

**4TH REPORT OF THE  
ENVIRONMENTAL AND ECOLOGICAL PLANNING ADVISORY COMMITTEE**

Meeting held on March 21, 2013, commencing at 5:06 p.m.

PRESENT: D. Sheppard (Chair), S. Levin, Dr. W.R. Maddeford, L. Nattagh, C. Peterson, S. Sanford, G. Sass, G. Vilks and Dr. N. Zitani and H. Lysynski (Committee Secretary).

ALSO PRESENT: B. Bergsma, C. Creighton, L. McDougall and D. MacRae.

REGRETS: K. Delaney and R. Gupta.

**I YOUR COMMITTEE RECOMMENDS:**

700541 Ontario  
Limited – 1300  
Fanshawe Park  
Road East

1. (8) That, the following actions be taken with respect to the Conditions of Draft Approval included with the Notice dated February 15, 2013, from N. McKee, Senior Planner, with respect to an application submitted by 700541 Ontario Limited, relating to the property located at 1300 Fanshawe Park Road East:
  - a) clauses 30, 31 and 32 should **BE RETAINED**;
  - b) the last line of clause 33 should **BE REMOVED**;
  - c) the final boundaries of the natural hazard lands **BE DETERMINED**;
  - d) all natural heritage issues **BE RESOLVED** prior to the approval of this application;
  - e) the Stoney Creek Master Drainage Plan, the Stoney Creek Stormwater Management Class Environmental Assessment, and any applications for the construction of the Stoney Creek On-line Flood Control Facility that may be outstanding **BE COMPLETED** prior to the approval of this application; and,
  - f) the Environmental and Ecological Planning Advisory Committee **BE CIRCULATED** on the Environmental Impact Statement for the proposed stormwater management pond.

ESA Committee  
Meeting  
Minutes

2. (9) That the Civic Administration **BE REQUESTED** to provide the following to the Environmental and Ecological Planning Advisory Committee:
  - a) the encroachment inventory for the Kilally ESA;
  - b) a presentation with respect to encroachments - actions that can be taken to ensure a higher enforcement priority, the types and how encroachments are addressed;
  - c) the Restoration Protocols prepared by J. Bruin, Landscape Architect/Parks Planner;
  - d) a presentation with respect to the Management of Wildlife Trees in ESAs; and,
  - e) prepare a summary on the deer studies prepared by Dr. Bazely; and,
  - f) a copy of the Nature London template forms.

**II YOUR COMMITTEE REPORTS:**

Transportation  
Environmental  
Assessments

3. That the Environmental and Ecological Planning Advisory Committee (EEPAC) received the attached presentation from D. MacRae, Division Manager, Transportation Planning and Design, with respect to the Transportation Environmental Assessments that have been undertaken for the Veterans Memorial Parkway (from the south extension of the Veterans Memorial Parkway to Wilton Grove Road) and Sunningdale Road (from Wonderland Road to Adelaide Street North). The EEPAC also received copies of the Fisheries and Terrestrial reports

prepared for the Veterans Memorial Parkway and the report prepared for Sunningdale Road. The EEPAC referred the Fisheries and Terrestrial reports to its Working Group to review and report back at the next EEPAC meeting.

Utility Overlay –  
Draft Medway  
Valley Heritage  
Forest ESA  
Trail Master  
Planning Study

4. (1) That the Environmental and Ecological Planning Advisory Committee (EEPAC) received the 3rd Report of the EEPAC from its meeting held on February 21, 2013; it being noted that the following were requested, with respect to clause 7 of the Report:

- a) how the environmental assessment requirements will be addressed;
- b) the requirements for the Medway Sewer Project;
- c) what has been completed on the Medway Sewer Project; and,
- d) any compensatory mitigation that may have been provided.

EIS Study  
Requirements

5. (6) That the Environmental and Ecological Planning Advisory Committee (EEPAC) heard a verbal presentation and received a draft of the Environmental Impact Study Requirements from B. Bergsma, Ecologist Planner. The EEPAC referred the EIS Requirements to its Working Group to review and report back at the next EEPAC meeting.

Bilyea Property  
– 3804 South  
Winds Drive

6. (10) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached comments, prepared by the EEPAC Working Group, with respect to the Bilyea property located at 3804 South Winds Drive, be forwarded to the Civic Administration for their review and consideration.

Old Victoria  
SWMF #2 - EIS

7. (11) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached, revised, comments, prepared by the EEPAC Working Group, with respect to the Old Victoria Stormwater Management Facility #2 Environmental Impact Study, be forwarded to the Civic Administration for their review and consideration.

Thames Village  
Joint Venture -  
EIA

8. (12) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached comments, prepared by the EEPAC Working Group, with respect to the Thames Village Joint Venture Environmental Impact Assessment Report, be forwarded to the Civic Administration for their review and consideration.

Lambeth Walk  
– 4138 and  
3924 Colonel  
Talbot Road

9. (13) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached comments, prepared by the EEPAC Working Group, with respect to Auburn Development's Lambeth Walk proposal subject land status report and scoped Environmental Impact Study relating to the properties located at 4138 and 3924 Colonel Talbot Road, be forwarded to the Civic Administration for their review and consideration.

Pottersburg  
Creek - EIS

10. (14,16) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached comments, prepared by the EEPAC Working Group, with respect to the Pottersburg Creek Environmental Impact Statement, be forwarded to the Civic Administration for their review and consideration.

11. That the Environmental and Ecological Planning Advisory Committee (EEPAC) received and noted the following:

2nd Report of  
the TFAC

(a) (2) the 2nd Report of the Trees and Forests Advisory Committee from its meeting held on February 27, 2013;

2nd and 3rd  
Reports of the  
ACE

(b) (3) the 2nd and 3rd Reports of the Advisory Committee on the Environment from its meetings held on February 6, 2013 and March 6, 2013, respectively;

2nd Report of  
the EEPAC

(c) (4) a Municipal Council resolution adopted at its meeting held on February 12, 2013, with respect to the 2nd Report of the EEPAC;

Meadowlily  
Woods  
Environmentally  
Significant  
Areas

(d) (5) the natural heritage inventory and evaluation for the Meadowlily Woods Environmentally Significant Area from B. Bergsma, Ecologist Planner; it being noted that the EEPAC expressed its appreciation to the Ecologist Planner for proceeding with the inventory and evaluation;

Trails Advisory  
Group Minutes

(e) (7) the Trails Advisory Group Minutes from its meeting held on February 26, 2013; and,

Westminster  
Ponds/ Pond  
Mills, Medway  
Valley Heritage  
Forest and  
Meadowlily  
Woods ESA  
updates

(f) (15) an update from L. MacDougall, Ecologist Planner, with respect to the Westminster Ponds/ Pond Mills, Medway Valley Heritage Forest and Meadowlily Woods Environmentally Significant Areas.


Next Meeting

12. That the Environmental and Ecological Planning Advisory Committee will hold its next meeting on April 18, 2013.

The meeting adjourned at 8:17 p.m.

