

10TH REPORT OF THE
ENVIRONMENTAL AND ECOLOGICAL PLANNING
ADVISORY COMMITTEE

Meeting held on September 15, 2016, commencing at 5:04 PM, in Committee Rooms #1 and #2, Second Floor, London City Hall.

PRESENT: S. Levin (Chair), E. Arellano, A. Boyer, L. DesMarteaux, P. Ferguson, S. Hall, D. Hiscott, N. Huner, C. Kushnir, K. Moser, N. St. Amour, M. Thorn, R. Trudeau and N. Weerasuriya and H. Lysynski (Secretary).

ABSENT: E. Boynton, S. Madhavji, S. Peirce, J. Stinziano and M. Watson.

ALSO PRESENT: C. Creighton 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. 8th and 9th Reports of the Environmental and Ecological Planning Advisory Committee

That it BE NOTED that the 8th and 9th Reports of the Environmental and Ecological Planning Advisory Committee from its meetings held on July 21, 2016 and August 25, 2016, respectively, were received.

3. 8th Report of the Advisory Committee on the Environment

That it BE NOTED that the 8th Report of the Advisory Committee on the Environment from its meeting held on July 20, 2016, was received.

4. Municipal Council Resolution – Child Minding Services

That it BE NOTED that the Municipal Council resolution adopted at its meeting held March 22, 2016 with respect to Child minding services, was received.

5. Municipal Council Resolution - Richmond Street Recreational Pathway Crossing Environmental Assessment

That it BE NOTED that the Municipal Council resolution from its session held on July 26, 2016, with respect to the Richmond Street Recreational Pathway Crossing Environmental Assessment, was received.

6. Municipal Council Resolution - 6th Report of the Trees and Forest Advisory Committee

That it BE NOTED that the Municipal Council resolution from its session held on July 26, 2016, with respect to the 6th Report of the Trees and Forests Advisory Committee, was received.

7. Municipal Council Resolution - Thames Valley Parkway North Branch Connection Class Environmental Assessment

That it BE NOTED that the Municipal Council resolution from its session held on July 26, 2016, with respect to the Thames Valley Parkway North Branch Connection Class Environmental Assessment, was received.

8. Notice of Application - City of London - 1577 and 1687 Wilton Grove Road

That it BE NOTED that a Notice dated August 10, 2016, from M. Davis, Planner II, with respect to the application by the City of London, relating to the properties located at 1577 and 1687 Wilton Grove Road, was received.

9. Notice of Application - Drewlo Holdings Inc. - 661 and 667 Talbot Street

That the Environmental and Ecological Planning and Environment Committee (EEPAC) BE PERMITTED to review site plan applications that require either an Environmental Impact Statement or a Subject Land Status Report; it being noted that the EEPAC is presently only circulated if it is change in land use or plan of subdivision; it being further noted that the EEPAC reviewed and received a Notice dated August 3, 2016, from M. Corby, Senior Planner, with respect to the application by Drewlo Holdings Inc., relating to the properties located at 661 and 667 Talbot Street, was received.

10. Notice of Application - Sunningdale Golf and Country Ltd. - 379 Sunningdale Road West

That a Working Group, consisting of S. Hall, S. Levin and R. Trudeau (lead) BE ESTABLISHED to review the updated Sunningdale Scoped Environmental Impact Study; it being noted that a Notice dated July 7, 2016, from A. Riley, Senior Planner, Development Services, with respect to the application by Sunningdale Golf and Country Ltd., relating to the property located at 379 Sunningdale Road West, was received.

11. Notice of Completion - Thames Valley Parkway North Branch Connection - Richmond Street to Adelaide Street - Class Environmental Assessment Study

That it BE NOTED that the Notice of Completion for the Thames Valley Parkway North Branch Connection, Richmond Street to Adelaide Street, Class Environmental Study, was received.

12. Westminster Pond/Ponds Mills Environmentally Significant Area Community Meeting

That it BE NOTED that the invitation to attend the Westminster Ponds/Pond Mills Environmentally Significant Area community meeting to be held on September 29, 2016, was received.

13. Medway Moments

That it BE NOTED that a notice related to the Medway Moments Movie Premiere to be held on September 26, 2016, was received.

IV. SUB-COMMITTEES & WORKING GROUPS

14. Mud Creek Environmental Assessment / Environmental Impact Study Review

That the attached Working Group comments related to the Mud Creek Environmental Assessment/ Environmental Impact Study BE FORWARDED to the Civic Administration for consideration.

15. Riverbend South Phase 2 Environmental Management Plan

That the attached Working Group comments related to the Riverbend South Phase 2 Environmental Management Plan BE FORWARDED to the Civic Administration for consideration.

V. ITEMS FOR DISCUSSION

17. Environmentally Significant Area (ESA) Management Committee - Minutes

That it BE NOTED that the ESA Management Committee Meeting minutes from its meeting held on June 14, 2016, were received.

18. Workplan

That it BE NOTED that the Environmental and Ecological Planning Advisory Committee held a general discussion with respect to its 2016 Work Plan.

19. 2015 Vegetation Monitoring and Vascular Flora Inventory Report - Sifton Bog Environmentally Significant Area

That consideration of the 2015 Vegetation Monitoring and Vascular Flora Inventory Report - Sifton Bog Environmentally Significant Area BE POSTPONED to the next Environmental and Ecological Planning Advisory Committee meeting.

20. Sifton Bog Environmentally Significant Area Management Zone Map and Trail Review for Existing Boardwalk / Dock with Guidelines for Management Zones & Trails in Environmentally Significant Areas

That consideration of the Sifton Bog Environmentally Significant Area Management Zone Map and Trail Review for Existing Boardwalk / Dock with Guidelines for Management Zones & Trails in Environmentally Significant Areas BE POSTPONED to a future Environmental and Ecological Planning Advisory Committee meeting.

