

7TH REPORT OF THE
ENVIRONMENTAL AND ECOLOGICAL PLANNING
ADVISORY COMMITTEE

Meeting held on August 20, 2015, commencing at 5:11 PM, in Committee Room #3, Second Floor, London City Hall.

PRESENT: S. Levin (Chair), E. Arellano, L. Des Marteaux, P.L. Ferguson, B. Gibson, D. Hiscott, M. Murphy, N. St. Amour and R. Trudeau and H. Lysynski (Committee Secretary).

ABSENT: F. Cirino, C. Dyck, C. Kushnir, L. McDougall, H. McNeely, K. Moser, S. Peirce and J. Stinziano.

ALSO PRESENT: C. Creighton, T. Grawey and J. MacKay.

I. CALL TO ORDER

1. Disclosures of Pecuniary Interest

That it **BE NOTED** that no pecuniary interests were disclosed.

II. SCHEDULED ITEMS

None.

III. CONSENT ITEMS

2. 6th Report of the Environmental and Ecological Planning Advisory Committee

That it **BE NOTED** that the 6th Report of the Environmental and Ecological Planning Advisory Committee, from its meeting held on May 21, 2015, was received.

3. 5th Report on the Advisory Committee on the Environment

That it **BE NOTED** that the 5th Report of the Advisory Committee on the Environment, from its meeting held on May 6, 2015, was received.

4. The London Plan (June 2015)

That it **BE NOTED** that the Municipal Council resolution adopted at its meeting held on June 25, 2015, with respect to the second draft of The London Plan, was received.

5. Wharncliffe Road South Class Environmental Assessment - Notice of Public Information Centre 1

That it **BE NOTED** that the communication dated May 26, 2015, from M. Chiu, Consultant Project Manager, MMM Group, relating to the Wharncliffe Road Class Environmental Assessment, Notice of Public Information Centre 1, was received.

6. Property located at 2150 Oxford Street East

That it **BE NOTED** that the Notice dated August 5, 2015, from T. Macbeth, Planner II, with respect to an application submitted by the City of London, relating to the property located at 2150 Oxford Street East, was received.

7. Properties located at 1155-1236 Gough Road and 1974-2119 Gough Avenue

That it **BE NOTED** that the Notice dated August 12, 2015, from B. Turcotte, Senior Planner, with respect to an application submitted by Sifton Properties Limited, relating to the properties located at 1155-1236 Gough Road and 1974-2119 Gough Avenue, was received.

IV. SUB-COMMITTEES & WORKING GROUPS

8. Properties located at 704 and 706 Boler Road

That, the following actions be taken with respect to the properties located at 704 and 706 Boler Road:

- a) the attached comments from the Boler Road Working Group, with respect to the application for approval of draft plan of subdivision and Zoning By-law Amendment, **BE FORWARDED** to the Civic Administration for consideration; and,
- b) it **BE NOTED** that the Notice dated July 13, 2015, from A. MacLean, Manager, Development Planning, with respect to an application submitted by Southside Construction Management Limited, c/o Development Engineering, relating to this matter, was received.

9. Property located at 3493 Colonel Talbot Road

That it **BE NOTED** that the Notice dated July 13, 2015, from A. MacLean, Manager, Development Planning, with respect to an application submitted by MHBC Planning on behalf of 2219008 Ontario Limited (York Developments), relating to the property located at 3493 Colonel Talbot Road, was received.

10. Property located at 2300 Richmond Street

That a Working Group consisting of M. Murphy (lead), L. Des Marteaux, P.L. Ferguson and D. Hiscott, **BE ESTABLISHED** to review and draft comments on the application of Old Oak Properties, relating to the property located at 2300 Richmond Street.

11. Courtney Subdivision Revised EIS

That the attached, revised comments from the Courtney Subdivision Working Group, with respect to the Courtney Subdivision Revised Environmental Impact Statement, **BE FORWARDED** to the Civic Administration for consideration.

12. Old Victoria SWM #1- Functional Design

That the attached comments from the Old Victoria Stormwater Management Facility Functional Design Working Group, with respect to the Old Victoria Stormwater Management Facility #1 functional design, **BE FORWARDED** to the Civic Administration for consideration.

V. ITEMS FOR DISCUSSION

13. Highbury Avenue / Hamilton Road Intersection Improvements Municipal Class Environmental Assessment - Public Information Centre Displays

That it **BE NOTED** that the communication dated May 26, 2015, from J. Smolders on behalf of K. Welker, Project Manager, Dillon Consulting, relating to the Highbury Avenue / Hamilton Road Intersection Improvements Municipal Class Environmental Assessment, was received.

VI. DEFERRED MATTERS/ADDITIONAL BUSINESS

14. Wonderland Road South Class Environmental Assessment – Notice of Study Completion

That it **BE NOTED** that the communication dated August 18, 2015, from M. Chiu, Consultant Project Manager, MMM Group, relating to the Wonderland Road South Class Environmental Assessment, was received.

15. London Bug Day

That it **BE NOTED** that the flyer from The Entomological Society of Ontario, relating to the 2nd Annual London Bug Day, was received.

VII. ADJOURNMENT

The meeting adjourned at 7:56 PM.

Next Meeting Date: September 17, 2015 at 5:00 PM
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EEPAC Review of:
704 AND 706 BOLER ROAD

EIS, Slope Stability Report and Water Balance

Reviewers: B. Gibson, R. Trudeau
August 2015

KEY RECOMMENDATIONS

Wooded area previously identified as Significant Woodland needs to be re-established through planting and protected inside the development area. Amphibian studies previously performed are inadequate, new studies are needed to properly establish amphibian populations on site. Branches in some back yards are identified, tree drip line needs to be assessed again, and a minimum setback buffer of 10 metres beyond the drip line needs to be created.

4.1.3: Topography

The study notes slope ranges of 16%-35%, while the exp slope stability study ranges from 6 horizontal to 1 vertical to 3 horizontal to 1 vertical. What is the relation to these numbers? Where on the site do these slopes occur?

Report references inclination of the slope to be 6H:1V to 3H:1H, but does not specify where the 6H:1V area is.

- EEPAC assumes it is the area between the woodland and the Block 101 area set aside for parkland/future development. It would have been helpful if the report was clearer. If this area had been included, the Slope Inclination Rating Value would increase from 0 to 16, changing the Slope Instability Rating to 38, which is Moderate Potential.

RECOMMENDATION:

Clarification and further detail of the slope positions is needed. This is related to further clarification and detail needed for swale positions and site grading (see below) as well as the Slope Instability Rating.

EEPAC also questions if the photographs are correctly labelled.