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21/03/2013





**Transportation Environmental Assessments**

- Veterans Memorial Parkway South Extension
- Sunningdale Road Widening


March 21, 2013  
Presentation to EEPAC

Doug MacRae, P.Eng.  
Division Manager  
Transportation Planning & Design



**VMP South Extension**

- Hwy 401 to Wilton Grove Road
- Cooperative project with the Ministry of Transportation
- Ontario's Southern Highways Program
- EA initiated in Fall 2011
- Provincial Transportation Sched B and Municipal Class Sched C EA
- Will be filed as a provincial Transportation Environmental Study Report (TESR)



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# LONDON

## VMP South Extension – Study Area

LEGEND

- Waterbody
- Watercourse / Water Body
- Parkland / Significant Habitat
- Urban Growth Boundary
- Municipal Boundary

London CANADA

# LONDON


## VMP South Extension – Study Area

LEGEND

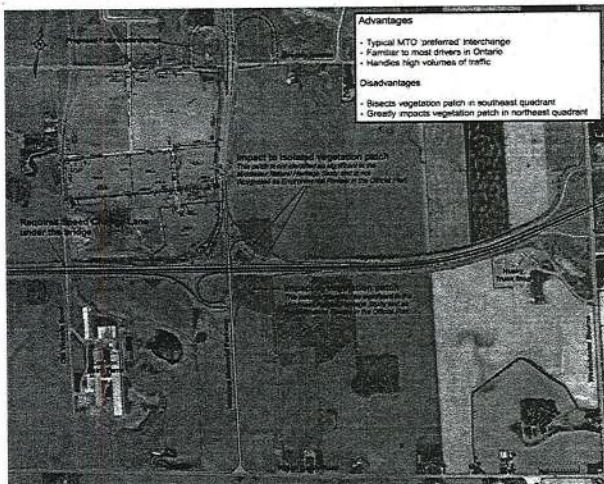
- Waterbody
- Watercourse / Water Body
- Parkland / Significant Habitat
- Urban Growth Boundary
- Municipal Boundary

London CANADA

21/03/2013



### VMP South Extension – Alternative 1



**Advantages**

- Typical MTD preferred interchange
- Familiar to most drivers in Ontario
- Handles high volumes of traffic



**Disadvantages**

- Greatly impacts vegetation patch in southeast quadrant
- Greatly impacts vegetation patch in northeast quadrant

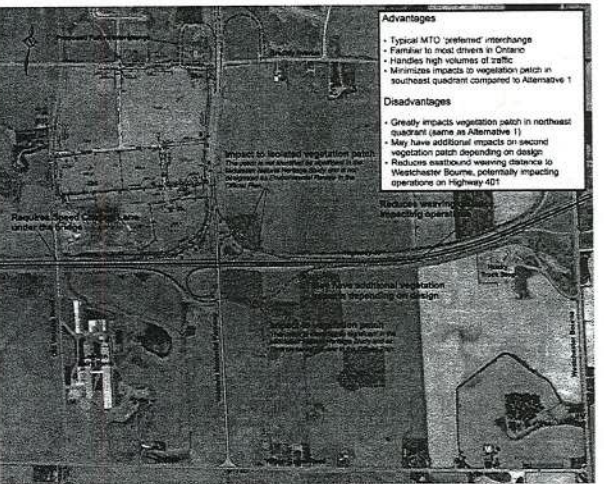
**Impact to isolated vegetation patch:**  
The area is not disturbed by overhead lines. However, future towers may affect it in the southeast and northeast quadrant of the area.

**Requires heavy construction under the bridge**

**Heavy Traffic Route**

### VMP South Extension – Alternative 2



**Advantages**

- Typical MTD preferred interchange
- Familiar to most drivers in Ontario
- Handles high volumes of traffic
- Minimizes impacts to vegetation patch in southeast quadrant compared to Alternative 1

**Disadvantages**


- Greatly impacts vegetation patch in northeast quadrant (same as Alternative 1)
- May have additional impacts on second vegetation patch depending on design
- Reduces eastbound weaving distance to Westchester Bourne, potentially impacting operations on Highway 401

**Impact to isolated vegetation patch:**  
The area is not disturbed by overhead lines. However, future towers may affect it in the southeast and northeast quadrant of the area.


**Requires heavy construction under the bridge**

**Reduces existing vegetation in southeast quadrant**


**May have additional vegetation impacts depending on design**



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### VMP South Extension – Alternative 3



**Advantages**

- Avoids impact to vegetation patch in southeast quadrant
- Layout familiar to most drivers
- A typically used interchange design with the exception of the left turn required for the eastbound on-ramp
- Handles moderate volumes of traffic

**Disadvantages**



- Requires a left turn for northbound traffic to access eastbound 401 resulting in a lower level of service at the south ramp terminal
- Greatly impacts vegetation patch in northeast quadrant

Impact to isolated vegetation patch. The patch is not isolated, as adjacent to the adjacent road network. This area is not considered an isolated vegetation patch.

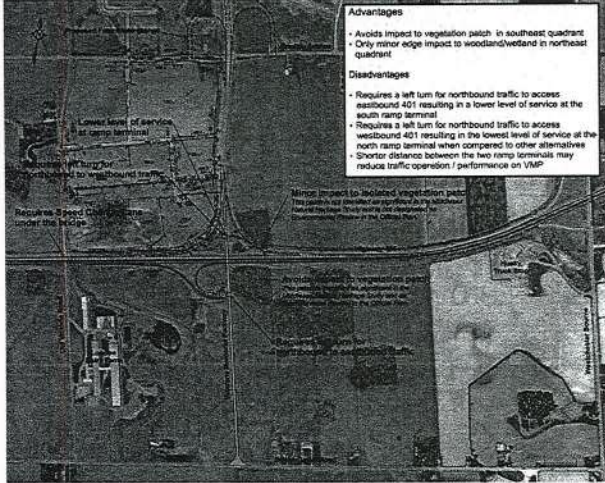
Requires Speed Change lanes under the bridge

Requires a left turn for northbound traffic to access eastbound 401

Track Bed

### VMP South Extension – Alternative 4



**Advantages**

- Avoids impact to vegetation patch in southeast quadrant
- Only minor edge impact to woodland/wetland in northeast quadrant

**Disadvantages**

- Requires a left turn for northbound traffic to access eastbound 401 resulting in a lower level of service at the south ramp terminal
- Requires a left turn for northbound traffic to access westbound 401 resulting in the lowest level of service at the north ramp terminal when compared to other alternatives
- Shorter distance between the two ramp terminals may reduce traffic operation / performance on VMP

Lower level of service at ramp terminal

Requires a left turn for northbound to westbound traffic


Requires Speed Change lanes under the bridge

Minor impact to isolated vegetation patch. The patch is not isolated as adjacent to the adjacent road network. This area is not considered an isolated vegetation patch.

Avoids impact to vegetation patch. The patch is not isolated as adjacent to the adjacent road network. This area is not considered an isolated vegetation patch.