21. 2017 Environmentally Significant Area Capital Project Ideas

That the following actions be taken with respect to 2017 Environmentally Significant capital projects:

- a) the attached list of suggested Environmentally Significant capital project ideas BE FORWARDED to the Civic Administration for consideration; and,
- b) the Civic Administration BE REQUESTED to report back to the Environmental and Ecological Planning Advisory Committee with respect to the projects that are going to be undertaken in 2017.

22. Brainstorm Session for Projects

That it BE NOTED that the attached, revised, ideas were discussed for potential expansion to the Environmental and Ecological Planning Advisory Committee 2016 Work Plan; it being noted that the additional proposed projects are complimentary to the 2016 Environmental and Ecological Planning Advisory Committee Work Plan.

23. Vauxhall-Pottersburg Sewer Line Connection

That the attached Working Group comments related to the Vauxhall-Pottersburg Sewer Line Connection Environmental Impact Study BE FORWARDED to the Civic Administration for consideration.

24. Ontario Invasive Plant Council

That it BE NOTED that the Environmental and Ecological Planning Advisory Committee Members were encouraged to attend the Ontario Invasive Plant Council Annual General meeting to be held on October 25 and 26, 2016.

VI. DEFERRED MATTERS/ADDITIONAL BUSINESS

25. Trails Advisory Group Minutes

That the attached Trails Advisory Group minutes from its meeting held on September 8, 2016, were received.

VII. ADJOURNMENT

The meeting adjourned at 6:54 PM.

NEXT MEETING DATE: October 20, 2016

EEPAC REVIEW: MUD CREEK SUBWATERSHED EA/EIS

Review of: **Mud Creek Subwatershed Class Environmental Assessment Draft Report and Environmental Impact Study**

Reviewers: Kat Doughty, Caitlin Kushnir, Lauren Des Marteaux, Natalie St. Amour, Michael Thorn
London's Environmental and Ecological Advisory Committee (EEPAC)

Date: Aug 25, 2016

The document under review is an Environmental Assessment (in draft) for the Mud Creek Subwatershed. It also includes a combined Subject Lands Status Report/Environmental Impact Study, a fluvial geomorphology assessment, an archaeological assessment, and hydrologic and hydraulic modelling. The purpose of the assessment is to reduce erosion and sedimentation within the channel, mitigate flooding, and protect and enhance the natural heritage features. The preferred Alternative 4, proposes to deepen, widen and realign sections of Mud Creek, enlarge the CNR culvert, and relocate the Oxford Street culvert. Although Alternative 4 will involve removal of trees and disturbance of wildlife species and habitat, EEPAC feels it is the best option for addressing flooding concerns and enhancing the ecological features and functions of Mud Creek corridor. Overall, the report is well-written, thoroughly addresses the impacts expected, and provides detailed outline of the mitigation efforts proposed.

Some additional issues are noted below:

General Comments:

- Some areas zoned for development (e.g., residential, north of Oxford Street) contain significant woodlands along the Mud Creek tributaries. These are also within the existing and future regulatory floodplains. New development should not be in these areas. Development plans should consider adequate buffer zones to protect woodland areas and incorporate LID opportunities in building design.
- Whenever possible, avoid cutting down trees during construction of culverts and renovation/relocation of Mud Creek by finding flexible ways to incorporate the trees' location into the design plan. Reducing negative impacts due to disturbance is key, and so retaining as much of the existing native vegetation is important, especially in preserving wildlife habitat and saving mature trees which take many years to grow. For example, when creating access roads, look for options to deviate to the side of mature trees rather than cutting it down and follow path of lower tree density. Another example would be to transplant native trees (small trees should be doable) to a nearby location within the corridor instead of cutting it down. A third example, where tree revetments are planned, is to leave original trees intact whenever possible, which will provide better bank stabilization. Fourthly, make all attempts to protect the vegetation communities on slopes, especially along both sides of the CNR tracks during construction of the culvert.

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- Ensure that the renovation and revitalization of Mud Creek improves corridor function and linking to Thames R. Compensation plan to replace the removal of woodland should be aimed at enhancing this corridor. In addition, in compensating trees 3:1 that the species of trees being replaced be appropriate to the environmental conditions of the location, and also to consider replacing the same type of vegetation communities (especially if it contains native and rare plants and promotes diversity) that were affected during construction.
- Show a map that identifies areas of woodland and/or mature trees proposed for removal. This would visually clarify what vegetation communities are affected in the construction.
- Ensure that wildlife and nests are safely moved. Check for cavities, etc. Ensure adequate compensation, especially in removal of habitat known to contain SAR species - that these are replaced and/or moved according to protocol. Place bat boxes and other wildlife habitat installations before construction.
- EEPAC supports the monitoring plan proposed, and should include water quality measurements.

Specific Comments:

Mud Creek Subwatershed Class Environmental Assessment

- Maps showing the preferred Alternative 4 alignment of Mud Creek at the CNR crossing does not seem to reflect the proposed shift for the enlarged CNR culvert. Although the shift is small compared to the scale of the map, Alternative 4 planform is straight going into the CNR culvert (e.g., Figure 6-7), but the plan (Figure 7-1) creates more of a bend in the creek, and would cut through woodland. This difference is especially noted in Figure 6 map showing both the alternative and existing water courses overlapping. This may likely be a scale issue and/or difficulty in discerning flow in flooded area, but in general, need to ensure that details in design during the planning stages are consistent.
- Section 7.3.4 and touched on in 7.3.6 – The EA specifies that the size of the gravel used in the riffles of the designed channel should be determined using the shear stress of the hydrological modelling. Though I agree with this practical consideration, the design should also strongly consider the aquatic fauna likely to inhabit the new stream habitat (said in passing within 7.3.6). Many fishes require a specific type of gravel composition and the selection of gravel should consider the type of fish likely to inhabit the stream. Furthermore, the final design should avoid the use of relatively homogeneous gravel because most natural systems have a relatively heterogeneous gravel composition, which increases the potential habitat of macroinvertebrates and fish species capable of utilizing the habitat. Perhaps the gravel composition of relatively productive parts of the Mud Creek system can be used to provide a general idea of a biologically relevant gravel composition for the design stream sections. The EA could have better addressed these concerns in the section 7.3.6 given that information on fish and macroinvertebrates is available.

