in the area.
- Very limited human impact is visible only in the area of the lower slope. However, this impact (in the form of hazardly stacked logs along the trail) does not appear to direct any drainage to the homes along Woodside Drive.
- The depth of the rainfall observed to occur by late December 1st, 2006 of approximately 70 mm over 24 hours is likely to occur no more than once every 5 years. The opinion of the University's consultants is that this storm event overwhelmed the ability of the porous rocks and soil to absorb the flow and therefore were a completely natural phenomena.

The technical review carried out by Brock University confirms that no historical action has been taken to disturb the natural flow of water. Accordingly, Brock relies on well established legal principles that the uphill landowner is not responsible for any natural water run-off from its lands which might affect the downhill landowner.

Brock University is committed to the continued monitoring of its East Campus lands to ensure that there continues to be no interference with or diversion of natural run-off or flows. In this regard, the University will have its consultants review this issue on a regular basis.