



P.O. Box 5035
300 Dufferin Avenue
London, ON
N6A 4L9

December 19, 2018

Chair and Members
London Advisory Committee on the Environment

I hereby certify that the Municipal Council, at its meeting held on December 18, 2018 resolved:

That, the following actions be taken with respect to the 12th Report of the Environmental and Ecological Planning Advisory Committee from its meeting held on November 15, 2018:

- a) that the following actions be taken with respect to Wilton Grove Road reconstruction, from Commerce Road to Westchester Bourne:
 - i) the Civic Administration BE ADVISED that the Environmental and Ecological Planning Advisory Committee recommends that phragmites be remediated at the commencement of construction to ensure that it does not spread; and,
 - ii) the Civic Administration BE REQUESTED to monitor the spread of phragmites at the conclusion of the project;

it being noted that the Environmental and Ecological Planning Advisory Committee reviewed and received a notice of Public Update Meeting from H. Huotari, Project Manager, Parsons Inc. and S. Shannon, Project Manager, City of London, with respect to this matter;

b) the Civic Administration BE REQUESTED to ensure that the Environmental and Ecological Planning Advisory Committee (EEPAC) is involved in the detailed design for the Southdale West Improvements; it being noted that the EEPAC would like to review the draft Environmental Study Report prior to its being placed on the thirty day public review; it being further noted that the EEPAC reviewed and received a communication from S. Shannon, Technologist II, with respect to this matter;

c) the Civic Administration BE REQUESTED to attend a future Environmental and Ecological Planning Advisory Committee meeting to provide an update on the Kilally South, East Basin, Municipal Class Environmental Assessment;

d) S. Hall BE APPOINTED as the Environmental and Ecological Planning Advisory Committee representative on the Advisory Committee on the Environment for the term ending February 28, 2019;

e) the following actions be taken with respect to the property located at 6019

ii) the Working Group comments appended to the 12th Report of the Environmental and Ecological Planning Advisory Committee relating to the hydrogeological study BE FORWARDED to the Civic Administration for consideration;

f) the following actions be taken with respect to the Clarke Road Improvements:

i) the Working Group comments 12th Report of the Environmental and Ecological Planning Advisory Committee BE FORWARDED to the Civic Administration for consideration; and,

ii) the Civic Administration BE ASKED to provide a copy of the Environmental Study Report prior to the thirty day public review; and,

g) clauses 1.1, 2.1, 3.1, 5.2, 5.3, 5.5, 5.7, 5.8, 6.1 and 6.1 BE RECEIVED for information. (3.1/1/PEC)



C. Saunders
City Clerk
/lm

cc. N. Pasato, Senior Planner
S. Shannon, Technologist II
A. Sones, Environmental Service Engineer
Chair and Members, Environmental and Ecological Planning Advisory Committee
External cc List in the City Clerk's Office

From: "Shannon, Sam" <sshannon@london.ca>
Date: November 14, 2018 at 1:04 PM

Hi Sandy,

See the follow responses for #9 and #14 as mentioned below.

#9 – Upstream of Southdale Road, the catchment area tributary to Thornicroft drain is collected primarily in the underground storm sewer network as shown in AECOM's report. This neighbourhood was constructed prior to current standards for stormwater control. The 2250 mm storm sewer daylight on the south side of Southdale Road as the most upstream, open channel portion of Thornicroft Drain. The Southdale Road EA identifies opportunities for Low-Impact-Development may provide water quality control from Southdale Road West improvements. As identified in the EA document, part of Phase 3 of the EA, a Stormwater Design Report will be prepared to address how stormwater associated to the road improvements will be managed.

The City's Stormwater Engineering Division recognizes that future development within the Thornicroft Drain catchment will need to consider a holistic approach to protect, maintain and enhance the Thornicroft Drain. This would be conducted as a separate exercise outside of the Southdale West EA Improvements project.

#14 - Currently it is difficult to meet the requirements for Habitat compensation within the City limits due to lack of available sites for this purpose. The City recognizes EEPAC's recommendation and will need to look at acquiring lands or changing the purpose of currently owned lands to allow for the City to meet its ESA 2007 (i.e. for Meadowlark) within the City instead of looking to the larger Ecoregion which is currently allowed under the ESA 2007 regulation.

Please do not hesitate to contact me should you have any questions.

Regards,

Sam Shannon, C.E.T.
Technologist II
Transportation Planning & Design
City of London

6019 HAMLYN STREET sub division, EIS by Natural Resources Solutions, Inc., dated August 2018, received by EEPAC on October 18, 2018

Reviewed by B. Krichker, S. Levin, R. Trudeau, I. Whiteside

Submitted to November 15, 2018 EEPAC meeting

Northern part of East Lambeth ESA.