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- The PCSWMM files for hydrological modelling were supposed to be in appendix K, but no such appendix was provided.
- Page 45: Wording is confusing. What is meant by "upstream of Wonderland Road"?
- Page 59, section 4.2.2.2. begins with "All three woodlands" – the use of the word 'three' is confusing.
- Unsure of the exact location of the first two photos in Appendix I. Need some clarification or could use a map to show locations of the photos.

Appendix B – Subject Lands Status Report and Environmental Impact Study

- Data for the stream fish assessment was used from previous studies on Mud Creek, but there are no details as to the methodology employed or the effort of the sampling. The consultants merely say they deem the data sufficient. This makes the stream fish assemblage section of the EIS difficult to evaluate and such a problem is evident in most EIS documents we see containing aquatic environments.
- Page 74 - Table 16 under Mitigation for Loss of Aquatic Habitat: I agree that the planned stream habitat improvements will provide enhanced water quality and habitat for stream fishes. However, the significant stream alterations that will occur between the Oxford Road and CN rail line will likely displace the fishes currently inhabiting the stream. Is there or will there be sufficient connectivity and fish upstream of the site to repopulate the altered stream sections? Furthermore, do the upstream sections of Mud Creek possess the diversity of fishes to maintain the biodiversity of the remediated stream section?
- Page 75 - Table 16 under Mitigation for Sedimentation: The listing of the warm water fish timing window is reversed (July 1 to March 31) making it appear as if the timing window is much larger. It dates should read: March 31 – July 1.
- Page 77 under Terrestrial Habitat and Communities Construction Mitigation: There are contradictory statement being made when the consultants say "Re-vegetate and restore disturbed areas with native vegetation immediately after construction or for periods of inactivity. Use of native, non-invasive species and complementary vegetation in all open spaces created". They say that native species should be used when restoring disturbed areas, but then say non-natives can be used in open spaces created. This is a confusing switch because the restoration or modification of a natural area should not result in the introduction of a non-native species. Instead, it should be an opportunity to enhance native vegetation communities. I recommend the statement be altered to say that native species should be used in all replanting activities.
- For the adaptive monitoring plan, the consultants list several areas to monitor post construction. Though they acknowledge this is not an exhaustive list, I think an incredibly important aspect of the monitoring should be the recolonization and use of

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remediated/modified stream reaches by fish and benthic macroinvertebrate communities. The aquatic environment will be the major disturbed area and should be intensively monitored. Aquatic communities are often forgotten about in environmental impact studies and, especially, during post-construction monitoring studies. Also, strong post-construction monitoring of the stream will help provide the City of London with information for any future stream restoration efforts.

- Survey for migratory birds in spring and fall appear not to be conducted. This should be included in the surveys for May and September.

Comments for benthic survey - Mud Creek EIS

Lauren Des Marteaux, August 2016

1. The EMG requires a 'benthic survey', timing recommendation for 'wetland species' is summer (mid-July/early August). Are benthic invertebrates are considered 'wetland species' in the EMG? If so, the EIS 'benthic invertebrate collection' was completed in the fall on October 17, rather than in summer. Note there can be different assemblages of invertebrates at different times of year

2. Were benthic survey stations chosen haphazardly?

3. Hilsenhoff recommends sampling at least 100 arthropods for the Biotic Index (likely to increase accuracy), but the calculation is a ratio and therefore having fewer than 100 arthropods does not make the index calculated for station 4 'invalid'.

4. The Biotic Index values in the 1987 Hilsenhoff article (below) do not match this EIS. According to the table, station 2 is 'very poor' (BI=9.88), stations 1 and 3 are 'poor', and station 4 is 'fairly poor'. I'm not sure that this would change the conclusions, but should still be reported accurately.

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Table 1. Evaluation of water quality using biotic index values of samples collected in March, April, May, September, and early October.

Biotic Index	Water Quality	Degree of Organic Pollution
0.00–3.50	Excellent	No apparent organic pollution
3.51–4.50	Very Good	Possible slight organic pollution
4.51–5.50	Good	Some organic pollution
5.51–6.50	Fair	Fairly significant organic pollution
6.51–7.50	Fairly Poor	Significant organic pollution
7.51–8.50	Poor	Very significant organic pollution
8.51–10.00	Very Poor	Severe organic pollution

RIVERBEND SOUTH Phase 2 Environmental Management Plan (EMP)

Dated April 2016, provided to EEPAC July 21, 2016

Reviewers: S. Levin, J. Stinziano

PREAMBLE

EEPAC continues to be concerned about the generalities included in the proposed monitoring sections of this and similar documents. The city must provide a clear template to developers so that specifics are included. Specifics should include when the monitoring period starts based on the construction period (beginning? End? 70% completion of units?), that reporting should specify which member of “the City” gets reports (EEPAC recommends the City Ecologist and Development Services), and what is being monitored (expected outcomes) and what action will be taken by the proponent if monitoring shows that the expected outcomes are not being achieved.

EEPAC also points out that Figure 3a and 3b seem to show buffers that are wider than those included in the text on page 6 and 7. This can be misleading and should be reviewed and corrected.

The intent of an EMP is to avoid impacts of the proposed development on the Natural Heritage System and mitigate those that cannot be avoided. The first paragraph should be reflect this and the work of the Plan should be avoidance first.

AREAS OF AGREEMENT

EEPAC supports the recommendations #1 and #2 on page 5 regarding amendments to the City’s Official Plan. EEPAC also adds the following:

Recommendation 1: The London Plan be revised to reflect the changes in delineation recommended in the EMP.

