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January 17, 2017

Via: Email

Jeff Wilker (jwilker@thomsonrogers.com)
Partner
Thomson Rogers
390 Bay Street, Suite 3100
Toronto ON M5H 1W2

Dear Mr. Wilker:

Re: Eden Oaks Subdivision
Town of Halton Hills
Project No.: 300038991.0000

Our August 29, 2016 correspondence to the Town provided our comments on Submission No.4. Since that time we have attended numerous meetings with the design engineer and have received amended drawing submissions, most recently on December 22, 2016. This letter provides our current comments.

In general, it is our opinion that substantial progress has been made since the time of our last letter. The grading plans are now showing significantly less disturbance of slopes and treed areas. The stormwater ponds have been expanded to provide better control of water release during storm events. This letter outlines five ongoing outstanding concerns that remain with the current design.

Further discussions are required to address and resolve these matters as we prepare for the Ontario Municipal Board hearing.

In our review we have encountered a number of issues on the drawings that are not critical at the current planning stage of the project, but they will need to be addressed before construction drawings are approved. We have listed those matters in an appendix to this letter.

Outstanding Lot Grading Matters

Lot 15 remains problematic. There is a proposed flat yard area located in a narrow space between two retaining walls that does not seem appropriate and in general, the rear yard amenity area is insufficient. Further revisions are required

Outstanding Stormwater Management Matters

1. The trail way/maintenance access to the ponds remains a concern. We suggest that the trail needs to be lengthened in order to reduce its slope. An “S” shape may be preferable and would eliminate the turnaround.
2. The shape of the ponds appears to be imposed on the natural contours, as opposed to molded into them. In particular, the lower pond is quite angular. We don’t understand why so much of the design requires fill underneath the floor of the pond; it would make more sense to utilize the storage volume that is proposed to be consumed with fill. We are of the opinion that the geometric contours of the ponds require substantial revision.
3. When the capacity of the upper pond is reached it is designed to spill over the retaining wall and cascade to the lower pond. This configuration raises a number of concerns. Modifications and refinements to the design and further discussion are required.
4. Conveyance of flows on Credit Street has not been rationalized for major events. In extreme events when the storm sewer is submerged, it is arguable that water is out letting in a location that didn’t previously receive water from the Eden Oak lands.

   Also, the existing upper Credit Street storm sewer is proposed to convey all of the pond discharge. This sewer contains an underground storage facility that was not designed for such input. The Eden Oak water would be routed through a 114 mm orifice and then a 300 mm corrugated steel pipe currently lying beneath Credit Street.

We anticipate a need for the Eden Oak pond Regional discharge to be conveyed in an independent storm sewer to a suitable discharge location situated within the Regional floodplain.

We are available to provide whatever assistance is required in resolving these matters.

Yours truly,

R.J. Burnside & Associates Limited

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Appendix - Detailed Engineering Matters

- Figure 2: The limit of tree preservation fencing on Lot 9 requires revision.
- The proposed culvert extensions and modifications in the area of the Emergency Access should be modified to remove bends and blind tee connections.
- An easement will be required for the water from Lot 8 that crosses the driveway to Lot 9.
- Various rear yard elevations on lots 24 - 31 do not have clear drainage outlets and appear to pond. A continuous swale is needed with a culvert under the proposed walkway.
- Page 15: Report makes reference to an HGL (Hydraulic Gradeline) Analysis but we couldn't find the analysis in the report.
- Page 15: The Regional Flow Conveyance Figure (3C) should be combined with Figure 6 to provide an overall Post Development Minor/Major Conveyance Plan, particularly as the drainage system downstream of the site seems to have undergone several modifications and since most of the flow seems to be confined to a pipe system. It would be helpful if there was additional detail on the downstream portion related to existing/proposed infrastructure and overland flow routes.
- Page 16: There is reference to a 'wetland' pond design. The conformance to wetland-type facilities (per the MOE 2003 manual) should be demonstrated in table format (i.e. how the design meets the various criteria for a wetland design).
- Profile should be provided for French Drain. Groundwater levels should also be provided if the purpose of the French Drain is to intercept groundwater.
- Forebay calculations in back of report for Settling Length may be incorrect (according to the formula referenced). Forebay should have a berm to contain sediment and to maximize flow length within the forebay. Short-circuiting of the forebay will result in the release of sediment to the main cell(s) of the pond.
- The maximum water elevation for the Lower Pond seems to be incorrect on Figures 7 B and 7 C (refer to table).
- More elevations/slope indications are required on the Maintenance Access Route /Walkway. Is the width meant to vary between 2 m and 4 m?