RECOMMENDATION: Given this site and other sites adjacent to this ESA are owned by the proponent, this represents piecemeal planning. Good ecosystem planning should require a look at the entire ESA and define buffers ahead of all applications.

POSITIVES

– Recommendation for signage in public areas in addition to the standard homeowner's booklet. This is supported by EEPAC.

-Agreement by proponent to retain the wooded link between the ESA and the other wetland/woodland on the site

MAIN ISSUES –

Hydrology and Storm Water Issues – details to follow

width of encroachment into 30 m wetland buffer and 10 m woodland buffer by a number of properties (6 back yards and a multi-use pathway that is not only in the buffer but is thru the ESA in violation of the principle “to not thru an ESA”).

Although it is interesting that there is an area of buffer compensation, it is the distance from the feature NOT the amount that is relevant. As area compensation ignores the critical function zone (see How Much Habitat Is Enough, Environment Canada, particularly 2.1.5 and)

https://www.ec.gc.ca/nature/default.asp?lang=En&n=E33B007C-1#_02_1_4

Protection Zones should protect the wetland attributes from stressors. Recommended widths should consider sensitivities of the wetland and the species that depend upon it, as well as local environmental conditions (e.g., slopes, soils and drainage), vegetative structure of the Protection Zone, and nature of the changes in adjacent land uses. Stressors need to be identified and mitigated through Protection Zone design.

RECOMMENDATION: As per How Much Habitat is Enough, Critical Function Zones should be established around the wetlands based on knowledge of species present and their use of habitat types.

Lots 91-92 have no woodland buffer and only 20 m wetland

Lots 65-66 have only 12.5 m wetland buffer by our measurement

From the medium density, the wetland buffer is as small as 8 m

Lots in the NW where the buffer is IN the backyard, there is only 12.5 m and part of that buffer appears to have a 3 m wide multiuse pathway that would be mowed at least 0.5 m on each side.

RECOMMENDATION: The minimum buffer from the wetland must be 30 m and 10 m from woodland features. This must be put in place for the entire patch which constitutes the East Lambeth Forest ESA (see attached pages from the SWAP Natural Heritage Study)

Unclear rationale (page 24) for excluding parts of the wetlands on the west side from the ESA. Given that they are not developable anyway, why are they excluded? It is noted that Frequency occurrence of MAM (Meadow Marsh) in London is only 5.6% and SWT is only 8% (Bergsma and DeYoung – 2006)

RECOMMENDATION: All wetlands must be included in the ESA and designated Green Space as per the London Plan.

The “sliver” of future development in the SE appears to be forced and fanciful. Why not make it part of the renaturalization plan?

There is no detail about the re-naturalization plan – when might it be produced and how would a City Ecologist be involved in its review?

Not clear why buckthorn on adjacent property means that no effort will be made to reduce buckthorn (page 39). Isn't much of the adjacent property to the south owned by the same proponent?

There is mention of a re-naturalization plan for the buffer on page 36-37 with no details other than “dense plantings” mentioned on page 39. At a minimum, a condition of approval must be the preparation of a re-naturalization plan to the satisfaction of the City and UTRCA and that such plan be implemented as soon as possible, so that the plants have a chance to mature.

RECOMMENDATION:

- **The EIS be considered incomplete until a specific re-naturalization plan including buckthorn management is included.**
- **Alternatively, a specific re-naturalization plan be a requirement of the subdivision agreement**

RECOMMENDATION: The subdivision agreement include fencing with no gates where private property will abut the ESA or wetland features

CONSTRUCTION RECOMMENDATIONS

To minimize construction impacts, all forested and wetland areas must be fenced during construction the intent being to reduce the amount of waste from the site blowing into the natural areas.

EEPAC agrees that refueling and marshalling of equipment must be at least 30 m min from natural features.

PHRAGMITES RECOMMENDATION

Phragmites should be dealt with either by the proponent or the City depending on when Wonderland Road is widened. If widened first, the City project should deal with it. It is unclear at this time if the herbicide that would be most effective has been approved for use in a watercourse. If not, and a special

permit is required, the City (or Upper Thames) should be responsible for its use with payment coming from the proponent.

POST CONSTRUCTION RECOMMENDATIONS

It must be made clear in the subdivision agreement when the monitoring period starts, which seasons monitoring will take place, who is responsible for monitoring, and how reports will be shared with the City. There should be a holdback to pay for any re-plantings that would only be released after the end of the monitoring period. The triggers for monitoring to start should be by the advancement of the subdivision.