While generally supportive of Recommendation #5 on page 12 of the EMP, EEPAC is surprised that a “Buffer Management Plan” is not part of this document.

Recommendation 2: The Buffer Management Plan recommended on page 12 of the EMP must be completed before approval to develop is given. Any such plan must be approved by a City Ecologist.

In the Construction Mitigation Measures starting on page 14, EEPAC is generally supportive. We also recommend:

Recommendation 3: The proposed Construction Mitigation Plan (#7) be **approved by a City Ecologist** and the approved plan **must** (not should as stated in #8) be included in contract drawings for the development of the site.

Recommendation 4: An onsite ecologist with the power to stop work be on site at all times where work near to the buffers and ESA are taking place. When not on site, a number to contact the ecologist be posted prominently at the construction site.

OTHER RECOMMENDATIONS OF EEPAC

TRAIL MANAGEMENT AND SIGNAGE

Recommendation 4: Trails should be signed before development proceeds. Otherwise, people will follow desire lines or the previous trampling creating habits difficult to change.

Recommendation 5: The boundary between the buffer/ESA be fenced with no gates and signed with the following: “Sensitive plants grow by the inch and die by the foot. Please do not enter this environmentally significant area here.”

Recommendation 6: No multi-use trails should be included in the buffer or the ESA.

TREE RETENTION IN BACK YARDS

EEPAC did not support tree retention in back yards, rather, trees worth retention should be in the buffer or the ESA. There is no City of London tree by law to protect these trees.

Recommendation 7: All new residents (homeowners and renters) receive the required developer created Homeowner Manual. The Manual must include information on why there are fences with no gates and why the homeowner should not gate the fence; that pools must not drain to the buffer or the ESA or woodland, that lawn chemicals with nitrates are harmful to the natural environment; a species list of recommended and plants to avoid, and why lighting is limited or full cut off.

Recommendation 8: The developer or builders agree to send the City’s “Living with Natural Areas” booklet to all new owners (at a minimum, those abutting the buffers/ESA) 3 to 6 months after new owners have moved in.

Recommendation 9: Either homeowners whose lots have trees to be retained be provided a special insert in the Homeowner Manual as to why they have a retained tree, or the City’s “Wildlife Tree” sign be placed on all retained trees.

Recommendation 10: Homeowners whose lots are closed to the constructed wetland be provided with a special insert in the Homeowner Manual regarding the constructed wetland and a recommendation to report wildlife sightings to the City Ecologist.

BUFFER ZONE RATIONALE (section 2.2.2, page 6 of EMP)

EEPAC is not in agreement with the treatment of the “bay” area. This area forms part of the ESA (as per the City’s “Boundary Delineation Guidelines”). However, the buffer for the ESA in this location is minimal (2 m). It is specious to say that the development limit is 40 and 50 meters from the original ESA boundary. The original ESA boundary should be irrelevant – it is the present boundary that is relevant.

Recommendation 6: A buffer width similar to the other buffer widths should be provided. The appropriate width should be based on the proposed restoration of the bay.

EEPAC also notes the in Map 2, this area seems to be less than 2 m when compared to Buffer Management Zone 3.

Recommendation 7: EEPAC disagrees with recommendation 3 on page 7 of the EMP as trails should not be in buffers. If the EMP recommends plantings in the buffer, having trails in the buffer will result in trampling.

Recommendation 8: EEPAC supports the wider buffers recommended by the UTRCA in its letter of September 6, 2011.

Further support comes from work by Wendy McWilliam who has studied this topic extensively. Wendy McWilliam, Paul Eagles, Mark Seasons, and Robert Brown, *Assessing the Degradation Effects of Local Residents on Urban Forests in Ontario, Canada*, **Arboriculture & Urban Forestry** 2010. 36(6): 253-260

“In terms of areal extent, most impacts occur within a mean distance of 18 m of forest borders and cover a mean of 25% to 50% of the first 20 m. This finding is confirmed by another study that found a mean extent of encroachment of 16 m; however, encroachment can be found up to 50 m of forest borders (McWilliam, W.J., P. Eagles, M. Seasons, and R. Brown. 2010. *The housing/forest interface: testing structural approaches for protecting suburban natural systems following development*. **Urban Forestry and Urban Greening** 9:149–159.).

BUFFER ZONE MANAGEMENT (Section 2.2.3, page 7 of the EMP)**CREATED WETLAND**

EEPAC is not convinced of the benefits of creating a wetland from a small ephemeral pond. If the pond only retains water for a few weeks a year, 50 cm elevation change is likely insufficient. Furthermore, changing the ephemeral pond to a wetland will alter habitat dramatically and could adversely affect species that depend on such ephemeral habitats. It is not mentioned in the EMP what species are currently present, which species are anticipated or if species are to be introduced. The suggestion that a clay liner may be required to retain water points to the soil conditions – which in this area are generally sandy – that are unlikely to support a wetland.

As EEPAC wrote in 2014, there is really not much point in having a pool (Management Zone 1) isolated from any connecting corridors. In addition, without any wetland corridors to allow wetland species (amphibians) to migrate as hydrological conditions evolve through seasonal cycles, the proposed pond is unlikely to succeed for amphibians. No critical function zone for such species is provided in the EIS (absolutely important for species whose life cycle includes water and land). There isn't a design water budget- so no one will have any idea what will happen post development. If this feature is agreed to by the City, there should first be a target wetland water balance, and an explanation of how the wetland would operate within those specifications.

Recommendation 9: If this pond is constructed, the monitoring period for it be extended by two years from the proposed 3 to 5. There should first be a target wetland water balance, and an explanation of how the wetland would operate within those specifications. There should also be clear outcome measures for the pond included in this EMP before acceptance of the Plan.

BUFFER MANAGEMENT ZONE 3: Meadow Enhancement (section 2.2.3.3, page 10)

EEPAC notes that only one of the species it recommended in 2014 is included in this list (*Panicum virgatum*). EEPAC repeats its comments and recommendations below. EEPAC also finds it puzzling that the EMP recommends placing a meadow between two forested areas as shown in Figure 2. What is the rationale?