Requires a left turn for northbound to eastbound traffic

Track Bed





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### VMP South Extension - Technically Preferred Alternative


- Extension of Veterans Memorial Parkway
- Replacement of the existing VMP Bridge on its current alignment
- Interchange improvements (Alternative 3)
- Retaining wall in the SE quadrant to minimize encroachment into the designated significant Natural Heritage System
- Realigned Crinklaw Drain to avoid a long enclosure
- Enhancement of fish habitat in the Crinklaw Drain through natural channel design
- Provision of wildlife passage opportunities at the Crinklaw Drain crossing
- Stormwater Management Measures



### VMP South Extension – Next Steps


- Receive Comments by April 21
- Finalize TESR
- Public Participation Meeting at Civic Works Committee
- 30-day Public Review Period
- MTO Implementation

*Project Information available at the Transportation Planning website, or type "Veterans Memorial Parkway South Extension" into the [www.london.ca](http://www.london.ca) Search*








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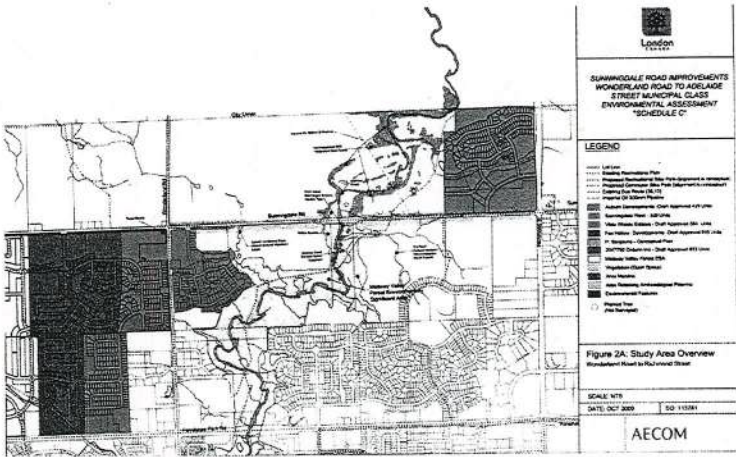


### Sunningdale Road Improvements

- Wonderland Road to Adelaide Street
- Growth Management Implementation Strategy
- Schedule 'C' EA initiated in 2009
- Needs include:
  - road capacity
  - sightline safety improvements
  - drainage improvements
  - Pedestrian and cyclist accommodation
- Road widenings subsequently deferred to 2024 / 2027

### Sunningdale Road Improvements – Study Area (West Half)




**LEGEND**

- ..... Existing Roadway
- ..... Proposed Roadway
- ..... Existing Right-of-Way
- ..... Proposed Right-of-Way
- ..... Existing Easement
- ..... Proposed Easement
- ..... Existing Utility
- ..... Proposed Utility
- ..... Existing Structure
- ..... Proposed Structure
- ..... Existing Land Use
- ..... Proposed Land Use
- ..... Existing Zoning
- ..... Proposed Zoning
- ..... Existing Property Lines
- ..... Proposed Property Lines
- ..... Existing Survey
- ..... Proposed Survey

Figure 2A: Study Area Overview  
Wonderland Road to Adelaide Street

SCALE: NTS  
DATE: OCT 2009  
SD: 110381

AECOM





**Sunningdale Road Improvements**

**Alternatives:**

**Road Alignments**

- Widen north / south / symmetrical
- Richmond Street area landowner alternative

**Intersection Control**

- Signals vs. Roundabouts


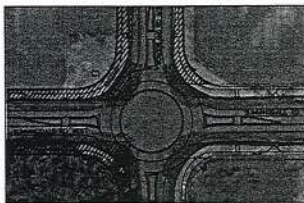
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# LONDON

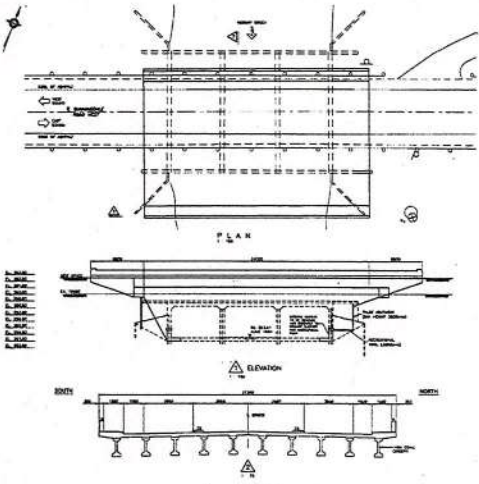
## Sunningdale Road Improvements – Preferred Alternative

- 4-lane widening with auxilliary lanes
- Bicycle lanes and sidewalks
- Roundabouts at Wonderland Rd and Adelaide Street
- Storm sewers and SWM quality and quantity controls
- Single span crossing of Medway Creek allowing future possible pathway connections




# LONDON

## Sunningdale Road Improvements - Medway Creek Crossing




Point	Elevation
1.00	100.00
1.01	100.00
1.02	100.00
1.03	100.00
1.04	100.00
1.05	100.00
1.06	100.00
1.07	100.00
1.08	100.00
1.09	100.00
1.10	100.00
1.11	100.00
1.12	100.00
1.13	100.00
1.14	100.00
1.15	100.00
1.16	100.00
1.17	100.00
1.18	100.00
1.19	100.00
1.20	100.00
1.21	100.00
1.22	100.00
1.23	100.00
1.24	100.00
1.25	100.00
1.26	100.00
1.27	100.00
1.28	100.00
1.29	100.00
1.30	100.00
1.31	100.00
1.32	100.00
1.33	100.00
1.34	100.00
1.35	100.00
1.36	100.00
1.37	100.00
1.38	100.00
1.39	100.00
1.40	100.00
1.41	100.00
1.42	100.00
1.43	100.00
1.44	100.00
1.45	100.00
1.46	100.00
1.47	100.00
1.48	100.00
1.49	100.00
1.50	100.00



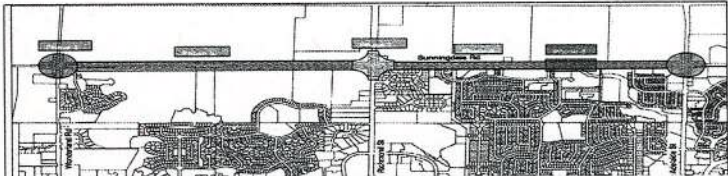
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21/03/2013




### Sunningdale Road Improvements – Next Steps

- Receive Comments by April 21
- Finalize TESR
- 30-day Review Period
- Near-term intersection improvements
- Long-term road widenings



*Project Information available at the Transportation Planning website, or type "Sunningdale Road Environmental Study" into the [www.london.ca](http://www.london.ca) Search*



Review of: **Bilyea Property – 3804 South Winds Drive**  
**South Winds Subdivision (formerly Deer Creek Ridge Subdivision)**  
dated January 10, 2013 by BioLogic

Reviewers: K. Delaney, S. Levin, L. Nattagh, D. Sheppard

#### **General**

It seems that the proponent has not addressed many of the issues raised previously in EIS's of 2005 and 2009.