The City should send each residence “Living with Natural Areas” 6 mons after the subdivision is 70% completion and again when the multi residential block is 70% occupied.

City of London

“Draft” Southwest Area Plan – Natural Heritage Study

Prepared by:

AECOM
50 Sportsworld Crossing Road
Suite 290
Kitchener, ON, Canada N2P 0A4
www.aecom.com

519 650-5313 tel
519 650-3424 fax

Project Number:

60118887

Date:

March 12, 2010

could be seen moving from all directions towards the pond through the grass. There were also several large leeches observed swimming throughout the water, which likely reached the pond by attaching to over-land travelling frogs and/or turtles, and possibly waterfowl.

Several Northern Leopard Frog was observed foraging in the field between Patch 10069 and 10070, and a Gray Tree Frog was observed calling from Patch 10069 on June 4 2009. Lower levels of calling activity that were most likely weather-related were observed on the second visit in June.

On a following daytime visit nearly two weeks later to Patch 10066, across the agricultural field to the north of Patch 10069, a single American Toad was observed moving from the direction of the church through the field towards Patch 10066; this, as well as the leeches, gives an indication that toads, and likely other amphibians and animals, travel in between patches to access the habitat necessary to complete their life cycle.

2.7.3.2 *Lambeth Area*

Patch 10075 on the Fratscko property had two ponds in an area of wetland; one is a dug-out pond that was surrounded by thick conifers, just at the edge of a wooded area bordering a meadow; the other is a much smaller pond less than 200 m to the northwest. The larger pond was surveyed May 21 and June 9 2009; small schools of small minnow-sized fish were observed. On both survey evenings no amphibians were heard calling from the smaller pond. However, during a daytime site visit earlier in the season, American Toad tadpoles were observed in open water in tire ruts and other scraped/cut-over areas in the wetland/swamp area at the north of the Patch. The larger pond was deeper than hip wader height, and much of the land surrounding the east, north and south of this pond was wet and swampy with pools of standing water. There was also a high amount of fallen woody debris and standing dead snags, and both submerged and emergent aquatic vegetation was present. American Toad, Spring Peeper, Northern Leopard Frog, Gray Tree Frog, and Green Frog were all observed calling here. During a subsequent daytime visit June 24 2009, several Green Frog tadpoles were observed in the swampier areas surrounding the amphibian survey station and a Gray Tree Frog was heard calling.

2.7.3.3 *Bostwick Area*

No amphibian surveys were conducted in the Bostwick area due to a lack of landowner permission.

2.7.3.4 *Longwoods Area*

Patch 10090 was surveyed May 21 and June 9 2009; on both evenings no calling frogs were observed. Although the majority of the aquatic habitat consisted of running water (frogs prefer standing water to breed), on June 24 2009 while conducting a breeding bird survey several adult Green Frogs were observed throughout the patch and tadpoles were observed in the wetland patch; at the time, the water levels in the wetland patch were above knee-height. There was other potential wildlife habitat available at this site, including standing and fallen snags, denning habitat, and a high amount of amphibian foraging habitat. Several Green Frogs and Leopard Frogs were observed during daytime visits foraging both within and adjacent to the watercourse.

2.7.3.5 Dingman Area

No amphibian surveys were conducted in the Dingman area due to a lack of landowner permission.

2.7.3.6 Brockley Area

A small portion of Patch 10101 was surveyed from the roadside May 21 and June 9 2009 as a lack of landowner permission prohibited access to other amphibian breeding habitat within the patch. On both evenings no calling frogs were observed. This is likely due to the majority of the accessible habitat consisting of running water; which is suitable for foraging amphibians but not for breeding. Snags and den trees were present, as were fallen logs and potential reptile hibernacula (the concrete bridge). Several Green Frogs and Leopard Frogs were observed during daytime visits to this patch foraging both within and adjacent to the watercourse.

Table 14 below summarizes the results of the amphibian surveys.

