

1577 and 1687 Wilton Grove Road – Forest City Industrial

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EEPAC is generally supportive of the outcome of the City's plans for this site as it relates to buffers and the land use changes to protect and recognize the extent of the Provincially Significant Wetland and Environmentally Significant Area. Below you will find a number of recommended conditions of development/site plan approval in addition to those in the Environmental Management Plan (EMP) of the EIS.

EEPAC does have concerns about the proposed stormwater management system. The pond north of Wilton Grove Road has resulted in changes to the wetland vegetation composition including increases in open water communities and increased water depths (as noted at the top of page 30). This highlights why it is important to get the next phase of the SWM system "right."

While we recognize the SWM Plan is conceptual as there is no clear decision on the size of the building and the amount of impervious surfaces, based on the "textbook" calculations from Golders included in the EIS, EEPAC questions whether sufficient information is contained in the EIS to ensure the system will work.

THEME #1 – Stormwater Management

It is clear from the data provided there is high variability between soil conditions in and around the site. This raises the question if sufficient borehole data has been collected to confirm the suitability of the conceptual locations of the rain gardens. For example, for G4 (page 26) the closest borehole is more than 100 m away (see Appendix D – Location Plan). In addition, this particular rain garden has an inferred depth of groundwater of "surface" (page 26). This means this rain garden will not infiltrate runoff as the groundwater intersects with the rain garden. This is of further concern because it is adjacent to the SWT2-4 community, which has a provincial ranking of S3 and should be protected.

EEPAC also questions the suggested design K (m/s) shown on page 26. This appears to be simply the midpoint in the estimates provided by Golders on page 2/3 of Appendix D. Even at a design K of 1×10^{-6} EEPAC expects the rate to be marginal to infiltrate into the rain gardens successfully.

EEPAC also questions the assumed void ration of 0.6 shown on page 19. Typical is 0.4 in the Credit Valley Conservation Authority's design literature. Therefore, we question the

comment at the bottom of page 19 and Table 5 that suggests the rain gardens will capture and store the 50mm rainfall event, particularly G4.

Page 27, Table 15 also shows LID implementation for 100% of the treatable impervious area, including roof, parking lot, and driveway runoff. However, section 2.2.4.1 (pg. 19) indicates LID is only implemented for rooftop runoff. Hence, EEPAC doubts the ability of the system to infiltrate 78,400 m³ in a reasonable period of time as shown in Table 15 given that the total rain garden storage volume is 5,350 m³.

Nor is it correct to say on page 28, that LID has been implemented to 95% of the treatable impervious surfaces as the proposed rain gardens are only receiving water from the roof leaders.

This demonstrates that the detail design of the SWM system is important and that the conclusions in the EIS regarding SWM cannot be relied on.

EEPAC is unclear if there is an error on Figure 6, which shows the new ponds permanent pool height as 264.9 elevation. This is lower than the maximum water level of the wetland it outlets to.

EEPAC is also unclear as to who will maintain the proposed restrictor plates shown on Figure 6. There is no commentary in the EIS. We note from other sources that such devices can clog from large debris without pre-treatment. Figure 6 also indicates that it is to direct flow to the rain garden in a two-year storm and to the surface (without treatment) in the 100-year event. We assume that water continues to be directed to the rain garden in all events up to the 100-year event, but this should be confirmed. Regardless, as we have already pointed out, we do not expect any infiltration at the proposed G4 rain garden.

EEPAC is also concerned about additional negative impacts caused by widening or paving the access across the berm. EEPAC is unaware of any compensatory mitigation when it was constructed - making it into a "roadway" would require removal of communities, requiring compensatory mitigation. On-going maintenance too would have negative impacts and we recommend that no salt be used in winter de-icing.

Recommendation 1: The SWM Unit of the city should conduct and be charged with undertaking the design and construction of the Stormwater Management System. This must include:

- a detailed water balance study (as noted on pages 27 and 34 of the EIS).
- prior to the siting of rain gardens or other LID solutions, infiltration tests, including new boreholes if necessary, be carried out.

Recommendation 2: Concurrent with the construction of the SWM system, the City should be responsible for the buffer plantings recommended in the Environmental Management Plan of the EIS.