Photograph 1:

- The placement of the trees to the right in the picture looks more like the viewer is looking west, given the long vista to the houses in the distance. If the viewer were looking south from Longview Crt., the trees would be on one's left.
- If looking east, with Apricot Dr. on the viewer's right, the woodlot trees would be on the viewer's left.
- The only location that this picture could have been taken is within Block 101 looking south towards the backs of the houses on Apricot Dr somewhere opposite Lots 68-72. This area of the Slope Study is not addressed.

Photograph 2:

- Clearly taken looking west. There is a house on Apricot Dr. with a distinctive rear façade, and the view from this photo is not taken **“from”** Lot 4, but looking **towards** Lot 4. Again as in Photograph 1, the slope being pictured is not the slope addressed in the Study for Lots 1-9, as they are in the distance in the photograph, about halfway in the picture. This corroborates with the woodlot trees on the viewer's right and the ornamental trees fronting Boler Rd on the horizon.

RECOMMENDATION:

The City and the proponent meet on site to clarify the photographs and if they support the conclusions in the EIS.

4.2.1: Vegetation

EEPAC is surprised to note that woodland previously identified on site at a scoping meeting as Significant Woodland has been removed from the site, before site plan approval. This drastically changes the site under consideration.

RECOMMENDATION:

Remove all previously wooded areas from the development design, and plant new trees to re-establish the area previously identified as Significant Woodland.

RECOMMENDATION:

London City Council amend the Tree Conservation By-law to ensure that a similar situation doesn't occur again, i.e. when a Significant Woodland is identified at a scoping meeting, the Tree Conservation By-law should immediately apply.

4.2.4: Fauna

For the amphibian study (Appendix G), the times were listed as follows:

Study 1: April 14, sunset at 8:06pm, survey at 7:00-7:30pm

Study 2: May 28, sunset at 8:54pm, time of survey not recorded

Study 3: July 4, sunset at 9:07pm, survey done 9:45-10:15pm

Amphibian studies need to be completed beginning half an hour after sunset as per the Marsh Monitoring Program. Study 1 concluded half an hour before sunset, and it is impossible to determine if study 2 was performed properly, as no time of study is given.

The description of what qualifies as Significant Wildlife Habitat is incomplete.

Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species (*grey tree frog and western chorus frog are on the list*) with at least 20 individuals (adults or eggs masses) or **2 or more of the listed frog/toad species with Call Level Codes of 3 or;** Wetland with confirmed breeding Bullfrogs are significant.

RECOMMENDATION:

The EIS be considered incomplete until another set of amphibian studies is completed as the ones submitted in the report were not completed properly. Mapping the location(s) of the stations would also be helpful.

7.1: Indirect Impacts

The report states that "The draft plan has been configured so all rear lot lines are beyond the woodland trees (however in some locations, there is some branch overhang into the rear lots)". This makes the location of the woodland drip line unclear – are the rear lot lines inside the drip line in places?

For lots 37-43, the report recommends a "zero buffer through mitigation" with a homeowners' brochure and rear yard fencing." City of London Guidelines for

Determining Ecological Buffers (2007) notes that “An absolute minimum of 5m buffer should be included to allow for variability along ecological edges.” and that the minimum buffer width recommended for a woodland is “10m beyond the drip line of trees (protects the rooting zone)”. A zero buffer through the proposed “mitigation” is unacceptable. The buffer should be consistent with the Guidelines as the proponent has not provided an acceptable reason for varying the buffer.

RECOMMENDATION:

Re-examine the dripline as identified to ensure that all construction takes place entirely outside of the woodland dripline.

No lots or blocks should be within the dripline. Lots 37-43 and the condo block should not be within the drip line (see page 24).

The trail should be outside the calculated buffer.

RECOMMENDATION:

Establish a minimum 10m buffer beyond the dripline of the woodland. The root zone of trees extends 1.5-3 times beyond the furthest extents of the tree canopy, so a further buffer may be appropriate.

7.2: Construction Related Impacts

The report recommends “All stormwater should be directed away from the woodland feature through a system of swales during construction, preferably adjacent to the road pattern.”

RECOMMENDATION:

Full details of the swale design are needed to assess protection of the woodland feature and slope integrity. Approval by the City of same must be a condition in the development agreement.

Water Balance

The water balance report was done in 2013, prior to the tree clearing. This was a clearly stated as being a pre-development assessment with limited design data, therefore, no data is presented to evaluate the impact to the areas of standing water, which based on previous studies are “sourced from surface run-off and shallow groundwater” (actually in the Slope Study report) post-construction.

If this report only addresses the water balance from the groundwater status with the six boreholes, all on relatively high ground, then the surface run-off impact has yet to be addressed.

It is unclear as to how post development surface flows will be comparable to pre development. If they are not, the areas of standing water may dry out.

RECOMMENDATION:

The EIS be considered incomplete until a post development water balance report is completed to the satisfaction of the City. The areas of standing water must be maintained as amphibian habitat.

Post Construction

1. Re-seeding areas of disturbance to maximize erosion protection and minimize volunteer populations of invasive species.

RECOMMENDATION:

This should be done with native species and not hydro-seeding.

GENERAL COMMENTS

Homeowner information material

RECOMMENDATION:

The required information for homeowners include the reason why no gates have been installed in the fences.

Evaluation of Ecologically Significant Woodlands

2015 pg. 22 says that “it is our opinion the City of London Evaluation of Ecologically Significant Woodlands (2006) should not be applied to small patches of this size as the evaluation process was not created for these very small features.”

In the introduction to the Woodland Evaluation, it says in the introduction:

These guidelines will apply to all vegetation patches outside ESA’s and wetlands as identified on Schedule B and designated as Environmental Review on

Schedule A. These patches, generally 4 ha in size or larger, were identified through the Subwatershed Planning Studies.

Also see 1.2.4 and 1.2.7 and 1.2.8 and 2.0 of appendix A, all of which indicate the **woodland is significant**.

Incorrect information regarding species at risk in Ontario

Page 9 says as follows:

“American Chestnut (END) and Butternut (END), while not listed by MNR, can be found in virtually any woodland setting in this region.”

This is simply wrong and should be removed or reworded. Both trees are on the Provincial Species at Risk Act. There is a recovery strategy for American Chestnut.

Review of:

Courtney Subdivision, Revised EIS

Located at Col. Talbot and Pack Road

Reviewer: S. Levin

HIGHLIGHTS

A. The EIS says that according to the SWM EA, the western arm tributary will be re-routed. EEPAC has reviewed the EA by Parsons and sees no such re-routing. Parsons clearly says that under the preferred option, the open sections of this tributary will be piped. EEPAC remains concerned that works on the west arm may interfere with the wetland features north of Pack Road by changing the hydrological regime. **The area north of Pack was not well studied in either the EA or the EIS due to lack of access.**

B. A clear **delineation of responsibilities** for natural heritage protection and enhancement that are related to the SWM project and the subdivision be established between the City and the subdivider. Neither the EA nor the EIS established the responsibilities.