Table 14: Summary Table of Amphibian Surveys

Date and Weather	Area and Patch Number	Site	UTM Coordinates	Species	Code	Number
May 21 2009; 10:00pm 19°C, no wind, 0% cloud cover, no precipitation	Lambeth Area - 10075	Pond rimmed by conifers;	477620 E, 4750675 N	American Toad	1	2
				Spring Peeper	1	2
				Gray Tree Frog	1	2
				Green Frog	1	4
	Talbot Area - 10069	Pond south of church driveway	476141 E, 4752215 N	American Toad	1	1
				Spring Peeper	1	1
				Gray Tree Frog	2	7
		Pond north of church driveway	476123 E, 4752228 N	American Toad	1	3
		Pond southwest of church parking lot	475906 E, 4752105 N	American Toad	1	2
				Spring Peeper	1	3
				Gray Tree Frog	2	10
	Longwoods Area - 10090	By roadside	479813 E, 4750950 N	None calling		
	Brockley Area - 10101	By roadside	483094 E, 4750983 N	None calling		
	Bostwick	No patches within this area were surveyed in 2009 due to lack of landowner permission				
	Dingman	No patches within this area were surveyed in 2009 due to lack of landowner permission				
June 9 2009; 10:00pm 10°C, wind 5-10 km/hr, 50% cloud cover, no	Lambeth Area - 10075	Pond rimmed by conifers	477620 E, 4750675 N	Leopard Frog	1	1
				Green Frog	1	4
	Talbot Area - 10069	Pond south of church driveway	476141 E, 4752215 N	None calling		
		Pond north of church driveway	476123 E, 4752228 N	Green Frog	1	1
		Pond southwest of church	475906 E,	Leopard Frog	1	1

Date and Weather	Area and Patch Number	Site	UTM Coordinates	Species	Code	Number
precipitation		parking lot	4752105 N	Green Frog	1	2
	Longwoods Area - 10090	By roadside	479813 E, 4750950 N	None calling		
	Brockley Area - 10101	By roadside	483094 E, 4750983 N	None calling		

2.7.4 Discussion

The spring and summer of 2009 was unseasonably cool and wet; April amphibian auditory surveys could not be conducted as the appropriate weather conditions were not achieved in April once landowner permission was received, and the May survey was conducted after the typical timing window in order to capitalize on ideal survey temperatures that had not been reached in May before that night. June surveys were conducted in less than ideal temperatures in order to capture any amphibians calling within the appropriate timing window as the desired night time temperature had not yet been reached, and forecasts did not predict warmer temperatures for the remainder of the month. For patches where landowner permission was not received, attempts to survey for calling amphibians from the roadside were thwarted by heavy traffic noise.

Other species of amphibians which likely use the ponds and other potential amphibian habitat within the study area include the Wood Frog (*Rana sylvatica*) and Western Chorus Frog (*Pseudacris triseriata*); as these species call earlier in the season and landowner permission was not obtained by that period in time they were likely missed.

Although the spring and summer's unusually cool temperatures likely affected the calling activity and the results of the amphibian survey, the amphibian habitat at both Patches 10069 and 10075 showed the highest numbers and highest diversity of calling amphibians of all surveyed areas.

The Western Chorus Frog has recently been listed as Threatened by COSEWIC in the Great Lakes – St. Lawrence Lowlands region of Ontario, though found to be Not at Risk in the Carolinian region, which includes the study area. There were no observations of any Red Efts, the terrestrial larval stage of the aquatic Red-spotted Newt (*Notophthalmus viridescens*); these are more commonly expected in older forests with larger permanent sources of standing water nearby. They may be present in some patches within the study area, including Patch 10075 and patches that were not surveyed.

The aquatic larva of Mole salamanders (*Ambystoma* sp.) such as the Spotted and Blue-spotted Salamanders were not observed within the survey patches; however this does not preclude their presence in other patches. Their reproductive success, and therefore their detectability within the surveyed patches may have been affected by the unusually cool spring and summer temperatures.

Reptiles

Though only two Eastern Garter Snakes (*Thamnophis sirtalis*) were observed at Patch 10090, the habitat is suitable at all patches for this species.

Eastern Grey Squirrel (*Sciurus carolinensis*)
 Striped Skunk (*Mephitis mephitis*)
 Virginia Opossum (*Didelphis virginiana*)
 Mink (*Mustela vison*)
 Coyote (*Canis latrans*)
 Red Fox (*Vulpes vulpes*)