#### **Urban Growth Boundary**

The proposed development is outside the Urban Growth Boundary. For many reasons, including ecological protection, the proposed subdivision should be refused by the City.

- 1) Any planning application for South Winds Subdivision be refused by the City.

#### **ESA Boundary**

The proposed boundary is still inadequate. It does not follow City Guidelines. There is no justification provided for the exclusion of part of vegetation community 5a. Indeed, the bisection of 5a creates a bay in the boundary which is undesirable. The ESA boundary fails to fully include identified erosion setbacks.

- 2) The ESA boundary should include community 5a in its entirety for the health of the ESA as well as the most desirably shaped boundary.
- 3) In all cases, the ESA boundary must not be less than the erosion setback.

#### **Destruction of Community 3b**

There is no suitable justification for the removal of Fresh Sugar Maple Forest 3b. It is clearly part of a larger patch and should be retained. The proposed reasoning that the patch can not be evaluated since it belongs to another party is both wrong as well as a perfect example of why the entire proposed development outside the Urban Growth Boundary and in the absence of an area plan, should not be approved by the City.

- 4) Community 3b must be retained.
- 5) The City of London should conduct a landscape level Woodland Evaluation of the patch to which 3b belongs.

#### **Buffers**

There continues to be no discussion of ecologically required buffers for the protection and enhancement of the ESA. While the proponent may opine that no buffers are necessary, for the report to be fully silent on the application of this City Guideline requirement is unacceptable.

- 6) The EIS should not be accepted by the City until a full explanation of the application of the City Guideline on Ecological Buffers is included.

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### **Split Zoning**

It is not a desirable management approach to include portions of the ESA within individual residential lots. These portions become impossible for the City to regulate and also make it very likely that eventually these portions will be so degraded or even destroyed as not to contribute to the health of the ESA.

- 7) The boundaries of proposed lots 5 and 6 should be redrawn so as to fully exclude any portion of the designated ESA.
- 8) The defined ESA should be a delineated legal block unto itself. Lot 6 specifically should be separated from the balance of the ESA lands. Without this separation, it makes any future conveyance of the ESA lands more complicated than necessary.

### **Stormwater**

The EIS continues to not depict nor discuss how stormwater will be handled and discharged. The environmental impacts of the stormwater infrastructure construction and operation should be addressed in this EIS.

- 9) Stormwater discharge route and method (presumably to the Dingman) must be detailed and impacts must be avoided or mitigated.
- 10) Ecological impacts of the stormwater outlet construction and operation must be detailed and mitigated.
- 11) Compensation must be considered for any impacts which can not be fully mitigated.

### **Stockpiles on Site**

The Net Effects Table erroneously states that stockpiles will be located 30m from the top of stable slope. As per UTRCA requirement, stockpiles must be 30m from the ESA boundary.

- 12) Net Effects Table should be corrected to read "30m from ESA boundary" in two instances.

/end

## Old Victoria Stormwater Management Facility #2 - EIS

dated February 2013

Reviewers: S. Levin, B. Maddeford, G. Sass (lead), N. Zitani  
March 2013

### LOCATION OF SWM

While the location of the SWM is stated as given in the EIS, EEPAC is of the opinion that the location is less than ideal and that there are viable alternative sites just upslope. First, as stated in the EIS (page 5) it is located within a significant groundwater recharge area (300-400 mm recharge per year). Given its proximity to the river, this recharge area is tightly coupled to the river, which means that water that infiltrates into the ground quickly flows into the river through subsurface hydrological pathways. So any water quality problems (oil spills, salts from salting, etc) within the collected stormwater will find its way into the river with little chance to be filtered out by the soil (page 25, Section 6.3). OP 15.4.9 explicitly calls for the protection of groundwater recharge zones. Second, the SWM is going to be placed into the Thames River Corridor which is a special management zone of 100m buffer (OP 15.4.6). Green development should only occur within this significant area if it has been shown that it cannot be placed anywhere else. Clearly, there are plenty of opportunities to site the SWM just outside of the 100m corridor. Third, the SWM is being placed within the Meadowlilly ESA buffer (10m) and Thames River buffer (30m). EEPAC's long stated view is that green infrastructure should not be placed within the Natural Heritage System.

**Recommendation 1:** The location of the SWM should be reevaluated on the grounds of being (1) placed in a significant recharge area, which is hydrologically connected to the river, (2) placed within the 100 m special buffer of Thames River corridor and (3) placed within the 30 buffer of ESA and Thames River. There are viable alternative sites just upslope.

### NATURALIZATION

Given its close proximity to the river, all aspects of its design should be aligned with best practices used in the design of green infrastructure. The design should completely mimic a natural wetland as was done for Stoney Creek green infrastructure wetlands with the caveat that green infrastructure should always be placed outside of the Natural Heritage System.

**Recommendation 2:** Where ever it is finally constructed, the SWM should be constructed in order to mimic the natural wetland as closely as possible in form and function as best as possible.

**Recommendation 3:** Given the strong renaturalization element in this project, the paved pathway should be taken out. If access is needed, (and its length should be minimized) a permeable pathway should be constructed.

### RESTORATION

There are various places (inc. pgs 18, 26, 33) where the report suggests how to deal with weeds and the weed seed bank from the former agricultural field. There is some disagreement between staff and the consultants in how to deal with this and what to do with soils removed for construction. It should be kept at least 30 m from watercourses and floodplains (see page 24). The consultants recommend that the field be cropped and then plowed under, but this is unlikely to be required (page 26). There is no alternative suggested. There is, however, a recommendation for post-construction monitoring including hand pulling weeds (page 33). However there is nothing in the document to explain who will do this, developer or the city.

**Recommendation 4:** The species planted conform to the City's Guide for Plant Selection for Natural Heritage Areas and Buffers.

**Recommendation 5:** Tossing out a native seed mix into soil that has a seedbank of aggressive invasive aliens will not work. The aliens will win. Seeds should be used, but it should be done in association with planting mature specimens with well-developed roots right into the ground, as with the trees and shrubs.

**Recommendation 6:** Sufficient funds in the project budget need to be allocated for post construction monitoring of the success of restoration and enhancement planting, and removal of invasive species. This work should be done by contract staff retained by the E&PPD (Environment and Parks Planning Department) of the City.

**Recommendation 7:** As a condition of development approval for the adjacent Victoria Ridge Plan of Subdivision Ecological Restoration Plan, the developer be required to coordinate its restoration plan with E&PPD and the restoration plan for SWM 2. Ideally the two restoration plans will move forward together.

### CONSTRUCTION

Given that the development will take place very close to as well as within significant habitat for wildlife, the contractor needs to be made aware of the potential for interaction with wildlife (nests, animals moving through area). The EIS recommends that the contractor ensure that no work takes place while any wildlife enters the area. It also suggests that given the presence of SAR reptile in the area (Snapping Turtle), that it be



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reported and photographed (page 31 'Workers should be educated on the identifying features of known potential SAR in the project area prior to construction start'). It will be important for someone with some understanding to tell and show the workers what to look out for.