C. A detailed **Environmental Monitoring Program (EMP) must** be developed to the satisfaction of the UTRCA and / or the City (Ecologist). **EEPAC takes the position that the City's consultant should prepare the EMP, and it should be reviewed by a City Ecologist prior to its inclusion in the subdivider's bid documents for those components related to the subdivision.**

D. The EIS does not clearly say if the proposed 3 m recreational link is paved or not. This is relevant to the width of the buffer because the City's practice (per discussion with Dianna Clarke and Linda McDougall of the City) has been to mow on either side of a paved multi-use pathway due to safety concerns related to bike/pedestrian conflict. Hence the width of the proposed buffer would be 1-2 m narrower if the pedestrian amenity is paved. **A paved and lighted pathway in the ESA is not supported by EEPAC.**

ESA BOUNDARY

Although page 1.2 indicates that the ESA boundary was delineated with the City staff on July 18, 2014, it is unclear from Figure 3 what the boundary is as the red line does not show a southern border. It is also unclear as to why all of Reach 3 of the Tributary is not included in the ESA given Figure 2 shows a wetland (MAM2-2B) that appears to go all the way to the green line in Figure 3, which is beyond the red line in this figure. The MAM2-2B is Significant Wildlife Habitat as noted in the EIS on page 5.6 due to the presence of terrestrial crayfish chimneys. As such it should be part of the ESA. As well, page 5.11 of the EIS clearly states that "... the ESA boundary should be extended along Reach 3 and 4 of the main tributary to include all portions of MAM2-2B and MAM2-2A meadow marsh communities since they are adjacent to the watercourse at the top of slope..."

- 1) **RECOMMENDATION:** The ESA boundary and buffer be clearly marked in the final EIS so that it may be correctly indicated on other drawings. It should include all of the MAM2-2B community.

Table 4.1 on page 4.4 clearly lays out that the Cultural Meadow at the southwest portion of the Study Area meets the Boundary Delineation Guidelines definition as an old field that would fill in a bay. It should be added to the ESA.

- 2) **RECOMMENDATION:** The Cultural Meadow (CUM1) west of Tributary and east of Dingman Creek be included in the ESA boundary as per the City's Boundary Delineation Guidelines and action be taken to change the mapping in the current Official Plan and London Plan to include it.

The ESA lands in the subject property appear from the EIS to be destined to be dedicated to the City. This should occur as soon as possible.

- 3) **RECOMMENDATION:** The lands determined to be ESA be dedicated to the City as soon as possible, and this part of the Lower Dingman Corridor ESA and all other lands owned by the City in the Lower Dingman Corridor ESA be added to the City's management contract with the UTRCA beginning no later than 2016.

BUFFERING

The EIS does not clearly establish if the proposed 3 m recreational link is paved in all sections or not (for example, page 7.8 says "3 m wide trail"). Nor do the drawings of the development clearly show "an average 10 m no touch buffer from

the edge of the ESA boundary” (page 7.7). This is relevant to the width of the buffer as the City’s practice (per discussion with Dianna Clarke and Linda McDougall of City staff) is to mow on either side of a paved multi-use pathway due to safety concerns related to bike/pedestrian conflict. Hence the width of the proposed naturalized buffer (Section 7.2, page 7.3) would be 1-2 m narrower if the pedestrian amenity is paved. (The area of “no touch” would be less than claimed in the EIS).

Even if the buffer is widened to take this into account, it is questionable whether it is enough to avoid the impacts noted in the EIS at the bottom of page 7.3. A recent study (McWilliam, W., et al., The housing-forest interface: Testing structural approaches for protecting suburban natural systems following development. *Urban Forestry and Urban Greening* (2010), doi:10.1016/j.ufug.2009.12.002) measured the extent of post development impacts of over 350 residences built adjacent to suburban forests in Southern Ontario. The results indicate that boundary treatments can offer some long-term protection from residential encroachment; however, commonly implemented treatments can be greatly improved. Boundaries between residences and natural systems should be carefully designed to control physical access, clearly delineate private from public land uses, and where appropriate, encourage community monitoring of the housing/forest interface. However, even under the most effective boundary treatment, encroachment activities continued at significant distances from forest borders. Forested buffers of at least 50 m wide are required to segregate encroachment impacts from sensitive forested natural systems.

EEPAC is aware of only one location in Warbler Woods in study by Beacon for the City where the effectiveness of a path or trail behind properties was reviewed for limiting encroachment and the dumping of yard waste. If the City intends to install a trail/path in addition to the set back from rear lots, it should check to see if the effect is as predicted by making a point of visiting the site on a regular basis (1, 3, 5, 10 years) and comparing it to other sites in comparable locations.

4) RECOMMENDATION:

- a. A wider buffer be considered, particularly if a paved path is constructed.
- b. Fences with no gates be required.
- c. The subdivider or builder provide all new homeowners in the subdivision with a guide to living adjacent to an ESA including why no gate should be installed in a fence, why pets should not run loose, which plants to avoid

- planting adjacent to an ESA, information on the City's Adopt an ESA program, and contact information for Friends of Dingman Creek.
- d. Within 6 months of 70% build out, the City or the subdivider send all addresses in the subdivision a copy of the City's "Living with Natural Areas" pamphlet to reinforce the homeowner guide.
 - e. The City review the effectiveness of using a trail/path as a means of mitigating encroachment by regularly visiting the site and reporting the results to EEPAC and / or PEC.

EEPAC is puzzled by the information provided on page 7.8 regarding the assimilation of water and the "access repelling impacts" of the buffer. It is unclear how the consultant was able to conclude that the assimilative capacity of the buffer will be adequate. There are no data presented to support this assertion. Nor does the EIS demonstrate where a "no touch" buffer has been successful in repelling impacts, especially where part of the proposed "no touch" buffer will be mowed if a paved path is provided.

- 5) **RECOMMENDATION:** The EIS be considered incomplete until supporting documentation is provided regarding water absorption requirements for the aquatic and hydrologic systems, and for the ability of a no touch buffer to successfully mitigate encroachment.
- 6) **RECOMMENDATION:** The subdivider be required to provide a landscape plan for the buffer to the satisfaction of a City Ecologist. The plan must include expected outcomes and an appropriate monitoring period.

SMALL TRIBUTARY / WEST ARM

As noted on page 4.11, this reach functions as seasonally direct fish habitat. Upstream, north of Pack Road, it consists of a moist, sedge meadow marsh (MAM 2-5). However, the tributary's head waters are further north and it passes through a Significant Woodland (Patch 10036). From air photos, it appears that another, larger wetland is located in this patch. The watercourse was not investigated north of Pack Road as the land owner restricted access. There is some question as to the impacts of the downstream works on this wetland. According to the EA by Parsons done for the City for the SWM facility for this development (page 74), the preferred alternative "... scored less in the

“Environmental” category as it involved piping and burying the intermittent tributary, which will result in the loss of potential habitat and removal of areas of floodplain.” Figure 6-4 of the EA which shows Alternative 3 does not indicate that the watercourse will be re-routed along Pack Road as stated in the EIS (page 7.5 section 7.1.2.2). This contradiction is concerning and requires clarification.