Recommendation 3: Compensatory mitigation be required for the partial loss of wetland communities, particularly due to the construction of a road across the stormwater management berm or the possible secondary access route shown on Figures 3 and 7. The MAS3-1 community is rare in London (less than 2% of all ecosites).

Recommendation 4: Environment Parks Planning and Development Approvals jointly be responsible for the implementation of the recommendations of the Environmental Management Plan and ensuring the recommendations are included in the conditions of development and/or site plan approval.

Recommendation 5: Deal with the phragmites infestation in the storm facility on the south side of Wilton Grove be dealt as part of the construction of the new SWM facilities.

Recommendation 6: Sufficient funds be included in the SWM construction contract to pay for recommendations 3-5.

Recommendation 7: The Clean Equipment Protocol be followed for all construction.

Theme #2 – Species at Risk (Barn Swallows)

The abandoned barns on the northwest corner of the property are home to a large colony of Barn Swallows. EEPAC believes that compensation for the loss of the habitat should be a requirement of the Site Plan approval process.

It appears from a brief reading of postings on the Internet, that the new structure should be of rough cut wood, so the swallows are free to build their nest anywhere, rather than using shelves.

Recommendation 8: The City or the proponent construct small “barn-like structures” to provide compensatory mitigation for the loss of Barn Swallow habitat. This would be instead of the “standard” barn swallow kiosks, which have a mixed record of success. A City Ecologist should sign off on any design before construction. As per Bird Studies Canada (“How to be a Good Barn Swallow Host”), the replacement structures should be built at least one breeding season before the old structure is removed, so that the young of the year can have a look before fall migration.

Theme #3 – Site Plan

Recommendation 9: The development agreement/site plan and design elements include implementation of the recommendations of the Environmental Management Plan contained in the EIS that are not carried out by the City during the SWM construction, such as requiring full cut off lighting for site lighting (page 34 of EIS). For emphasis, EEPAC highlights:

- Provision of Barn Swallow habitat (and educational signage)
- The Environmental Monitoring Program (Recommendation 16 of the EMP) be prepared as soon as possible and that it require a sign off from a City Ecologist or an ecologist retained by the City.
- a detailed planting plan which outlines seed mixes and planting composition must be completed as part of site plan approval (see page 42 EIS) and that it be to the satisfaction of a City Ecologist or one retained by the City.

Recommendation 10: The detailed Construction Mitigation Plan for the actual building construction (as per Recommendation 13 of the Environmental Management Plan), be to the satisfaction of a City Ecologist as well as the regular approval authorities of the City.

Recommendation 11: EEPAC also recommends for site plan or development approval:

- Green roof to reduce the amount of water going into the roof leaders
- The use of porous instead of impermeable surfaces wherever possible
- Prohibition of the use of salts and other chemicals on the road that crosses the wetland
- following the Clean Equipment Protocol during construction

Recommendation 12: EEPAC does not support a paved pathway for the access path to the “amenity” area in the southeast corner of the site (see EMP, Recommendation #11). We reiterate our recommendation from the SLSR that this area be revegetated and designated part of the ESA.

Theme #4 – Miscellaneous

EEPAC notes there are inconsistencies as to where the development limit appears on various maps, in particular, Appendix C and Figure 2.

Recommendation 13: The development limit be clearly staked prior to the stormwater system construction and prior to building construction.

The 0.1 impervious figures in Table 6 on page 22 should read 10% (see page 18 of EIS).

There is an inconsistency between the end of page 26 and page 27 regarding the City policy as to what triggers the requirement to implement a Private Permanent Storm System. Pages 26-27 say the first 20 mm should be captured on site, as this is 90% of the annual rainfall volumes. However, the graph on page 21 shows the 90% is reached at 21 mm, and the text on page 21 states that 90% is equivalent to 25 mm. EEPAC also asks if the IDF curves being used by the City and Simonovic and Peck of Western University have updated its consultants to reflect the 2009 report to the City.

<http://www.london.ca/residents/Environment/Climate-Change/Pages/Vulnerability-of-Infrastructure-to-Climate-Change.aspx>