**Recommendation 8:** As a condition of the contract of awarding construction work, along with "education of the construction workers", photographs of species of concern be posted in the construction site office so that the recommendation to stop work while wildlife is on site can be properly acted on. This should be supervised by E&PPD of the city.

The Ontario Invasive Plant Council has identified dirty/contaminated construction equipment as a pathway that spreads invasive alien seeds (in soil stuck to construction equipment) from one site to another. The City is being invited to their upcoming municipal workshop (specifically about Phragmites) which will discuss, among other things, clean equipment protocols.

**Recommendation 9:** EEPAC urges the use of clean equipment protocols for the construction of this (and all upcoming) facilities near the Natural Heritage System.

#### **FUTURE TRAIL PLANNING**

There is a trail planned around the north side of the SWM. It is unclear from the material provided where it will go once it nears the ESA to the west.

**Recommendation 10:** EEPAC requests to view the conceptual plan for the trail extension to the west.

**Recommendation 11:** EEPAC recommends that the Meadowlily ESA Conservation Master Plan determine trail locations in and around the ESA and that no concept plan be made available to development proponents in order to ensure that no unrealistic expectations are provided to developer or future home buyers.

#### **MONITORING**

**Recommendation 12:** Construction monitoring should be done by an ecologist with the ability to stop work if anything damaging to the natural environment or watercourses occurs. This means monitoring should be more frequent than the suggested bi-weekly monitoring on page 33.

**Recommendation 13:** On-site monitoring should occur when the weather forecasts any heavy rain events during the construction period (to avoid the potential for excess run off from piles of top soil)

**Recommendation 14:** EEPAC agrees that there should be at least two years of erosion monitoring (page 33), however, there is no recommendation as to who would do this work or who would pay for it. If it is to be required of the developer, the filing of a monitoring plan should be a condition of the award of the contract for construction of SWM #2.

**Recommendation 15:** Sufficient funds should be budgeted for a qualified person contracted by the City to monitor the channel for erosion concerns. EEPAC also recommends that there be a holdback on the contract to repair any failures in the channel.

**Recommendation 16:** The UTRCA turtle expert should be engaged to advise on the construction and monitoring of the Snapping Turtle nesting site as proposed. The monitoring should be for at least 2 but ideally for a 5 year period.

#### **Tributary 4 - PSW**

For reasons that are not clear, there was no requirement to assess the impact of development on Watercourse 4 and the PSW located within it. The ad-hoc addendum (section 9.0) suggests that there is some concern as to water quality, erosion and vegetation impacts. The objective of this EIS is clearly stated at the beginning and the evaluation of impact on tributary 4 is not one of them.

**Recommendation 17:** As the addendum suggests there is reason for concern with respect to impact on a PSW located within Meadowlilly ESA. The addendum does not evaluate this impact. A separate EIS is required to evaluate the potential impact of development on Watercourse 4 and PSW located within it.

#### **Mapping, Nomenclature**

There is no suitable map that shows development overlay on Natural Heritage System with all buffers shown to scale.

Nomenclature mistakes: Table 6.2: "Aster ericoides" should be "Symphyotrichum ericoides", and A. pilosis should be "S. pilosum".

**Recommendation 18:** Mapping needs to be updated include ESA boundary and buffer, Thames River corridor with the development overlay.

Review of: **Thames Village Joint Venture  
Environmental Impact Assessment Report**  
(note that this is not an EIS)  
dated September 2012 by Leonard and Associates

Reviewers: B. Maddeford, S. Levin, D. Sheppard

### **Geotechnical – Site Dewatering**

The Geotechnical focuses on site preparation and construction, there is a section on page 12 where it references that dewatering is likely due to the high water table. It is unclear where this water will discharge to. Given the slopes, ravines, watercourses and ESA, the report cautions that dewatering should be done without negative impact on the natural environment. How that will be done is unclear in the report.

- 1) **RECOMMENDATION** : The report address where water during dewatering will flow to. If it is to be discharged to a watercourse, it must be treated before flowing into a watercourse.

The Slope Stability Study also points out on page 12 that serious erosion on the face of the slope could be caused by run off washing over the face of the slope and human disturbance. There is moderate potential for slope instability.

- 2) **RECOMMENDATION**: As a condition of draft approval, a dewatering plan, with location and volumes of discharge calculated, must be prepared and approved by the UTRCA or MOEE and /or the City.

### **Split Zoning and Open Space within Residential Lots**

The majority of the low density residential lands are anticipated in the central and eastern portion of the study area. Low density lands within the southern portion of the Cline property and the northern portion of the Sifton property that are both adjacent to identified tree preservation areas may be developed with lower density cluster housing. **Individual lots would include the tree preservation areas** however these lands will be zoned for open space. The tree preservation area will be included for density purposes however, **development activity, including the construction of pools and accessory structures will not be permitted in these preserved areas.** A special Official Plan policy has been created for this area as follows:

*In the three areas labeled "tree preservation zone" identified in the Old Victoria Area Plan, the dominant natural heritage features shall be preserved through the detailed subdivision and site plan approval design processes. These areas may*

*be included and incorporated in rear yards or as outdoor amenity areas for residential developments. These areas will be zoned as Open Space and will not permit any form of structures including outbuildings, decks, patios and pools. These areas will be used for density calculation purposes.*

This section of the Old Victoria Area Plan is not noted in this report. EEPAC is concerned that there is no mechanism in place to prevent homebuyers from installing pools, desks or removing trees. Presently, the city does not require contractors to review such covenants before contracting for such work on private property nor does it require a building permit for these works. Hence, this is no protection at all.

- 3) **RECOMMENDATION:** The lot pattern must be revised so that none of the land designated Open Space, including the 6 m required set back from top of slope, is within individual lots.

### **Trail Planning**

It is noted with some concern that page 16 of the Area Plan states:

*The Thames Valley Parkway will extend the length of the Thames River at the north end of the study area where it will provide for connections to the east and the west. The Thames Valley Parkway will be a 4.5 metre wide asphalted surface that will attempt to utilize other servicing corridors to minimize the impact of the trail on the natural heritage system. A future pedestrian underpass will be required at White's Bridge. This network of trails will assist in reducing the need for automotive dependency within the study area. A special Official Plan policy was prepared for these parks and their linkages:*

- 4) **RECOMMENDATION:** The mapping is considered incomplete without showing the exact proposed location of any multi-use pathway.
- 5) **RECOMMENDATION:** The City should utilize Planning Act provisions at its disposable to acquire lands, outside of the natural heritage system, specifically for the purpose of the TVP.
- 6) **RECOMMENDATION:** The Meadowlily ESA Conservation Plan should be the basis for trail planning in this area. The ESA should not be traversed with a 4.5 m wide asphalted surface.
- 7) **RECOMMENDATION:** Any Multi-use pathway planned in this area by the City must be outside the ESA.
- 8) **RECOMMENDATION:** Any final EIS must depict any planned pathway to ensure proper alignment with other proposed development features.