EEPAC is concerned with the impacts on the ecological functioning of this small tributary as direct fish habitat and with its hydrologic functions in supporting the meadow marsh north of Pack. Generally, piping lowers the water table, drying out features. Neither the EIS nor the EA provide any data on anticipated post development changes to the hydrological regime north of Pack.

- 7) **RECOMMENDATION:** After the functional design for the SWM facility determines the work proposed for the west arm, there must be a hydrologic study to determine the impacts on the features and functions of the tributary including impact on direct fish habitat and the meadow marsh north of Pack. If damage to the features or their functions is predicted, compensatory mitigation must be provided.

RESTORATION OF PROPOSED CHANNEL BLOCK

Page 7.13 identifies that “restoration opportunities are available within the proposed Channel block as part of the channel improvements. The final design of the channel block should include a detailed planting plan.” EEPAC agrees, however, it is unclear as to whether the City or the proponent will be responsible for this work, and how long it will be monitored.

- 8) **RECOMMENDATION:** Once the responsibility for channel improvements is identified, the detailed planting program as well as the functional design for the improvements be to the satisfaction of the UTRCA and / or a City Ecologist.

TRAIL/PATHWAY

The EIS is unclear as to the type of feature that will be built. It uses the term pathway and trail. Other than indicating a 3 m width, there is no clear statement if it will be a paved pathway or a natural trail. This is of some concern to EEPAC for a number of reasons. It is unknown when the amenity will be built. If late in the development, people will have already created their own unmanaged ways into the ESA. Habits are hard to break.

Section 5.5.1.1 of the EIS briefly discusses turtle overwintering areas. No overwintering surveys were conducted (page 5.5) yet the EIS concludes there is no risk as development is outside the ESA. In section 5.5.2.1 the EIS briefly reviews turtle nesting areas. It notes on page 5.5 that “potential candidate SWH for turtle nesting occurs within the ESA within 100 m (of) MAM communities.” However, later in this section, the consultants indicate that no turtle nesting surveys were conducted. The reason - because no impacts are expected to this habitat as a result of the proposed development since “all proposed development is outside of the ESA where potential turtle nesting habitat may be present.” This assertion seems odd given the MAM communities are less than 100 m from the proposed development. As well, the proposed pathway/trail could have negative impacts on nesting and overwintering as it will be located closer to the MAM communities including the proposed bridge which EEPAC does not support. According to Parsons (page 28), a snapping turtle was reported in the Mathers Stream (Tributary in the EIS) Valley.

- 9) **RECOMMENDATION:** Turtle overwintering and nesting surveys be conducted prior to any site alteration within 100 m of candidate SWM for turtle nesting. This includes site alteration for a trail/pathway.
- 10) **RECOMMENDATION:** E&PP convene a Trail Advisory Group (TAG) meeting to provide advice on location and surface type for this amenity as guided by the Trail Guidelines. The TAG should include a representative from Friends of Dingman.
- 11) **RECOMMENDATION:** The amenity be created at the beginning of the development process in a location and surface type as determined by the TAG.
- 12) **RECOMMENDATION:** No bridge be constructed over the tributary within the boundaries of the ESA, particularly prior to the identification of the Management Zones as per the Trail Guidelines.
- 13) **RECOMMENDATION:** When the amenity is provided, concurrently address the invasive species such as buckthorn.
- 14) **RECOMMENDATION:** No lighting should be installed as suggested on page 7.6 of the EIS. As noted on page 7.7, there will already be an increase in lighting from the development.

SPECIES OF SPECIAL CONCERN

In addition to the prior recommendation to do turtle nesting and overwintering surveys, EEPAC has the following recommendation for the construction period.

- 15) **RECOMMENDATION:** During construction of the subdivision, the subdivider's construction crews be made aware of turtle identification and that a City or UTRCA Ecologist/Biologist be notified if turtles are observed during construction, particularly during nesting season. Fencing should be constructed and maintained between the ESA buffer and all construction.

Breeding Birds (p. 4.7)

It surprising that the consultants did not check culverts for swallow nests. They observed both bank and barn swallows during surveys. The literature notes that Barn Swallows nest in culverts and their nests have been found in a number of culverts by consultants preparing EISs for other clients (Richardson Farms and the City's new Recreation Centre on Southdale near Colonel Talbot).

- 16) **RECOMMENDATION:** The EIS be considered incomplete until surveys of culverts are conducted to determine if swallows are nesting. If they are found, nesting kiosks be provided.

EEPAC is also surprised to see page 7.7 claim that no reduction in the number and range of species that could utilize this large habitat block are anticipated. This is without a source for this assertion. It is easy to make this assertion as no follow up data collection is anticipated. It is also a "leap" to suggest that while there may be an increase in mortality of some breeding birds due to increase predation, the EIS claims that the woodland along the Valley "will provide a variety of habitat niches for such species to find suitable habitat and adapt to increased predation. This claim comes without any supporting data, nor information on which bird species the consultant expect to start using the woodland after an increase in predation. After all, the woodland is already there, the people and their domestic animals are not.

- 17) **RECOMMENDATION:** The EIS either include supporting documentation on this claim (EEPAC would be most interested in it) or delete this section from the EIS.
- 18) **RECOMMENDATION:** The subdivider be required to conduct breeding bird surveys, as determined by a City of London Ecologist, post-construction for a period of two years.

FISH HABITAT

On page 5.7, the EIS notes that Reaches 3 and 4 of the Tributary provide direct warm water fish habitat. It also notes that DFO requires that it be demonstrated that the proposed development will result in “non Net Loss of the productive capacity of fish habitat” by avoiding the direct loss of habitat or habitat components. The EIS then points to Section 8, the EMP, where one would expect to find how it would demonstrate the development will meet this requirement. However, Section 8 does not explore this issue.

- 19) **RECOMMENDATION:** The EIS be considered incomplete until it demonstrates that the proposed development will result in no Net Loss of the productive capacity of fish habitat or how the stream enhancements will improve it.

INVASIVE SPECIES

Page 4.4 notes that the FOD 7-2 where the Butternuts are located has a sub-canopy with common buckthorn dominant in the understory. This should be addressed during the construction of the SWM facility.

Table 4.1 on page 4.5 also notes the existence of reed canary grass in the area where the Tributary will be enhanced.