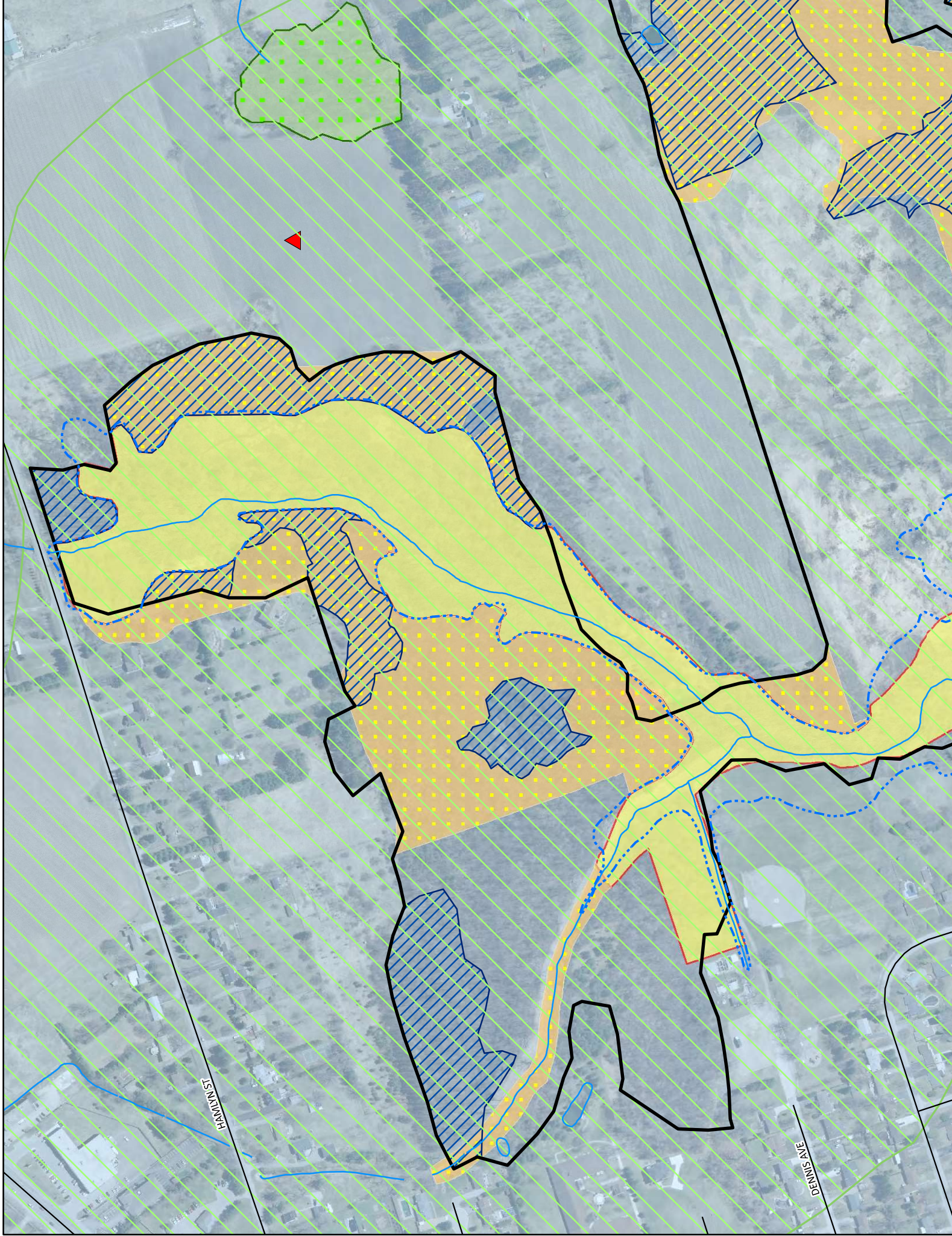
The Mink and Opossum were observed in Patch 10090 along Dingman Creek, and the Meadow Jumping Mouse was observed in the thick vegetation of the hydro cut in Patch 10075, and Red Fox scat was observed in Patch 10075. The lack of observations of these mammals in other patches does not preclude their presence. All of the surveyed patches showed evidence of the other mammal species.

Other Wildlife

Monarch Butterflies (*Danaus plexippus*) were observed within several patches which had open field habitat suitable for milkweed to grow, namely 10075, 10090 and 10069. Ebony Jewelwings (*Calopteryx maculata*), a species of damselfly indicative of a permanent freshwater source, were observed at Patches 10090, 10069, and 10101. Several Twelve-spotted Skimmers (*Libellula pulchella*), a species of dragonfly, were observed at Patch 10090; and two extremely large dragonflies, potentially Swamp Darners (*Epiaeschna heros*) judging from time of year, suitable habitat present, and their large size, were observed in Patch 10075. Digger or Chimney Crayfish (*Fallicambarus fodiens*) were present in Patches 10127 and 10075 in various wet areas both within and adjacent to the wooded areas. Several large leeches were also visible swimming in the pond north of the church driveway by Patch 10069; they likely arrived at the pond while attached to an over-land travelling turtle, a common way for leeches to both breed and travel between water bodies.

Birds

A total of 71 bird species were observed throughout the surveyed patches. This total includes two species at risk, no provincially rare species, and 11 area-sensitive species. Also, 15 species observed in the study area are identified as 'Priority Species' by Partners In Flight Ontario/Bird Studies Canada's Landbird Conservation Plan, and 31 species that were identified by Bird Studies Canada as Conservation Priority Species for Middlesex County. Table 15 below gives a summary of these findings per patch, and Table 16 shows which species were observed per patch.