### **Patch 09028 as Significant Woodland**

From the OVAP (page 18):

*Municipal staff should complete the application of the Council approved Woodland*

*Guidelines to better determine its function. Until that time the lands are to be considered "Vegetation Patches Outside an ESA".*

It appears that the Woodland Guideline has not been applied in the report, although it appears that this patch will be Open Space (see Figure 7.0). EEPAC is concerned that the future road pattern crosses this ravine at the wetland (*mineral thicket swamp*).

- 9) **RECOMMENDATION:** The Woodland Evaluation Guidelines be applied to patch 09028 and that if found to be significant, the road pattern be revised to avoid crossing the patch.

#### **ESA Boundary**

- 10) **RECOMMENDATION:** The following issues should be addressed:
- The proposed lot line layout should be shown on a map of ESA boundary and vegetation community so encroachments and impacts can be properly conveyed.
  - It would be helpful if the ESA was shown in Figure 7.0 as a different colour so that it was easy to see.
  - It would be helpful if the ESA boundary line appeared in all appropriate places. It does not seem to appear on the easterly portion of Figure 7.0. It does not appear on the legend for this map either.
  - The document does not seem to use the city's boundary delineation guidelines in setting its ESA line.
  - The maximum hazard line should be within the ESA boundary (p 21)

#### **Uncommon Vegetation Community**

- 11) EEPAC disagrees that an uncommon cultural vegetation community should be treated differently than one that is not in the SW Ontario Landscape. See the Area Plan regarding Community 12.

*One vegetation community located on Patch 09029 (Cline) - Community 12: Fresh-Moist Black Walnut Lowland Deciduous Forest (Attachment: Figure 3.7) is listed as G4 - globally secure (federal rank) and provincially as S2/S3 - very rare (5-20 occurrences)/rare to uncommon (20-100 occurrences) by the OMNR (NHIC, 2006). According to the floral biologist, this community is cultural in origin and should not fall under ranked status*

#### **Buffers**

The discussion and mapping of buffers is quite confusing to follow.

- 12) **RECOMMENDATION:** Revised mapping to more clearly align with buffer discussions is desirable.

#### **Migrant Birds**



The finding that other sites in London have higher diversity of migrant species than Patch 09028 is not sufficient grounds to conclude that Patch 09028 is not a significant landbird migratory stopover area.

- 13) **RECOMMENDATION:** The significance of Patch 09028 to migratory species should be judged on its own merits and the species found within the patch.

#### **Area Plan Recommendations to be Executed on Subject Site**

- 14) **RECOMMENDATION:** The following recommendations, already stated on page 18 and 21 of the OVAP, must be reflected on the subject site:
- a. *Link the locally significant wetland on-site to the Thames River*
  - b. *Enhance the role of the South Thames River as a faunal movement corridor*
  - c. *Maintain the large blocks of natural habitat that are connected to this corridor*
  - d. *Maintain habitat for plants that are atypical within the provincial and local landscape*
  - e. *Maintain water conveyance through the wetland and Tributaries 1 and 2 that outlet into the Thames River*
  - f. *Maintain habitat for rare vegetation species in Vegetation Communities 7 & 15b.*
  - g. *Minimize the edge effects of development by maintaining all of Vegetation Communities 3a and 7 in successional vegetation*
  - h. *Minimize the edge effects of development by maintaining specific pockets of successional vegetation along the west side of Vegetation Community 4b in successional vegetation.*
  - i. *a transition zone be maintained adjacent to Vegetation Community 15b, a wetland bisected by a first-order stream.*
  - j. *The Potential cold water status of this stream should be determined. ( according to the OVAP page 27 of 156, one of the tributaries on the Cline lands was identified as a UTRCA Class A Channel, which is characterized as cool/coldwater with baitfish present.*
  - k. *Once the specific road center line is determined for the internal road that traverses a portion of Vegetation Communities 1 | 4b / 15b, prepare a site-specific landscape restoration plan.*

#### **Stream within Community 15b**

- 15) **RECOMMENDATION:** the status of the first order stream in Community 15b be determined before the completion of the EA for the stormwater facility to be built to service this subdivision.

#### **Existing laneway realignment and restoration**



- 16) **RECOMMENDATION:** As a condition of draft plan approval, the following recommendation from the Area Plan be implemented:

*Once the specific road center line is determined for the internal road that traverses a portion of Vegetation Communities 11, 4b, and 15b, prepare a site-specific landscape restoration plan.*

### **Stormwater**

The report fails to offer mapping which clearly overlays the 'proposed conceptual' SWM pond location and outlet location in relation to vegetation communities. This simple failing makes it very difficult to understand or assess potential environmental impacts.

- 17) **RECOMMENDATION:** The report is incomplete without mapping which clearly overlays the 'proposed conceptual' SWM pond location and outlet location in relation to vegetation communities.
- 18) **RECOMMENDATION:** As a requirement of the Stormwater Management Plan, the following recommendation from the Area Plan be included:  
*Maintain water conveyance through the wetland and Tributaries 1 and 2 that outlet into the Thames River*
- 19) **RECOMMENDATION.**
- *The parameters for the integration of the SWM with natural areas and the evaluation of the specific outlet location and appropriate vegetation treatment must be detailed (page 6)*

The conceptual SWM block appears to be in the ESA and within 30 m of the wetland. This seems contrary to the OVAP which notes that Delcan determined that proper stormwater practices are possible outside of Natural Heritage lands. The Report also states on page 20 that the Class EA recognized that the SWM facility must avoid all of the ESA and other restricted land uses. There is no explanation in the Report as to why the Delcan recommendation has not been followed. According to the OP, infrastructure is only located in an ESA when there is no reasonable alternative. The proposed site for the Pond removes maples and black cherry from the ESA (Patch 09029) and is unclear as to where it outlets in relation to the steep slopes in the area. No compensation for ESA lands lost to infrastructure is offered. Page 20 of the document suggests that landscape restoration plans will be prepared as an addendum to the document at draft plan review. Also Page 21 suggests the location of the Pond shown will not be the actual location. Page 17-18 of the Slope Stability Study indicates that if water is to go down the slope, it must be through a controlled channel or pipe. Given this confusion:

- 20) **RECOMMENDATION:** EEPAC should receive and review the EA addendum for the stormwater system to determine why the system cannot be placed completely outside the ESA.
- 21) **RECOMMENDATION:** A requirement of approval at the appropriate stage is for compensation and restoration plans to be prepared by the proponent for approval by the City. This should be done as a holding provision as part of an application for a zoning change.
- 22) **RECOMMENDATION:** The monitoring and reporting noted on page 23 should be required as part of the draft plan approval.
- 23) **RECOMMENDATION:** The outlet seems to be proposed through Community 9 which is an integrous valuable Forest Community. This should be avoided.