From EEPAC's 2014 comments on the EIS

The key piece of information to point out, with any mitigation/restoration of Lepidopteran habitat, is the absolute necessity of the host plants for the caterpillar. All caterpillars are specialists to some degree according to *Butterflies of Canada* (an important source). For example, for this species, it states "*Panicum* spp., *Digitaria* spp., and *Poa* spp. Therefore the "butterfly plantings" need to incorporate **the native food plants of the caterpillars, i.e., native species of *Panicum*, *Digitaria*, and *Poa* (*Poa palustris*, *Poa glauca*, *Poa alsodes*)**. There are definitely native species of *Panicum*, e.g.,

Panicum virgatum, and according to USDA Plants Database, *Digitaria cognata* (but not *filiformis*) and definitely NOT *Poa pratensis*, as this is native to Europe. The butterfly plantings need to incorporate the preferred nectar plants of the adults as well, which, in *Butterflies of Canada*, it states members of the pea family (family Fabaceae).

A grassy area created to replace the meadow that will be taken out would be desirable, not just for the Tawny-edged Skipper but also for other meadow species.

- The approved native plantings of buffers and butterfly habitat be monitored (see page 42 of the EIS) at the proponent's cost for 5 years from the date of the first housing unit being built. Sufficient security should be held back so a source of funding is available for any new plantings that may be required. The monitoring program must include clear outcome measures and details as to who conducts the monitoring. The City Ecologist should do site visits to confirm outcomes. It should be a condition of approval (see EIS page 43).
- The native plantings for the butterfly habitat must include the species list above for the regionally rare Tawney Skipper.

MONITORING (Section 2.5, page 15)

EEPAC points out that the monitoring period, reporting, what is being monitored, and the actions taken if there are issues, is still not completely clear in this EMP.

For example - when the three year monitoring period begins. Page 15 says "Annual reporting of monitoring results to the City of London for a period of 3 years following construction."

Does this mean the completion of construction of the housing? Of the infrastructure? If the former, this will be too late as most of the units will be occupied and the subdivision assumed by the City by that point. This is particularly significant when the bottom of the page points out that the three proposed amphibian surveys will be done in the spring of each monitoring year. While there should already be baseline data on amphibians from the EA/EIS (pre-construction), will the first survey be done in the first spring after construction starts?

Recommendation 10: The start date of the three year monitoring period be based on the recommendation of a City Ecologist in consultation with the proponent based on the forecasted period from ground breaking to assumption. This information should be in chart or table form and form part of the conditions of approval.

Buffer zone and vegetation monitoring should have similar data to be recorded. For example, it is not sufficient to monitor planted trees and shrubs in the buffer for evidence of browsing, rodent damage and mortality.

Recommendation 11: The buffer zone monitoring include monitoring of incursions and trampling by residents.

Recommendation: There be a more detailed monitoring plan developed that includes the timing of plantings and the expected condition in each reporting cycle, subject to the approval of a City Ecologist.

While EEPAC is supportive of the bird and amphibian surveys to be done as part of the monitoring (page 15), EEPAC points out that the *Marsh Monitoring Protocols* not only state time periods for monitoring but also weather conditions including temperature and wind velocity.

Recommendation 12: The last line on page 15 is unnecessary.

Recommendation 13: All monitoring reports be provided to a City Ecologist and Development Services.

Wildlife Movement Surveys (page 16) between the Significant Woodlot and the Woods will be interesting but EEPAC is not sure how useful they will be without pre-development baseline data. There has been development in the area prior to the Riverbend South application.

EEPAC is also curious to know what action will be taken if the cameras detect that the majority of wildlife are cats on their way to hunt birds?

While EEPAC is in agreement with Recommendation 9 on page 16, and that it should be a condition of approval (whether it is development approval or site plan approval, we don't take a position) we wonder why the detailed Environmental Management Program was not submitted at this time.

Recommendation 14: The proposed detailed EMP be subject to approval by a City Ecologist.

Recommendation 15: EEPAC be given an opportunity to comment on the draft detailed EMP.

Recommendation 16: EEPAC be provided with the baseline monitoring component noted at the end of page 16.

CONSTRUCTION IMPACTS

The report says nothing of mitigating the potential sunscald or wind-throw, it says only that this is a potential result of removing the plantation vegetation. If the sunscald/windthrow would penetrate the ESA canopy, then removal of the plantation should not take place as there is no plan to mitigate it.

Recommendation 17: Mitigation measures, such as those black curtains used to contain construction dust, should be placed along the boundary of the plantation removal, and left there for ~5 years to reduce/prevent sunscald/windthrow, and be removed once the buffer zone has grown enough to serve that function.

Previous capital projects (some of which are in process) – **new suggestions highlighted, questions in yellow**

NEW ASKS

Development of a monitoring program to ensure that any informal trails that appear are identified and closed ASAP. This is included in the TVP EA and should be used in any ESA. What will it take to develop such a program and what will be the costs of implementation?

ESA signage – present signs at entrances are OK. What about explanatory signs within the ESAs to explain why the area is significant? QR codes don't seem to work.

Signage should be installed in ESAs to explain why an ESA is an ESA. Also helpful would be signage to encourage people to stay on trails. Example from Cape Breton Highlands National Park:

**Roots die, plants die, animals disappear
Respect and protect this area
Do your part, stay on the trail**

Conservation Master Plans

(note there hasn't been a CMP for Warbler Woods or an update to Killaly or Lower Dingman, despite development pressure there). **Are there any scheduled/planned in 10 yr outlook? If none, what is the plan to deal with Riverbend South development adjacent to Warbler Woods? The development adjacent to the Lower Dingman at Pack and Col Talbot?**

Please clarify the amounts budgeted and still available to implement upcoming recommendations of Medway and Meadowlily CMPs (was told \$200K as of 2015) and available funds for Bog, WMP, and Coves.

