

Dear Councillors,

I am sending these comments / suggestions as a concerned citizen, not as an employee of the City of Ottawa.

Last week I stumbled upon what I believe is at the root of the principal flooding problem in Glen Cairn - flood levels have been allowed to rise nearly 4 feet since houses were built in the Glamorgan - Uxbridge - Dundegan area in 1973.

Attached is a 1973 grading plan that included a note about the floodplain elevation being 310 feet. This translates to 94.5m. Basements were obviously designed to be at or higher than the floodplain elevation established at the time.

Since 1973, extensive development has occurred in Glen Cairn and later in Bridlewood. In 1978 the Glen Cairn SWM Pond was constructed on what is now the west side of Terry Fox Drive, just north of Castlefrank. The purpose of the Glen Cairn SWM Pond was/is to attenuate the urban peak flow rates generated in Glen Cairn and Bridlewood so they would not flood riparian lands downstream from Glen Cairn. When urban runoff during the 100-year event is stored in the SWM pond, according to the CCL 2003 reports, flood levels rise to elevation 95.65m - or 1.15m higher than the floodplain elevation on which houses and services were designed in 1973.

I have attached a figure that provides an overview of the cause of flooding. The rise in flood levels results in a near 4 foot surcharge in the storm sewer system that outlets into the SWM pond that drains a large area of Glen Cairn south of the Carp River . This is the single largest reason why there are persistent flooding problems in Glen Cairn - and the problems will continue to persist until a solution is found to lower flood levels below the basement elevations in the worst impacted area. In addition to this most fundamental improvement that is required, other local improvements to major system drainage conditions need to be completed to ensure there is a continuous path for overland to outlet before flood levels on streets would accumulate enough to cause flooding damage. Further, an emergency overflow is required from the Hazeldean Pumpstation that would spill to a storage tank or outlet before basements would become the emergency overflow by default.

I was very surprised to find the 2003 CCL reports did not even include an inventory of basement elevations, and conduct a check to see whether the proposed solution would ensure flood levels would be lowered such that basements would no longer be subject to flooding - before the \$7 Million was spent. Given that CCL were involved in much of the land development work in Glen Cairn and Bridlewood - AND were the consultant who designed the Glen Cairn SWM Pond, could lead a reasonable minded person to speculate why the real problem was not uncovered by CCL in their 2003 reports.

### **Solutions to problem**

The Glen Cairn SWM Pond needs to be re-configured and the profile of the Carp River needs to be lowered. Otherwise the City and/or MVC and/or Province may have to look at purchasing / compensating homeowners who, through no fault of their own, no longer have houses safe from being flooded because of the MVC's apparent failings as floodplain managers. (At the time the MNR would likely also have been involved in approving the SWM Pond).

To lower the profile of the Carp River is no easy task. This will require extending the scope of the present Carp River Restoration Plan downstream of its present terminus to at least downstream of the Village of Carp, if not further downstream due to the extremely mild gradient. Other projects

would need to be re-designed, such as the planned Hazeldean Road crossing of the Carp River and related buried infrastructure.

Options for an emergency outlet from the Hazeldean PS would need to be evaluated. The safest (but not necessarily the cheapest) emergency outlet could be to an emergency underground storage tank.

### **Immediate action required by the City**

1. A development freeze is required in areas serviced by the Hazeldean PS until a plan is implemented that would result in sewage spilling to an outlet other than basements when operating levels in the pumpstation exceed the equivalent hydraulic gradeline elevation of 94.5m at the affected houses.

2. Given that the pre-Hearing for the Fernbank OMB Appeals is to commence this Thursday - Friday, and the Master Servicing Study approved by Council is no longer valid - given the wastewater flows experienced on July 24th, I would encourage Councillors to consider motions be discussed at Planning & Environment Committee meeting on Tuesday and at Council on Wednesday to direct City legal Counsel as to the appropriate position to take at the Pre-Hearing scheduled for Thursday-Friday. The best example of how the Master Servicing Study is invalid is the emergency overflow proposed in Novatech's report - an overflow to the Monahan Drain at elevation 94.99 - which would never be used because sewage would spill into basements at elevation 94.5m on Glamorgan Drive long before the emergency overflow would take effect. Growth should pay for its share of the costs of establishing a long-term solution.

3. I would encourage Council to rethink the choice of Third Party Consultant who are on the record supporting a flood level increase at the Glen Cairn Pond in their report concerning the Kanata West Class EAs. Greenland has already taken a position supporting flood level increases in the Carp River, and I submit are now compromised undertaking an independent investigation. The situation would be not unlike having CCL undertake the studies after the 2002 flood. Council should hand this matter over to the Auditor General for a truly arms-length independent investigation.

Below (and attached) is a letter to the Premier requesting an operational audit of the MVC be undertaken.

Yours truly,

Ted Cooper, M.A.Sc., P.Eng.