2006 Woodland Evaluation results – Patch 10075

Assessment Component	Score	Rationale
1.1 Site Protection	High	A) High – patch contains wetland > 2ha in size (approx. 8.6 ha) and watercourse B) Low – overall gentle slopes (average slope less than 10%)
1.2 Landscape Integrity	High	A) Medium – Woodland cover within 2 km estimated between 7-10% B) High – directly connected through waterways C) High – patch is isolated and 89.2 ha in size
2.1 Age & Site Quality	High	A) High – Contains mature woodland community types B) High – one or more vegetation community has a MCC greater than 4.6 C) Medium – Patch contains a combination of communities in good, fair and poor condition.
2.2 Size & Shape	High	A) High – Patch is approximately 89.2 ha in size B) High – Patch contains forest interior C) High – Fourteen Conservation Priority birds at Levels 1 and 2 were observed
2.3 Diversity	High	A) High – Patch contains 3 community series B) High – Patch Contains four or more Vegetation Types C) High – 4 critical amphibian habitat components (unpolluted shallow water that remains wet during breeding season; emergent and submergent aquatic vegetation; closed canopy offering a shaded moist understory environment and abundance of coarse woody debris) D) Low – Patch contains conifer communities <2.0ha in size. E) High – contains natural channel with fish habitat present
3.0 Threatened or Endangered Species	N/A	No VTEs present
4.1 High Quality Communities	High	A) Medium – no communities with an srnk higher than S4 B) Medium – Carolinian species present C) Medium – trees > 50 cm dbh rare or occasional in one or more communities within the patch D) Medium – Average basal area 12-24 m ² /ha
4.2 High Quality Landforms	Medium	A) Medium – Patch located on the Till Plain
Total Score	High 6 Medium 1 Low	Significant Woodland

From: Ian Whiteside
Sent: Thursday, November 15, 2018 6:13 PM
To: ; Lysynski, Heather <hlysynsk@London.ca>
Cc:
Subject: Hamlyn Street Hydro/SWM

Based on the EEPAC review of the AECOM SWM Report for the proposed storm/drainage and SWM Servicing works for Sifton Property [6019 Hamlyn Street -Draft](#) of Subdivision, and the MTE Preliminary Hydrogeological Investigation for the same site, EEPAC comments are as follows:

City Council and MOECP accepted the Dingman Creek Subwatershed Study Updates (DCSSU) and the Pincombe Drain Municipal Class EA study with City Council approving all recommendations for these studies to maintain at minimum, and if possible, to improve environmental/ecological health of this system. Also, City Council's approved recommendations included the specific environmental/ecological targets with criteria for terrestrial, water resources systems and their major functions and features, as well as design criteria and requirements for storm/drainage and SWM quantity, quality control, erosion, and allowable peak flow discharges to the Digman Creek and its tributaries under the projected post developments conditions.

We are of the opinion that it is absolutely critical to ensure that environmental/ ecological conditions, and significant major functions and features not be adversely impacted by the proposed land development and servicing works for this Draft Plan of subdivision. Therefore, the final SWM report for the proposed servicing works needs to include and address the following:

- a) compliance with all applicable criteria and requirements of the Pincombe Drain Municipal Class EA and DCSSU for the proposed design of the storm/drainage and SWM servicing works for the subject should be demonstrated and all applicable criteria and requirements for the subject lands should be listed and incorporated in the SWM report;
- b) taking in considerations that the proposed SWM system components (soakaway pits) are designed to be located with in the wetland buffer area, which represents an encroachment to a Provincially Significant Wetland (PSW) buffer and it is located immediately adjacent to the subdivision land boundaries, the SWM report should incorporate and demonstrate all required justifications for the proposed SWM design, including updating the Hydrogeological report with support information related to hydrogeological and geotechnical conditions, water balance assessment (including a detailed assessment of water balance for the proposed subdivision lands and the PSWs) and the detailed record of groundwater quality and quantity monitoring information for the existing conditions to establish the base line conditions, prior to finalizing the proposed design. Also, this SWM design report needs to include and develop the

required details and cost considerations for the compensation and mitigation plan and measures and all these estimated costs;

c) a water quantity and quality and monitoring program needs to be developed and be included in the report. This water quantity and quality and monitoring program needs to include the water quality (basic chemistry and ecological monitoring-BioMAP) under pre development conditions for a minimum 1 year monitoring to assess dry and wet weather conditions (2 monitoring periods for each of the identified conditions - we note that the preliminary groundwater report only had two weeks of water level information) and a minimum of 3 years under the post development conditions to establish the baseline conditions and to measure any potential adverse impacts on the PSW and/or the potential failing of the proposed SWM system/LID.