Invasive Species Management

Buckthorn in the Bog

Buckthorn and Dog Strangling Vine in Killaly (2013, 2015)

Aquatic invasives in WMP (water lettuce and water hyacinth) – listed in 2013

Tree-azin injections continuing (done once every two years 2012 2014 2016)

Coves (buckthorn, knotweed) – 2015

What about buckthorn in Medway – south section? Knotweed at EPW?

Medway (north section – buckthorn and frag) – 2015

Medway (south section – SAR and goutweed and frag – 2015) also Goutweed at Longbow entrance addressed in 2016.

Private funding to UTRCA for vinca behind Precious Blood – restoration to come

Warbler – buckthorn, English ivy, Barberry (2015)

Meadowlily and Kains – monitor using Early Detection Rapid Response approach (2015) – success??

Kain's - buckthorn, knotweed, goutweed (2016)

WMP – frag, buckthorn, black locust, knotweed (2016)

Medway – frag, 3rd yr of SAR/Goutweed/Knotweed/restoration project (2016)

Meadowlily – frag (2016)

All ESAs monitor using EDRR and touch ups of all 2014/15 work under operating budget – 2016

Invasive Species Management Strategy city wide (James).

Has there been any discussion with the landowner (Drewlo) to deal with the buckthorn forest on his land adjacent to the Bog? – raised in 2015 and at EEPAC

Trail related works

Boardwalks, railings, bioengineering (suggestions appreciated. There should be some bioengineering on the hill where the new boardwalk and restored staircase are in Medway)

What is status of boardwalk design SE of Naomee Park? – Bog (2013)

Shrub planting and improved barrier at trail closed location (turtle nesting site) – from 2013. Not done?

Bike racks at ESA entrances (implemented from 2014 project list)

Trail for Riverbend South to Warbler (2016) and Boardwalk repairs in southern portion (2016)

Coves implementation of CMP (2015, 2016)

All ESAs continue un-official trail closures with Warbler as a priority (2015 – what happened? Did it work?)

Assess all unmanaged trails in newly acquired portion of Meadowlily ESA. Manage a minimal trail system that is anticipated to follow a route already established by the Thames Valley Trail Association (2012) – what happened?

Encroachments

What can be done from capital for this? (2014 was supposed to have assistance with removal and restoration at Killaly and Warbler – Benson Cres?)

What about a by law to prevent new owners from putting gates in fences?

Finalize the ESA Encroachment Strategy (2012) – status?

EEPAC/NL did receive a staff response to its suggestions for 2015 ESA Capital Budget List:

Trail closure, remove pavement and restore lands in new ESA (Pottersburg) when new pathway and rail crossing is installed.

STAFF: Agree and this work is incorporated in project scope.

When is this project scheduled?

Unmanaged trails in Killaly should be closed.

STAFF: Agree and will review as UTRCA and staff time permits. What happened?

Install additional fencing perpendicular to existing fencing at Wonderland Road entrance to Snake Creek to reduce by passes to bike gate at this location.

STAFF: Agree and will implement in 2015 (Was not done). There is also an unmanaged access to Snake Creek from the west side of Wonderland under the bridge. Jeff Bruin alerted and passed along to Linda McDougall

Trail to Saunders Cabin and South Side of Saunders Pond are heavy clay and muddy when it rains. Is this part of the Canada 150 funding?

Better trail marking/signage for Sifton Bog

STAFF: Agree and will review in light of Management Zone Map (status?)

Budget for work in converting Euston Park to Euston Meadows as part of ESA in order to protect SAR and its habitat was high priority in CMP for Coves.

STAFF: "...we will work to improve and protect the habitat, naturalization opportunities, signage and ensure trails are outside of the NZ zones. Status?

We noticed the upswing in purple loosestrife and staff noted they and UTRCA will be working with Donna Mackenzie of Ontario beetles

James suggested we look at doable or practical ideas that could be adopted into policy or practice and make an impact. Examples of products of advisory ctes has been the Dark Sky initiative and the Urban Wildlife Conflict policy.

LONG TERM

1. As part of the update of the Environmental Management Guidelines:
 - a. Design standards
 - snake hibernacula - Is there something other than the Toronto Zoo's? Long Point?
 - bat boxes
 - barn swallow galleries
 - artificial nesting cavities/roosting
 - Aquatic habitat data collection for the EMG or CMPs
 - b. Restoration Standards
 - wetlands
 - microbes in soil and muck
2. Communicating why it is important that cats and dogs are controlled (cat indoors, dog on leash)
 - Which media to use? City web site and social media? Print material for shelters/stores/vets?
 - Pet stores, animal shelters, vets
 - Work with AWAC on this

MEDIUM TERM

3. Can EEPAC do monitoring or get reports on implementation of monitoring as per development agreements?
4. how to make your yard friendly to birds, amphibians and reptiles (similar to the Pollinator garden idea)

SHORT TERM

5. Implementation of the Invasive Species Act {Peter, Nimalka}
 - do other cities encourage garden centres not to sell invasive species? or even ban them?
 - could we find out what is being sold in and around London?
 - Communicate the benefits of planting native and labelling plants as native.

Once the Regulations are in place, the City could invite garden centres to an information and education session.

Start from scratch.

How to reduce the amount sold in the City?

Education

- standards for signage to encourage better "behaviour" in ESAs

- how to avoid invasive species

Natural dog parks (e.g. Saskatoon, Pinery dog beach)

How to get people to keep their cats indoors?

Wetland restoration standards

VAUXHALL-POTTERSBERG EA: EEPAC REVIEW OF DRAFT ENVIRONMENTAL IMPACT STUDY

Document dated August, 2016

Reviewers: Sandy Levin, Lauren Des Marteaux
September, 2016

INTRODUCTION

In addition to the recommendations contained in the document, EEPAC provides the following recommendations.