- 20) **RECOMMENDATION:** If this is non-native reed canary grass, it should be removed as part of the contract to rehabilitate and enhanced the Tributary. This must be made a condition of the development agreement.
- 21) **RECOMMENDATION:** The SWM unit be asked to include the removal of buckthorn from the understory of this community in its project budget for the SWM facility for this development.

ELCs

Page 4.4 notes a Dry – Fresh Poplar Forest (FOD 3-1). However, it does not appear in Figure 2.

- 22) **RECOMMENDATION:** The consultant either revise Figure 2 to include this community or revise Table 4.1 to exclude it.

NET ENVIRONMENTAL EFFECTS ASSESSMENT (TABLE 7-2)

- Table 7.2 – page 7.10 – constructing a stormwater management pond is not a mitigation measure.

There is a recommendation to monitor channel stability and vegetation after the channel improvements. However, there is nothing as to who is to do the monitoring or for how long.

- 23) **RECOMMENDATION:** Whoever is responsible for the construction of these improvements, should be responsible for monitoring. Monitoring should take place for at least three springs. One year as suggested on page 7.11 is inadequate.
- 24) **RECOMMENDATION:** Whoever is responsible for the construction of each of the various parts of this development (City for SWM, proponent for other elements) should be responsible for the removal of invasive species as suggested on page 7.12.

CONSTRUCTION AND GRADING IMPACTS

In addition to the recommendations on page 7.4, EEPAC adds the following:

- 25) **RECOMMENDATION:** All storage and refueling/maintenance of equipment must be at least 30 m from the edge of the buffer to the ESA and the Tributary.

It is also not clear who is responsible for the channel improvements noted on page 7.5.

- 26) **RECOMMENDATION:** The UTRCA approve all work on the channel improvements proposed for the upstream intermittent reaches of the Tributary.
- 27) **RECOMMENDATION:** E & S controls must (rather than should as indicated in the EIS on page 7.6) be implemented prior to the initiation of any construction or grading on the subject property. They must be maintained in good repair.
- 28) **RECOMMENDATION:** Vegetated buffer strips should be of vegetation that is consistent with the surrounding area and not include invasive or non-native species - use the City's for [Guide to Plant Selection for Natural Heritage Areas and Buffers](#).

EEPAC urges avoidance of hydro seeding as the nitrate “burst” can have negative impacts on aquatic and groundwater systems.

ENVIRONMENTAL MANAGEMENT PLAN

Compliance Monitoring and Qualitative Vegetation Monitoring (page 8.3)

Although EEPAC supports the preparation and submission of compliance monitoring reports quarterly while the site is actively being developed, we believe that more clarity is required.

- 29) **RECOMMENDATION:** The quarterly compliance monitoring reports be sent to Development Services and Environment and Parks Planning. To say that they should be sent “to the City” is insufficient direction.

- 30) **RECOMMENDATION:** Any impacts on the natural environment from accidents such as run off or sedimentation must be reported immediately to Development Services and E&PP.

- 31) **RECOMMENDATION:** Compliance monitoring should continue after assumption or until work adjacent to the ESA is completed, whichever is later. EEPAC is unclear what the consultant means by “while the site is actively being developed/constructed...”

The monitoring period recommended on page 8.3 is inadequate. It is unclear what “implementation of the rehabilitation plans” means. Does the monitoring period clock start when the rehabilitation starts or when the work is completed and accepted by the City and the UTRCA? It is also unclear where the support for a two year period of annual monitoring comes from. EEPAC generally prefers longer periods with more regular monitoring than once per year, particularly in this case where a trail will be established. Also important is ensuring that the contract for the rehabilitation work comes with warranties that can be easily “called” if the expected outcomes are not achieved. Finally, this section of the EIS refers to including the monitoring as part of the landscape and planting contracts assigned to this development. In addition to the lack of detail as to what should be included in such contracts, the EIS leaves out if this work should be done as part of the SWM project or the subdivider or both.

- 32) **RECOMMENDATION:** The subdivider and City agree in writing to the responsibility of each in the rehabilitation plans for the Tributary. Clear outcomes for the landscaping and planting be included in contracts for such works, with approval of the Plans be the responsibility of a City Ecologist and/or the UTRCA as appropriate.

Misc

- Figure 2 – There are five “points of interest” noted in Figure 3. However, there is no explanation of them in either the notes to the Figure, nor in the EIS. This should be included in the final EIS or deleted. If it relates to the evaluation of the impact on the natural features and functions, EEPAC would appreciate the opportunity to review the material before the EIS is accepted.
- On page 10, it notes that in December 2014 Development Services asked the consultant to update Figure 2 to show the locations of the terrestrial crayfish chimneys. This appears not to have been done unless these are the points of interest.
- Page 3.5 – Amphibian Survey table. There is a discrepancy in the precipitation column. According to the Environment Canada web site (Daily Data Report), the precipitation data for the day of and day before the surveys are as follows.

Day before survey	Day of survey
April 28 – 10.8 mm	April 29 – none
May 26 – none	May 27 – 2.1 mm
June 21 – none	June 22 - 29.8 mm

- Page 4.3 – section 4.5.1 Landscape Ecology. Notes the target for natural vegetation in the Dingman Creek Watershed Report Card – then ignores the report card in the rest of the document.
- Page 4.6 – section 4.5.3 mentions the Butternut. Oddly, the second full paragraph on this page states “This medium-sized tree is commonly found in a variety of habitats throughout Southwestern Ontario.” Perhaps more accurate is to delete the word ‘commonly’ as this tree species is an endangered species under the Provincial Endangered Species Act. Common and endangered generally do not go together.

- Page 5.1-5.2 – section 5.1 Significant Wetlands. While it is likely the wetlands are not Provincially Significant Wetlands, it does not appear an evaluation was done under the Ontario Wetland Evaluation System. In fact, section 5.1.1 says the wetland communities were unevaluated.
- Page 5.2 – Significant Woodlands. It is unclear which woodland has been evaluated. It is certainly not Patch 10036 which is larger than 4 ha. It is assumed Table 5.1 applies to the wooded area within the Study Area which logically is part of the ESA based on applying the Boundary Delineation Guidelines.
- EEPAC did not receive the Floodplain Analysis by Stantec referred to on page 6.2

Review of:

Documents associated with the Functional design of the Old Victoria SWM Facility #1 by AECOM (lead), June 2015

Located at Hamilton Road and Commissioners

Reviewers: P. Ferguson, PhD, S. Peirce (PhD Candidate), J. Stinziano (PhD Candidate), S. Levin

The documents reviewed are the Environmental Impact Study (EIS), Functional Design Report – Final (Functional Design) and Functional Design Report – Final Volume II - Supplemental Reports (Supplemental Report)

HIGHLIGHTS

A. EEPAC appreciates the efforts made to move the facility almost completely out of the ESA.

B. Recommendation 7 in the EIS (page 60) is for the development of an **Environmental Monitoring Program (EMP)**. The elements are good, however, EEPAC thought preparing the Program itself would have been included in the EIS. This begs the questions: “who will be preparing it,” and “will it be prepared and reviewed prior to the awarding of the construction contract?” **EEPAC takes the position that the City’s consultant should prepare the EMP, and it should be reviewed by a City Ecologist prior to its inclusion in the bid documents for this project.**

C. As noted in its previous comments on the Thames Village EIS, EEPAC recommends that the **wetlands** in the area **be evaluated** under the Ontario Wetland Evaluation System. We note the wetlands are treated as significant, but without an OWE, it is unknown if they are provincially significant themselves or complexed with the PSW already identified to the west (see air photo from the MNRF at the end of this document). This is particularly important as Figure 5 of the EIS does not show the complete wetland boundary (the purple line in the Figure does not completely encompass an area).