#### **Other Recommendations**

- 24) **RECOMMENDATION:** The 8 m Setback be clearly marked and adhered to. Where the mapping in Figure 7 shows 4 m, it be changed to 6 m for access.
- 25) **RECOMMENDATION:** No lots should be established in an area of potential erosion.
- 26) **RECOMMENDATION:** Page 18 of the Slope Stability Study recommends that the final design drawings showing building and servicing locations should be reviewed by a geotechnical consultant to ensure the Erosion Hazard Limit is properly interpreted. It also recommends more test holes before construction as the ones already done are only for design purposes.
- 27) **RECOMMENDATION:** Flows from downspouts and weeping tiles must be directed away from slopes as recommended on page 18 of the Slope Stability Study.
- 28) **RECOMMENDATION:** Geotechnical inspection and testing (pre and post construction) be required as a condition of approval. This testing should confirm all geotechnical recommendations are followed. Another reason for this is from Page 12 of the Slope Stability Study. "...details regarding the proposed development, layout and site grading have not been examined."



Page 23 and page 24 note that there is a range of potential effects on the natural heritage system. However, there is no detail as to the potential effects or what might be monitored.

- 29) **RECOMMENDATION:** The document be revised to provide the necessary detail to determine what the effects will be on the natural heritage system. From the geotechnical report, it is clear that significant site alteration will be required and there is no detail in the Leonard document as to how the NHS components will be protected.
- 30) **RECOMMENDATION:** Hazard lands should be dedicated to the city outside of the required 5% parkland dedication under the Planning Act as the land is not developable.
- 31) **RECOMMENDATION:** A requirement of approval should include the planting of deep rooted vegetation for slope stability.
- 32) **RECOMMENDATION:** Any trails be set at least 6 m away from the top of slope with signage indicating that slopes are to be avoided to reduce risk.

### **Concerns about Leonard Report**

It is not clear if this is a scoped EIS or not. If it was, it should include a rationale for having lots within 30 m of a wetland, 30 m of a watercourse, and 10 m of the ESA. The OVAP indicated the ESA boundary on the east should include a 30 m setback to lands at the southern tip of the tributary. There are many lots that are within either a hazard or within 10 m of the open space limit or within 30 m of a watercourse.

Page 12 of the report indicates that an 8 m Geomorphic Hazard Setback be established. The Slope Stability Study also set a minimum 6 m Access Allowance setback from the top of Stable Slope as the Erosion Hazard Limit. However, this limit appears on Figure 7.0 as varying between 4 m and 8 m. Page 12 also notes the engineering firm Trow/exp recommended that erosion monitoring stations could be established within areas of concern. It is unclear from the document where and when these could be established and what use they would be after the site was assumed by the city. Is this another Pitcairne Crescent (Snake Creek Valley, east of Wonderland, north of Whiteacres, south of the Museum) in the making where future tax payer funded expensive remediation work will be required once slope failure occurs?

The Provincial Policy Statement Section 3.1.3 requires an emergency access allowance of 6 m to 15 m in addition to the erosion and stability set backs. The City's Official Plan in Section 15.7 also requires a minimum of 6 m. In the Slope Stability Study, the consultants relied on aerial photographs to presume stability and use the lowest possible set back.

It would be helpful if the transition zones referred to in various places starting on page 23, were actually marked on Figure 7.0. They are not nor do they appear in the legend or any map contained in this document.

It would be helpful to have included figure A5 from the OVAP in this document. It seems to be copied in Figure 3.2 but without all the notions for the eastern part of the area and certainly without the legend.

The 100 year flood is not shown in Figure 7.0

Figure 3.2 should include as yellow, the rest of the patch which is ESA. There is no legend for this figure.

The report mentions the Area Plan field work which identified 20 Monarch butterflies in Patch 09029 but neglects to add that Monarchs are ranked as Special Concern species by COSEWIC and the OMNR (NHIC, 2006). It continues to be listed as such on the Jan 24, 2013, SARO list.

Page 4, top paragraph is incomplete.

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Review of: **Auburn Development's Lambeth Walk proposal**  
**Subject Land Status Report and Scoped EIS**  
**4138 and 3924 Colonel Talbot Road**  
**REVISED**  
dated December 11, 2012 by BioLogic

Reviewers: S. Levin, D. Sheppard

#### **Mapping**

The report fails to include mapping showing the complete (pre-assessment) boundaries of the patches involved. As always, application of the Boundary Delineation Guidelines is difficult without preliminary boundaries. The zoning map is also difficult to interpret in the area of Patch 10051.

- 1) RECOMMENDATION: Improved mapping should be required.

#### **Stormwater Management**

Patches 10051 and 10070 – both were evaluated by the consultant and found to be Significant Woodlands (see page 29 of this document, 5 HIGH for each).

However, 10051 (Patch is 6 ha with 2.2 ha of native woodland, and 4 PIF birds observed) is slated to be partially removed for SMW facility (page 40). While the efforts at compensation are appreciated, (page 43), according to Official Plan Policy 15.3.3.i

*New or expanded infrastructure shall only be permitted within the Natural Heritage System where it is clearly demonstrated through an environmental assessment process under the Environmental Assessment Act that it is the preferred location for the infrastructure, and that the alternatives are all evaluated in accordance with the policies of the Official Plan, including the completion of an environmental impact study accepted by the City.*

No alternatives are shown in the present report.

This is particularly important as the report (page 18) suggests that downstream of the proposed location of the SWM pond, the Anguish Drain (west of Colonel Talbot Road) and a portion of flow path upstream of this drain [Section A, Figure 8b], should likely be reclassified to a Class C Drain (permanent warm water bait fish).

- 2) RECOMMENDATION: The location of the SWM facility be the subject of an environmental assessment under the Act to determine if there is no alternative to placing infrastructure in a component of the Natural Heritage System.
- 3) RECOMMENDATION: The impact of the SWM facility on the watercourse within Community 4 should be specified and mitigated.

**Compensation for Destruction of Community 3**

- 4) RECOMMENDATION: If the SWM facility ultimate destroys some or most of Community 3, compensation should be made in the following form
  - a) Retain Community 1 in its entirety (excluding the narrow hedgerow)
  - b) Naturalize the 'bay' between the preserved portion of community 4 and the entirety of community 1.

**PATCH 10070**

There appears to be some question as to who is responsible for the restoration of patch 10070 which was partially removed illegally by the previous owner (page 36). The report also discusses Community 10 on p. 36-7. There is a Potential Renaturalization Zone triangle on Schedule B1 of the Official Plan linking this community to the rest of the Patch. However, the report, states "Community 10 requires too much management to be considered a core feature of the patch. However a tree preservation report can further define components of Community 10 that can be retained, dependent on the development design."

- 5) RECOMMENDATION: community 10 is part of the significant woodland patch 10070. It should be treated as such and designated and zoned OS. It has a canopy height of >25m, contains dominant species red oak (providing important mast supply) and has a canopy cover of > 60%.
- 6) RECOMMENDATION: The report incorrectly applies Boundary Delineation Guideline #5 for Community 10. It is proximal enough to the portion of Patch 10070 that is on land own by others to qualify for inclusion within Significant Woodland.
- 7) RECOMMENDATION: The report clearly spell out who is responsible for the restoration of the illegally cleared sections of the Patch . If the landowner, then a management plan be submitted now for approval as a condition of a complete application and implementation started as a condition of change in land use. If the city is responsible, the city shall commence restoration activities this spring and permission shall be granted by the land owner for such activities on its land.