THEME #1 – Protecting Cat Tail Marsh

EEPAC notes that on Figure 3, this Marsh is about 30 metres from the location of the pipe pathway. It is unclear how wide the construction corridor will be or if the directional drilling section includes the area closest to the marsh. According to Appendix E, there are no *Phragmites* or loosestrife in this marsh.

Recommendation 1: The marsh should be protected by a 30 m buffer from construction because it is a regionally rare vegetation community. Only 1.5% of all landscapes noted by Bergsman and DeYoung in 2006 were MAS.

THEME #2 – Chimney Swift

The report notes Swifts foraging in the area (page 16). It seems likely that barn swallows are nesting within 200 m of the flyover observation sites, if they typically forage within 200 m of a nest, we would expect there is some suitable nesting habitat within the study area, but perhaps not observed from the chosen stations. Given the amount of city owned land in the area, consideration be given to the following recommendations.

Recommendation 2: Identify and protect cavity trees in the area.

Recommendation 3: Construct a swift tower and provide in the Environmental Enhancement Plan funds for recordings to attract swifts (see Appendix)

Recommendation 4: Construct barn swallow habitat on city lands with appropriate educational signage.

THEME #3 - Environmental Management Plan and Enhancement Plan

Pg 36: EEPAC would be cautious about assuming net positive impact if trees will be disturbed/removed. It could be positive long-term, but this will depend on the success of mitigation.

Pg 38: “The preferred pathway alignment will avoided wooded areas where possible” - Can you be more specific? The buffer width should be specified in the detail design.

Pg 39: Based on the known pathway alignment, any trees predicted to be negatively affected should be replaced (or compensated by planting somewhere else in the City owned lands) as soon as possible to allow for some maturation time (saplings do not provide the same habitat as mature trees).

Recommendation 5: A City Ecologist review and approve these Plans as it is noted in the document that they are proposed to be prepared only at the detail design phase.

THEME #4 – Official Plan Changes

It appears that the study has reviewed sections of the Thames River corridor that were previously unevaluated patches (see study Appendix, copy of Schedule B-1 of the City's Official Plan. It would appear that the EIS did not evaluate them for significance but the work done by the Consultant would, on the face of it, confirm that the sections north of the river are Significant.

Recommendation 6: The City initiate an Official Plan amendment to Schedule B-1 to show the previous unevaluated lands as Significant.

THEME #5 – Land Acquisition

Although the City owns large parts of the study area and lands adjacent, there are opportunities to protect features that might not be otherwise protected such as the Cat-tail Marsh and the butternut tree on private land.

Recommendation 7: The City acquire lands adjacent to other city land identified in the study as being Significant.

Theme #6 – Recommended Additional Survey Work

On page 20, the report notes that the SWH criteria for Turtle Wintering Area was not assessed.

Recommendation 6: Conduct a turtle wintering survey early in the spring of 2017 (March-April) if any construction is to take place near to potential SWH for Turtle Wintering Areas.

On page 23 the SAR butterfly West Virginia White is mentioned: "This species is found only in early spring." Unless it is migratory, the caterpillars have to live somewhere.

Recommendation 7: Conduct a search of larval host plants for the West Virginia White (SAR species) after spring.

EEPAC notes there is no discussion of other (non-butterfly) SAR insects (e.g. there are a number of beetles and odonates) Without the information from the OMNRF on SAR records (see page 25 which notes that as of August 2016, the consultant had not received SAR records from the Ministry), EEPAC feels the survey work is incomplete.

Recommendation 8: Conduct surveys for SAR beetles and odonates.
<https://www.ontario.ca/environment-and-energy/species-risk-type?name=Insects>

APPENDIX

Zanchetta, C., D. C. Tozer, T. M. Fitzgerald, K. Richardson, and D. Badzinski. 2014. Tree cavity use by Chimney Swifts: implications for forestry and population recovery. *Avian Conservation and Ecology* 9(2): 1.
<http://dx.doi.org/10.5751/ACE-00677-090201>

ABSTRACT

The Chimney Swift (*Chaetura pelagica*) is an aerial insectivore and a cavity-nesting/roosting specialist designated as threatened in several jurisdictions. As the occurrence of suitable chimneys declines, Chimney Swifts may increasingly nest and roost in tree cavities. It is therefore important to identify characteristics of suitable nest or roost trees and assess their frequency of occurrence. We reviewed 59 historic and modern records of trees used by Chimney Swifts to understand characteristics of suitable nest or roost trees. Chimney Swifts used at least 13 different deciduous and coniferous tree species. All of the trees were greater than 0.5 m diameter at breast height (DBH) and were described as hollow or having cavities. Nest or roost tree height was 12.7 ± 7.0 m (mean \pm SD; range: 3.6–28.0 m; n = 25) and DBH was $1.0 \text{ m} \pm 0.5$ m (range 0.5–2.1 m; n = 21). According to our description of used trees, the number of suitably hollow Chimney Swift nest or roost trees may be two to three times higher, although still rare, in most unlogged compared to logged hardwood forests. Whether the current total supply of suitable nest or roost trees is sufficient to carry the anticipated increase in use by Chimney Swifts as chimney habitat is modified or deteriorates is unknown. Monitoring the frequency of use of tree cavities by nesting and roosting Chimney Swifts over time, and more robustly quantifying the availability of suitable tree cavities in different forest types for nesting and roosting Chimney Swifts, particularly in unlogged versus logged forests, are fruitful areas for future research.

CHIMNEY SWIFT TOWERS

There have generally been poor results from the artificial Chimney Swift towers built in North America. However, it appears that to have any success, birds must be lured to the tower by playing swift calls from a recording.