D. EEPAC **does not support multi-use pathways** in ecological buffers. They must be outside the buffer. The City should utilize Planning Act provisions at its disposal to acquire lands, outside of the natural heritage system, for the Thames Valley Parkway.

FUNCTIONAL DESIGN REPORT

EEPAC notes (p. 48 EIS and p. 9 Functional Design) that 1961 to 2003 data are used to model surface water inputs. The IDF curves for the city were modified after the July 2009 work of Simonovic and Peck. The report can be found on the City's web site under IDF report final at <http://www.london.ca/residents/Environment/Climate-Change/Pages/Vulnerability-of-Infrastructure-to-Climate-Change.aspx>

This report, "Updated Rainfall Intensity Duration Frequency Curves for the City of London under the Changing Climate" reviewed the 61-2002 (DLY03) data set. **It is unclear if this is the same data set used in the modeling for the SWM facility.** Simonovic and Peck noted that the DLY03 data set has errors in element 010 and the "hourly data set did not include some of the critical rainfall events (for example, the 2000 summer storm)!" As well, they noted 17% of data was missing for durations shorter than 24 hours. In order to deal with these deficiencies, Simonovic and Peck prepared a modified data set. It is unclear if this modified data set was used by the consultants for the SWM facility.

- 1) **Recommendation:** The most up to date rainfall data set be used in future functional design work required by the City.
- 2) **Recommendation:** The most up to date data set be used to re run the numbers for this facility.
- 3) **Recommendation:** The SWM unit check with the Ontario Climate Centre (Ontario.climate@ec.gc.ca) to determine if 2004 and beyond have been added to the data set. Page 33 of Simonovic and Peck notes that in late 2008, the Centre was working on 2004 data.

EEPAC notes the dewatering requirements and Golder's comment (p.6 Supplemental Reports) that a Permit to Take Water will be required. Based on the geomorphological work in Parson's report it is our understanding that bankfull discharge is 1.13 m³/s and that the critical discharge (the discharge at which sediment will begin to move) is 0.33 m³/s or 30% of the bankfull. This is the same as 330 litres/second.

For the dewatering process, the maximum rate would be 579 l/min or 9.65 l/s and a steady state of 100 l/min = 1.66 l/s. Based on these conversions, the rate of dewatering would be below the rate of critical discharge so sediment transport shouldn't be a problem.

- 4) **Recommendation:** Groundwater discharged as part of dewatering should be done in such a way to cause no negative impact to the Natural Heritage features and their functions. If water is discharged to Tributary 2, it must be at a rate less than the critical discharge rate and should follow the proposed outlet channel to avoid unnecessary impacts to the steep slopes as suggested in the consultant's report.

- 5) **Recommendation:** A dewatering plan be prepared and approved by the UTRCA or MOEE and /or the City. Water must not be discharged through the woodlands of the ESA to the river.

Significant Wildlife Habitat

EEPAC notes the anuran call surveys were done last year (2014), a much drier spring than this year. Results could have been significantly different if undertaken this year.

Gray Treefrog was noted in the anuran call surveys. This is an indication of Significant Wildlife Habitat (SWH). However, the EIS (p. 26) assumes the SWH is the FOD5-1 (outside the area of development), rather than the SWT-2 (swamp thicket). Gray treefrogs live in moist, deciduous woodlands and swamps near water. Appendix J (and pp. 26 and 34) note that this frog was heard outside the 100 m area of the survey which could be either the woods or the swamp thicket. A survey station north of the tributary closer to the river could have clarified this matter.

The swamp thicket is already considered SWH due to the presence of hispid buttercup *Ranunculus hispidus(?)* (pp. 17, 40, 47).

- 6) **Recommendation:** If long term disturbance of the SWH cannot be avoided (either from ongoing operations or construction), EEPAC recommends compensatory mitigation based on the recommendations of a City Ecologist. Ideally, this should be in the Meadowlily ESA.

- 7) **Recommendation:** A literature search be conducted to determine if hispid buttercup can be transplanted successfully as suggested in the EIS. If not, seed stock or plants should be obtained. There are plant experts at Western University who should be consulted as to the optimum choice and location(s).

Seeps

EEPAC notes that none of the reports seem to have studied ground water flows particularly to the seeps. We understand the barrier will prevent groundwater from entering the facility, but we are not clear what the impact will be on the seeps to the north of the facility. It is not well marked on the maps how far into the seeps construction of the outlet will go. It does not appear any of the boreholes were done near to the proposed outlet (BH-104 is the closest) in order to determine the direction of the groundwater flows near the seeps. Certainly none of the monitoring wells are nearby. The clay dam may cut off groundwater to the swamp thicket under the Hydro corridor to the east of the outlet. Again there are no data collection points nearby.

The Supplemental Report from Golder's showing the A-A' and B-B' cross sections (Figures 3 and 4) do not relieve our concerns. In fact, it increases them as each of the cross sections do not seem to include monitoring wells that would seem more appropriate. For example, BH-104 which is closest to the seepage area, is a borehole, not a monitoring well. None of the boreholes appear to be close enough to the seeps to provide enough information to forecast impacts. Hence we are puzzled by the comment on page 48 of the EIS that points to Golder's June 3, 2015 correspondence (not found in our review) that indicates "... that the SWM facility may will (sic) likely interrupt groundwater flow causing it to flow around the facility and reconverge on the downstream side of the facility. This reconvergence may or may not lead to a change in the discharge orientation such that the seepage areas are bifurcated or widened."

EEPAC anticipates that discharge changes **will** likely impact the seeps (despite the awkward "may likely" sentence on page 48 of the EIS). Page 50 of the EIS also raises concerns "... the potential bifurcation of groundwater discharge to the seepage areas may cause a widening or separation of the seepage areas. Provided that this potential impact does not result in a reduction of the volume of discharge, it is not anticipated that there will be any impacts to the wildlife habitat function of the seepage areas." This is no clear estimation of volume of discharge to the seeps and even if discharge has any connection to the seeps.