d) the estimated water balance under the post development conditions should not exceed 90-80% of the pre development run off flows conditions and to minimize potential adverse impact on PSW. Equally, the evaluation should demonstrate that the development will protect water inflows to the PSW. (In short, the report should demonstrate that the water balance and water quality of the PSW will not be adversely impacted by the site development, including construction related impacts.) We note that the Hydrogeological report for the subject lands shows that run off increase under the post development conditions represents a 49% increase over baseline conditions and must be treated, therefore, the SWM report should address these issues in the design of the SWM quality/quantity control system for this subdivision.

e) The life expectancy, ownership, and the level of the risk of the proposed SWM system LID components - the proposed soakaway pits and bioretention facility - potentially failing (and what the impact on the system from failure would be) should be addressed and identified in details in this report, prior to finalizing and accepting the proposed design of this SWM system.

Based on the information presented in the Hydrogeological report, the subject lands are located within the shallow aquifer (groundwater app. 0.25m to 3 m from the ground service), the ground water gradient is generally directed to the Dingman Creek and/or the Dingman tributaries, and the soil conditions are variable. Although there is a presence of the small sand layer; however, the thickness of this layer as well as the permeability suggests to be variable and could be in some areas to be mixed with some till, all these formations looks are sitting on on some layers of clay and till formations. It suggests that these soil and groundwater conditions may not able to support a long life expectancy and performance of the proposed LID systems.

Sent from my iPhone

Preliminary Comments on Stantec EIS for Clarke Road Improvements

Prepared by Katrina Moser, Susan Hall and Berta Krichker

Context: As discussed Oct. 29, 2018 with Stantec and City Staff, EEPAC will provide preliminary comments on the EIS for the municipal class environmental study report (ESR) for the Clarke Road Improvements. Upon receiving and reviewing the environmental study report for the municipal class EA Clarke Road Improvements, EEPAC will finalize the comments for the project. In the ESR, EEPAC will be looking for a complete description of the present and predicted environmental conditions of the site, including both terrestrial and aquatic environmental conditions, assurance that adverse impacts will be minimized and that mitigations will be more than sufficient. This will require more detailed mitigation and compensation plans than are presently in the EIS.

Summary of EIS: The proposed project will expand Clarke Road from two to four lanes with consideration given to the ultimate build-out to six lanes. The project will also necessitate widening or possible reconstruction of the J.W. Carson Bridge, which crosses the Thames River. The proposed project addresses increased traffic volumes associated with development. The construction will occur in a particularly sensitive area, and will impact the Fanshawe Wetlands PSW, unevaluated wetlands, significant valley lands, Kilally Forest ESA, potential ESA and the Thames River. Within the study site there are reports of 18 animal (birds, reptiles, mammals), three fish and seven plants SAR. Diversity is high; 263 plant species were identified, of which 175 were native. Five plant species have a rank of S2 or S3, and nine native species had a coefficient of 8, indicating intact remnant natural systems. The EIS also identifies numerous potential impacts, including threats to SARs, loss of habitat for SARs, loss of provincially rare species and others. These losses will be difficult to mitigate and compensate, and will be costly. Monitoring must be a part of the plan. Given the sensitivity of the site, it is critical that the EIS is an accurate and detailed description of the present terrestrial and aquatic ecosystem condition. Complete knowledge of present conditions is critical in order that: 1) the best choice is made for the preferred alternative, 2) baseline conditions are accurately documented, and 3) the ecosystem is protected and there is accountability.

Comments:

1. Ecological and environmental water quality monitoring is critical, and presently inadequate. Presently the EIS provides what appears to be a single measurement at one site for pH, conductivity, dissolved oxygen and temperature. There is also a basic description of the aquatic habitat. This is inadequate to provide an accurate estimate of pre-disturbance conditions. Pre-construction conditions need to be measured, recorded and evaluated to establish the existing environmental/ecological baseline for the area where the work is proposed. Also, the monitoring program needs to record and measure any changes, including any potential adverse impacts on environmental/ecological health of this system. The monitoring program should be conducted for a minimum period of one year prior to finalizing the design and construction of this proposed work and be monitored for a minimum of 2-3 years following the construction period. This monitoring program should be based on professionally recognized monitoring program protocols, be comprehensive and should include terrestrial, aquatic and water quality monitoring components. Water quality monitoring should include basic water chemistry (major anions

and cations, nutrients, including nutrient constituents, contaminants, chlorophyll a, dissolved oxygen, pH and specific conductivity) together with BioMapping and/or aquatic biomonitoring following CABIN protocols. Water quality monitoring should be done multiple times to capture seasonal variations, and should include samples upstream and downstream of the construction site. As noted in the EIS, the bridge and construction will have impacts on the adjacent terrestrial and aquatic systems. It must be ensured that there is an accurate baseline assessment to determine post construction impacts and appropriate mitigation and compensation to protect the ecosystem.