Trails Advisory Group (TAG) – Minutes

Onsite Meeting: Westminster Ponds/Pond Mills ESA - Tourism Building / W.E. Saunders / Dearness – Canada 150 Grant

Date: September 8, 2016 5:00pm - 6:30pm

Attendees: Horace Krueger – WMP Adopt an ESA, Dave Potten - TVTA, Anita Caveney - Nature London, Lauren Des Marteaux - EEPAC, Steve Beasley – London Fire Department, Dan Jones - UTRCA, Andrew Macpherson - E&PP, Jaclyn Ramsay – Urban Forestry, Linda McDougall - E&PP, Philip McLeod – Documentary Filmmaker, Allan Arthur - St. Williams Nursery and Ecology Centre

Minutes: Linda McDougall

Linda circulated hard copies of the Management Zone (MZ) map, identifying the existing trail locations and reviewed the following points with TAG:

- The City was awarded with a Canada 150 Grant of nearly \$100,000 to improve the accessibility of the trails from the tourism building to the W.E. Saunders Cabin site, and implement the Conservation Master Plan (CMP) accessible trail to the Dearness Home with trail work expected to wrap up in 2017.
- Ben Gibson, Manager of Dearness home met onsite with staff previously, has expressed strong support for the project and with the location for the trail connection to their lands identified on the circulated TAG maps.
- The trail connection to Dearness Home does appear on Map 16 as trail 25 in the CMP and we are engaging TAG, along with Fire and Dearness staff in the process as per Recommendation 68 in the CMP.
- The Westminster Ponds/Pond Mills Trail Review for CMP Trail 25 was circulated to TAG following the updated Council approved Guidelines for Management Zones and Trails in ESAs 2016 and ecological data in the Ecological Inventory and Management Zone Report by NSE, 2015.
- The TAG route traverses Natural Environment and Nature Reserve Zones noting the entire area is subject to an intensive restoration project to remove dead ash, and buckthorn and other invasives while retaining as many native trees as possible (unfortunately very few). This provides us with a great opportunity for trail placement as the vegetation will regenerate around the new and relocated trails.

Comments during the Walk

- Anita described the significance of the W.E. Saunders cabin site and Saunders himself who was an avid naturalist and the founding president of the ornithological section of the Entomological Society that later became

Mcllwraith Field Naturalists / Nature London. She shared the details of the dedication ceremony photo depicted on the kiosk sign and agreed that Nature London would be happy to provide input for staff on updating the existing kiosk signage and signage at the cabin site.

- Anita noted that the cabin site used to be more open, and less heavily vegetated, with sweeping views to the pond, and TAG agreed that the restoration should strive to re-create and maintain these historic vistas and trail experience through native meadow plantings for example.
- Linda noted that a member of TAG contacted staff in advance of the walk to suggest introducing a section of trail that might be a bit closer to Saunders pond, thereby providing users with a view of the pond. Hard copies of Option B and C with trails closer to the pond were circulated for TAG's consideration (with Option A previously circulated to TAG as the current trail alignment with a connection to Dearness via the Saunders cabin site).
- Linda noted that there is a large inventory of boardwalks, bridges and stairs in our ESAs which are costly to maintain. Clay soils on these trails stay very wet and many members of the public have been asking for trail upgrades here for years. Woodchips are likely not suitable as they may not keep trails dry. Linda suggested TAG consider granular trails in this location to improve accessibility, keep folks on the trail and to limit the length of boardwalks to be maintained. This is in keeping with the Trail Guidelines that support the use of granular materials in poorly drained situations.
- Andrew noted that the grant is primarily for accessible boardwalks and accessible trails and while we must complete the restoration to complete the project the grant is primarily intended to improve accessibility in this high profile location. Further he identified that granular trails are a quarter of the cost of boardwalk to install and require much less maintenance.
- Lauren asked if drainage would work with granular trails and Andrew advised it would and that small culverts or boardwalks may be necessary in a few spots.
- Lauren asked if there would be budget to manage the buckthorn long term in the restoration area and Linda advised that it would as this will be a priority project and become a showcase for the City's continued commitment and leadership in invasive species control and restoration in ESAs in this high profile location.
- Lauren inquired about the timeline for the project and Linda noted the trail construction will wrap up in 2017 and the restoration will be ongoing.
- Allan noted it could take years to kill all the buckthorn re-growth as the seed bank and buckthorn is so dense and very few retainable, native trees are present here. If we re-plant too soon we could be "throwing good money after bad". Allan said that clearing of buckthorn will likely begin this winter, and new buckthorn shoots will be hit with Garlon herbicide in the spring.
- TAG discussed the options, reviewed the alignments and reached consensus that Option C (attached) be selected as the preferred trail alignment with accessible, granular surface trails and an accessible

boardwalk extending from the existing asphalt trail from the tourism building to the W.E. Saunders cabin site.

Next Steps













- Planning for trail construction will proceed based on TAG's consensus on Option C. A walk will be arranged in 2017 to microsite Option C after the restoration process has begun.
- Fire and Dearness staff will continue to be engaged in the project and are invited to the September 29th Community Meeting.
- Jaclyn Ramsay will be coordinating project signage in cooperation with UTRCA. We are happy to take Nature London up on their kind offer of assistance with content regarding the W.E. Saunders cabin site and kiosk signage.
- Further details about the associated ecological restoration project and other ESA updates will be presented at the Westminster Ponds / Pond Mills ESA Community Update Meeting on Thursday, September 29th, 7:00 PM at the Western Ontario Fish & Game Club and draft restoration plans will be circulated to EEPAC and TFAC.

Trails Advisory Group (TAG) Option C Preferred Alignment

Westminster Ponds/Pond Mills ESA - Tourism Building to Saunders Cabin to Dearness Home



Legend

-  Proposed Accessible Granular Trail
-  Proposed Accessible Boardwalk
-  Existing Trail to be Removed
-  Existing Trail to Remain
-  Nature Reserve Zone
-  Natural Environment Zone
-  EWPE - Eastern Wood-Pewee (Special Concern) North South Environmental 2015
-  Accessible Connections on Dearness Home Grounds
-  Ecological Restoration Area (approximate)
-  Contours
-  W.E. Saunders Cabin Site
-  Parking