Page 7 of the Functional Design document also notes infiltration in the study area will be reduced by 72%. Page 16 notes that the 2009 EA estimated a 65% total of impervious surfaces. It is unclear how this decrease in infiltration will impact the seeps.

EEPAC assumes that there have been other interruptions of seepage at other sites, therefore, a provisional plan and budget for compensation should be prepared and be in place at the beginning of construction. The possible corrective measures noted on page 60 do not take into account the time it would take to implement, who would be responsible for developing the mitigation measures, nor who would pay costs. Nor is there an estimate of funds to reserve for such an eventuality. Given the lag between problem identification, identifying a solution, hiring a contractor to implement the recommendation, EEPAC is skeptical the features and their function could be saved.

- 8) **Recommendation:** Professor Chris Smart at Western University be asked to review the data and provide recommendations for additional work and/or mitigation measures.

- 9) **Recommendation:** In the to be prepared Environmental Monitoring Program, monitoring of the seeps must be included (as referenced on page 60 of the EIS) and funds for compensatory mitigation be included in a holdback in the project budget. This holdback will only be released after the conclusion of the monitoring period if there are no negative impacts to the seeps. Otherwise, the funds are to be applied to compensatory mitigation. We recommend that monitoring be the responsibility of the SWM unit with support from a City Ecologist from E&PP. We recommend that corrective action measures be estimated and budgeted for and not left to the point in time where corrective action is needed. Compensatory mitigation could also include work in another area of the ESA perhaps to the west of the ravine.

- 10) **Recommendation:** EEPAC supports the section (p.23) of the Functional Design document that removed two catchments from the SWM facility in order to provide potential localized groundwater recharge. EEPAC concurs that the engineer for the subdivision works be required to work within the noted site servicing requirements. These requirements must be included in the development agreement for the development.

Buffers (Appendix O, EIS and recommendation 2, p. 56, EIS)

- 11) **Recommendation:** Plantings in the buffer should also include “unfriendly” native species such as hawthorns to discourage people from entering the ESA away from managed trail access points.

According to the City’s Environmental Management Guideline, the ESA should have a minimum 30 m buffer. EEPAC does understand that due to the location of the facility, such buffers are not possible. But under the Guidelines, Woodlands require a minimum of 15 m. Therefore we do not agree with sections of Appendix O where the buffer is reduced below 15 m where it does not interfere with the functioning and maintenance of the facility.

- 12) **Recommendation:** The buffers be reviewed and be at least 15 m where it would not interfere with the functioning and maintenance of the facility. The buffers also be reviewed in light of the geotechnical report. The Table in Appendix O of the EIS notes that this study may lead to greater buffers than suggested. It appears the geotechnical report was subsequent to the publication of the EIS.

Generally, EEPAC supports plantings in the buffer that mirror those in the ESA (p. 58 EIS). The emphasis should be on establishing a healthy treed edge. It will be important in the monitoring program to ensure buckthorn and other invasives do not get established in the new edge.

Habitat compensation (Figure 8, EIS, and Recommendation 6, page 60)

Three different areas are proposed. One is recommended as a cultural thicket, another as a buffer extension of shrub and herbaceous plants and a third as a meadow habitat. A clear rationale for these choices is not included in the EIS. EEPAC is of the position that the appropriate plantings should mirror the existing ESA, in particular, the area around the outlet. As well, the type of revegetation should consider the future development and any trails. For example, the proposed meadow habitat may not survive if the area is where the ESA is being accessed inappropriately. If no trail development is proposed in conjunction with the construction of the facility (hence our recommendation below that E&PP convene the Trail Advisory Group), undesirable access to the ESA may continue.

There are likely areas where access should not be promoted and “unfriendly” plantings such as native hawthorns would be more appropriate.

EEPAC also notes that this recommendation in the EIS is a “pre-recommendation.” The detailed recommendations are left to the Detail Design stage (EIS - Recommendation 4 for buffer plantings also leaves the details to the detail design stage). Again, this begs the question “when will the work be done, by who, and who will approve it?”

- 13) **Recommendation:** A City Ecologist should provide a recommendation for the appropriate species and type of habitat for the compensation areas. This direction must be included in the bid documents. The winning bidder be required to prepare the detailed recommendations and planting specifications subject to the approval of a City Ecologist. Only after approval by a City Ecologist should construction begin.
- 14) **Recommendation:** The placeholder of \$20,000 in the project budget for landscaping be reviewed by a City Ecologist and adjusted if necessary after the Ecologist provides recommendations for the appropriate species and type of habitat for the buffers and compensation areas.

Aquatic Health

It is unclear if the EIS has addressed impacts on the health of the aquatic system of Tributary 2. From page 29 of the Functional Design document, it appears that peak flows to the Tributary will be significantly less than pre-development. With the removal of the old coffer dam, EEPAC believes greater access for fish to the Tributary will be possible. Also a lower flow may have an impact on plants such as watercress and the temperature regime of the Tributary (AECOM and NRSI disagree if it is a cold water thermal regime). Given some sediment is good for nutrients and that the Thames is the receiving water course, a lower flow may be acceptable as it will likely mean no negative impact on the riffles at the outlet. However, further work should be done.

- 15) **Recommendation:** AECOM and NRSI be asked for their opinion on the impact of the lower peak flow on the aquatic health of Tributary 2 post construction.

(NB: In the EIS that NRSI did for the Thames Village development proposal, NRSI says there are fish up and downstream of the old dam on Tributary 2 and the Tributary is a cold water thermal regime, while AECOM on page 15 of its draft EIS report says it is warm water and the dam is a barrier to fish movement, but that there were cyprinids in pools.)

- 16) **Recommendation:** The non-native Common Reed (*Phragmites australis*) should be eliminated from the site as it will spread invasively.

Avoiding impacts during construction

EEPAC agrees with the recommendation that temporary construction access be away from Tributary 2C.

- 17) **Recommendation:** In addition to Golder’s recommendation on page 6 of the Geotechnical Investigation in the Supplemental Report that care should be taken to direct all surface flows away from open excavations during construction, EEPAC recommends that care be taken so that the surface water flows to the tributary and ESA should mirror pre-development flows as far as is possible.

EEPAC is supportive of Sheet 4, Appendix B of the Functional Design document outlining the sediment and erosion control and other measures. If the SWM unit is unable to do a weekly inspection, the inspection must be done by a City Ecologist or a qualified ecologist retained by the contractor who reports to both the City (SWM unit) and the contractor.

- 18) **Recommendation:** In addition to the contractor education proposed on page 53 of the Net Effects Table, EEPAC recommends SWM unit staff inspect the site at least weekly to ensure fencing is maintained and equipment stored at least 30 m from the buffer (i.e., to the south of the construction area), and litter is being removed so that it doesn’t blow into the woodland or watercourses.