**Hydrological Impacts on Woodlands**

- 8) RECOMMENDATION: If the water flow patterns as indicated in Figure 10 are to be altered, impacts on Woodlands 10069 and 10070 must be identified and avoided.

**CORRIDOR BETWEEN PATCH 10069 and 10070**

There is an area zoned OS5 that links Patch 10069 to the north and Patch 10070 on the subject lands (Figure 4 although it is unclear from the zoning map whether the area extends all the way to the adjacent church property. It should). In Figure 12, it is shown as a narrow line along the property boundary. This zoning reflects the area that corresponds to the designated Unevaluated Corridor (actually, Potential Naturalization Area) on Schedule B1 of the City of London Official Plan (2011). The area is currently farmed. While we are encouraged to see a linkage being supported in the document, the actual recommendation in the report (page 38) suggests the linkage be located close to the pond on the adjacent

church property rather than in the farm field, although it is not explained why. Nor is there further information in the report regarding how wide such a corridor would be, when such work would start or who would fund the work.

- 9) RECOMMENDATION: Linkages be planned for nearby woodlands to provide corridors that make ecological sense regardless of property ownership.
- 10) RECOMMENDATION: The report clarify the location and width of the proposed corridor and indicate who would be responsible for funding the work necessary to create the corridor, as well as when the work could begin.
- 11) RECOMMENDATION: The corridor would have higher ecological function and value if it was located along the existing water flow path. This would not only include a hydrological function within the corridor but would avoid any potential hydrological impacts on Woodland 10069 and 10070 by not affecting the existing flow patterns.

#### **Restoration of Patch 10070**

- 12) RECOMMENDATION: EEPAC requests an update from staff regarding the restoration of the 'illegal' clear cut areas of Patch 10070, including:
  - a) Qty of area cut
  - b) Qty of area required to be restored
  - c) Who is responsible for executing restoration?
  - d) Who is responsible for ensuring restoration is executed?
  - e) Qty of area that has been successfully restored
  - f) Plan to accomplish any outstanding restoration works
  - g) Any monitoring or maintenance plans in place to ensure restoration remains successful in future

#### **Management Strategy**

There are a variety of references to a Management Strategy for the elements of the Natural Heritage System (Section 6.0, page 36-7), but this Section is at a high level and is unclear as to how and when the various recommendations would be implemented and who would be responsible for carrying out the Strategy.

- 13) RECOMMENDATION: A detailed Management Strategy be prepared including costs and responsibilities as part of what is required to consider this EIS complete.

#### **Protection of the natural heritage system post development**

On page 44, the report has two recommendations regarding protecting the Natural Heritage System post development:

*Recommendation 2: Rear yard fencing should be installed at the lot limit to prevent human encroachment into natural heritage areas*

EEPAC concurs that rear yard fencing be required noting the requirement is fencing with NO gates. However, the concern is that there is currently no limit on creating gates in fences after the homeowner moves in. Therefore EEPAC recommends:

- 14) **RECOMMENDATION:** City staff investigate how best to control the creation of gates in fences through either by law enforcement or requiring a building permit for such work, or through notification to contractors.

The other recommendation in the document is:

***Recommendation 1:** Develop a homeowners brochure to educate landowners on appropriate measures to protect the natural heritage components within and beyond their property boundaries. This is important for preservation of the woodland and corridor. While most landowners will respect property limits, the brochure should also educate landowners about the problems with encroachment and introduction of non-native species.*

We have seen other brochures and see that it is provided with a whole host of other information. We doubt its efficacy and are nearly certain that it would not be retained by the homeowner for his or her use, let alone passed along to subsequent home owners. EEPAC proposes the following:

- 15) **RECOMMENDATION:** Each homebuilder be asked to hold a session for all new homeowners from time to time during build out, attended by EEPAC or city staff members so that the brochure can be reviewed and the importance of protecting the NHS be explained.
- 16) **RECOMMENDATION:** EEPAC or city staff meet with the real estate board to discuss ways to better educate real estate agents where a re-sale home abuts a component of the NHS and how such lots have an enhanced value.

**Review of: Pottersburg Creek Environmental Impact Study**

dated February 2013, by North-South Environmental Inc.

Reviewers: R. Gupta, S. Levin, S. Sanford, G. Sass (lead)  
March 7, 2013

**Options for Slope Stabilization**

Though it is the role of the forthcoming Class Environmental Assessment to determine which of the three options of slope stabilization is most appropriate, it is surprising that no recommendation was given in this EIS. Important considerations in picking the right option are (1) tree cover, (2) PCB (re)contamination, and (3) increased erosion. Some of the options will result in taking out trees that shade the creek and while there will be replanting (which the report says will shade the creek, pp. 28, 29), by the time the trees grow up, the water temperature will be far too high to support many fish (there is northern pike (page 17) in this section of the creek!). Pottersburg Creek was contaminated by PCBs by a long closed Westinghouse operation at Clark and Huron. Lots of soil was removed (but not all) and stored in London for many years before being shipped out to Alberta for burning. The report states on page 28 that *"There is a potential for the disturbance of contaminated soils (PCBs) that may be present within the substrate of the creek within the area of the proposed realignment."* Finally, sediment transfer could be increased both as a result of doing nothing and doing too much (realignment).

**Recommendation 1:**

EEPAC does not support Option 4, which includes creek realignment in addition to slope stabilization. This option would have the most direct impacts on both the aquatic and surrounding terrestrial environment in the short term, with no guarantee of enhancement in the long term. Furthermore, this option poses a risk of releasing PCB contaminated soils into the Thames River, which would have deleterious effects on the existing ecosystem.

**Recommendation 2:**

Given the potential for disturbing soil contaminated by PCBs, the soils as well as the river should be monitored before, during and after the proposed works.

**Recommendation 3:**

The role of groundwater seepage in causing the failure of the gabion wall should be investigated as future control structures could be washed out as well.

**ELC Classifications**

The authors of the report have done an excellent job of describing the detailed characteristics of each of the vegetation communities found within the study area. They are to be commended for formatting the report as such.

**Recommendation 4:**

The detailed descriptions of vegetation communities (ELCs) provided in this report should be used as a template for ELC descriptions in future EISs that are conducted where either the city or a private landowner is the proponent.

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**Monitoring of Soil Stockpiles During Construction**

All of the options for slope stabilization require some disturbance and grading of the riparian areas surrounding the creek. It is important that the soil that is removed during this construction not be allowed to wash away during storm events. This happened about 5 years ago along the Medway just north of Fanshawe and east of Wonderland where the Amica seniors' building currently exists.

**Recommendation 5:**

Stockpiles of soil during construction should be prevented from washing into the creek during storm events. A qualified inspector should be sent to the site when storm events are forecasted as part of the construction monitoring programme.