2. *Sediment Erosion Control Plan (SECP) - critical steps required for the design component of the proposed infrastructure that will require careful planning and monitoring.* Based on the EIS, it is clear that an important issue will be the erosion control measures proposed for this project. Without control measures, erosion may have significant effects on the ecological/environmental system, negatively impacting both the terrestrial and aquatic ecosystems. Erosion controls must be proposed and adequately outlined to protect SAR, aquatic water quality and aquatic and terrestrial ecosystems. These controls must be extremely robust and sufficient to avoid sediment intrusion and impact. The proposed SECP/measures should be in principal developed and described in the ESR of this Municipal class EA. The supervision and review of the SECP, mitigations and implementations must be done by the Consultant, the City staff and UTRCA , to ensure accountability.

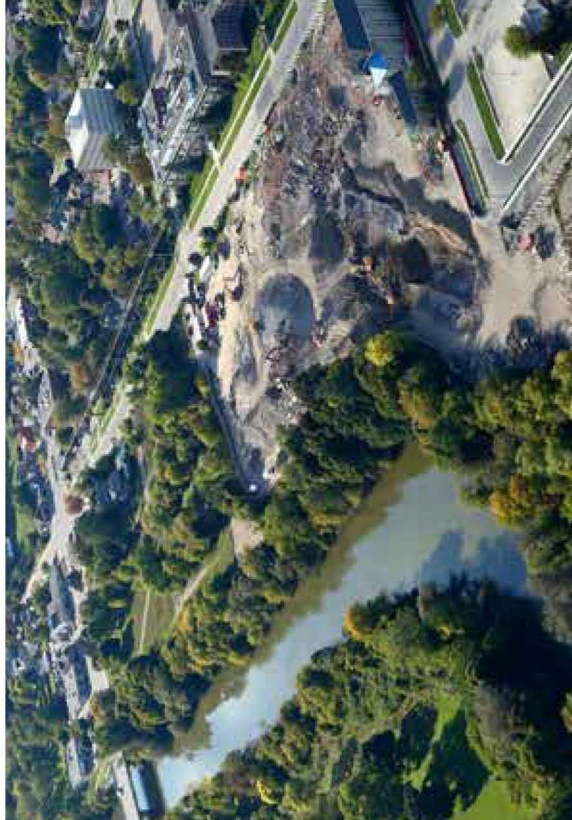
3. *Additional detailed studies are required to better document SAR as is recommended in the EIS report.* Additional detailed environmental studies are recommended. These include surveys, recording and determining the presence or absence of SAR, both aquatic and terrestrial, and should be included as a part of the Municipal Class EA Study's Environmental Study Report (ESR) together with all applicable recommendations for protection of these species and overall ecological health of the system. Examples include documenting Queensnake hibernaculum and hairy sedge microenvironment. Is there evidence that hairy sedge can be successfully transplanted? Where is there suitable habitat for such a transplant? Similar questions regarding Weak bluegrass and rhombic-leaved sunflower.

4. *The underlying principals and general outline of the proposed compensation and mitigation plans that will be developed and presented for the MNRF and DOF approval permits need to be identified and recommended by the ESR of this Municipal Class EA.* The recommended mitigation and compensation plans and costs associated with this work are critical requirements for the success of the proposed work and should be part of the ESR record.

5. *The ESR needs to include a proposed design for the storm/drainage and Storm Water Management (SWM) water quantity/quality plan and the location of storm outlets.* The ESR needs to provide a storm/drainage and SWM plan to determine where discharges of storm sewers will occur. This is a critical piece of water quality control.

6. *Invasive species control measures need to be described in more detail.* Plans to minimize invasive species are described very generally. With selection of the preferred option, we expect to see more detailed plans in the ESR.

THAMES VALLEY CORRIDOR: SOHO



WHAT:

This is a community open house to help us design and create new pathways and park amenities along the Thames River from Wellington St. to Maitland St.

WHEN:

November 28, 2018,

Open house from
6 p.m. to 8 p.m.

WHERE:

Goodwill Industries
255 Horton Street
Third Floor.