EEPAC agrees with Recommendation 5 on page 59 of the EIS regarding a construction mitigation plan. However the recommendation does not specify who will develop the plan, who will review it, and who will approve it.

- 19) **Recommendation:** The detailed construction mitigation plan be prepared by a qualified individual retained by the contractor prior to approval being given for the start of construction. The plan must be approved by a City Ecologist.

- 20) **Recommendation:** A qualified ecologist be on site at all times with the ability to stop work if unanticipated disturbance to the natural heritage features or their ecological functions is noted.
- 21) **Recommendation:** For the severe weather contingency plan, EEPAC recommends stockpiles be removed 30 m from all watercourses and the ESA. This is to avoid a situation similar to the Amica site on Fanshawe where there was a large discharge of sediment to the Medway from a stockpile on the site.
- 22) **Recommendation:** While EEPAC agrees that piles inactive for 30 days or more should be revegetated, EEPAC recommends it be with native seed mix not hydro-seeded grass due to the inherent nitrate nutrient surge. If hydro-seeded with grass, it must be a form of hydro-seeding without fertilizers.

Golder on page 10 of its Hydrogeological Assessment in the Supplemental Report document suggests there may be temporary impacts to the water wells further from the site. EEPAC suspects that there will also be at least temporary impacts to the seeps and the SWT. EEPAC agrees with Golder's that groundwater levels be checked prior to commencing excavation as it appears that groundwater data was only collected on December 9, 2014 and March 17, 2015 (page 5 and Table 1, Golder Hydrogeological Assessment, Supplemental Report).

- 23) **Recommendation:** Excavating and dewatering be avoided during snow melt and early spring.
- 24) **Recommendation:** A qualified ecologist with the ability to stop work be on site during excavation and dewatering (if Recommendation 20 above is not included).

Post construction

EEPAC is not clear why a specific meadow mix is recommended on page 58. There will be little meadow left unless plantings are planned for the south side of the facility where the soils will ostensibly be drier.

EEPAC does not agree that post construction ground cover should be to urban lawn as it appears to be suggested by Golder's on page 3-4 of its report in the Supplemental Report. We hope this is only for modeling purposes.

- 25) **Recommendation:** The areas/buffers north of the facility should be planted with shrubs and trees consistent with the ESA. The contract should

also include a requirement that buckthorn should be removed/treated and understory plantings be undertaken.

- 26) **Recommendation:** If the areas south of the facility are planted with an appropriate meadow mix, there must be a warranty and annual summer inspections by a City Ecologist or a qualified ecologist retained by the contractor, for at least the three years recommended by AECOM.

EEPAC believes the monitoring program outlined in Section 6.5 page 60 is good. What is missing, however, is specifying who is responsible for the monitoring and for bearing the cost, particularly the cost of any follow up work that may be required. It also does not specify which department at the City should receive the monitoring reports for review.

- 27) **Recommendation:** If the contractor is responsible for monitoring as part of the construction bid documents, monitoring must be carried out by a qualified ecologist (CV required in the bid submission) and approved by a City Ecologist. Reports should be sent to the SWM unit with a copy for review by a City Ecologist. Otherwise, the contractor be given the option for the inspection to be carried out directly by a City Ecologist or a City selected ecologist and funded by the contractor.

- 28) **Recommendation:** The construction contract include holdbacks to ensure remediation and plantings are successful. The recommended amount be recommended by a City Ecologist. The monitoring period be for a minimum of three years and inspections be made bi-annually, once in spring and one in autumn.

Other

- 29) **Recommendation:** If all of EEPAC's recommendations for monitoring and restoration are included in the bid documents, a City Ecologist should serve on the evaluation team when the bids are opened.
- 30) **Recommendation:** The old control structure in the tributary be removed as part of the facility construction contract.
- 31) **Recommendation:** The non-developable lands that are not required for the SWM facility should be acquired by the City and revegetated as part of the

SWM project rather than waiting for dedication through the residential development process. The species used for revegetation should be consistent with the existing ELC (primarily FOD5-1). Native species such as hawthorn should also be added to discourage unmanaged access to the ESA. The bike jumps and litter can then be removed and managed trails established.

Without an established formal trail system in place, existing and new residents will create their own trails, as there is easy access to the ESA through the hydro right of way. The risk of this *laissez faire* / desire line trail planning is that residents may be entering the most sensitive parts of the ESA including seepage areas. Once informal trails are established, they are hard to remove.

- 32) **Recommendation:** The rest of the identified ESA should be dedicated to the City now so that trails can be identified by a Trail Advisory Group established and led by a City Ecologist. The TAG must include a representative from Friends of Meadowlily and from EEPAC.
- 33) **Recommendation:** Multi-use pathways must be outside the ESA and ecological buffers. EEPAC notes there is no rationale for why the buffer may include such pathways in Recommendation 2, page 56 of the EIS. Guidance for trails is presently through the Trails Standards Guideline.
- 34) **Recommendation:** ESA lands acquired by the City must be added to the management contract with the UTRCA.

Areas of Agreement

Vegetation removal must follow the Migratory Birds Convention Act's limitations.

Tree removal must be outside bat roosting season (April 30 to Sept 1) as per page 28. This must be included in the construction documents and reinforced once with the contractor once the contract is awarded.

- 35) **Recommendation:** If additional trees are required to be removed, acoustic surveys for bats must be undertaken. There are bat experts at Western University who can analyze the recordings.

EEPAC agrees with Recommendation 1 on page 55 of the EIS that the ESA boundaries and buffers determined in the EIS be added to Schedules A and B1 (and the equivalent maps in the London Plan). This should be through an Official Plan amendment initiated by the City. The wetlands in particular need to be

added as Golder notes on page 10 of its Hydrogeological Assessment in the Supplemental Report document that no wetland areas are mapped in the Official Plan in the vicinity of the facility.

EEPAC agrees that sediment and erosion control measures be installed prior to clearing and grubbing.

Misc

It appears that there wasn't a spring survey of spring ephemeral plants listed in Table 2-1 page 11. The consultant should provide a rationale for not including this work.

The Issues Summary Checklist includes nutrient retention and removal/ biochemical cycling. There is no information in the EIS – there should be a section addressing it.

The EIS could have been more succinct and better organized. If desired, EEPAC can provide examples from the document.

It would have been helpful to have at least one map with both the SMW facility and the proposed subdivision shown, particularly one showing the ELCs or Hazard Lines (Figure 2 of the EIS for example). In future, the City should require at least one such figure in all EIS and Functional Design documents.

Figure 2 of the EIS is difficult to read on line – the colours do not stand out.

The last row of the Net Effects Table, the last column should be No Net Effect to Net Positive Effect as the present rationale assumes the plantings are successful and invasive species are managed on an ongoing basis.

WETLAND COMPLEX FROM MNR

