

Thames Valley Parkway North Branch Connection, Class EA Environmental Impact Study, Richmond to Adelaide Street

Public Version, dated February 2016 by Dillon Consulting

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THEME #1 – EEPAC cannot support the preferred option

The proposed route for the TVP cannot be accepted. The ecological risks are too great as to justify the recreational benefits. Therefore, an alternate route with a less environmentally disruptive alignment should be selected.

EEPAC comes to this conclusion despite sections of the EIS dealing with species at risk (SAR) being heavily redacted. For example, there is a 2013 letter re: Habitat regulation to the City from MNR sent to the Tax Office at City Hall. While included in the EIS, the entire letter is redacted.

KEY REASONS

Contrary to the Provincial Policy Statement (PPS), there will be negative impacts to environmental features and their ecological functions in Significant Wildlife Habitat and Significant Valleylands. The relevant parts of Policy 2.1.4 appear highlighted below. The majority of the natural areas within the study lands are designated as Significant River, Stream and Ravine Corridors and these are equivalent to Significant Valleylands in the Provincial Policy Statement (PPS).

2.1.4 *Development and site alteration* shall not be permitted in:

- a) **significant wetlands in Ecoregions 5E, 6E and 7E1**; and
- b) *significant coastal wetlands*.

2.1.5 *Development and site alteration* shall not be permitted in:

- a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E and 7E1;
- b) **significant woodlands in Ecoregions 6E and 7E** (excluding islands in Lake Huron and the St. Marys River)¹;
- c) **significant valleylands in Ecoregions 6E and 7E** (excluding islands in Lake Huron and the St. Marys River)¹;
- d) **significant wildlife habitat**;
- e) *significant areas of natural and scientific interest*; and
- f) *coastal wetlands* in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b)

unless it has been demonstrated that there will be no *negative impacts* on the natural features or their *ecological functions*.

EEPAC concludes that the EIS has not shown there will be no negative impacts on the natural features or their ecological functions as per section 2.1.5 of the PPS.

Development and site alteration shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.

PPS definition is: **Site alteration**: *means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site.*

Even page 4 of the EIS states, as it relates to sections of the Provincial Policy Statement:

“Policies 2.1 and 2.2 introduce nine natural heritage features where development and site alteration is not permitted unless it can be demonstrated that no negative impacts will occur (2.1.5). Within the PPS land use policy context, the proposed pathway connection may fall under the definition of site alteration.”

Section 28(25) of the Conservation Authorities Act points out that site grading and the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere; is development. The Long List Screening display board shown at the first public information centre for this project shows earth fill as a requirement of the project. Hence, EEPAC does **not** support the position that this project falls outside the definitions in the PPS.

Even if one takes the position that it is infrastructure which falls under Section 15.3.3 of the City’s Official Plan, EEPAC points out there are clear alternatives to this project being in the Natural Heritage System.

Official Plan (specifically 15.3.3.):

It is the preference of the Municipal Council that the preferred location of infrastructure not be within the Natural Heritage System.

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. For any alternative location identified within the Natural Heritage System, an environmental impact study, accepted by the City, shall be completed to further assess potential impacts, identify mitigation measures, and determine appropriate compensatory mitigation.

Any alternative where the impacts of the proposed works as identified in the environmental impact study would result in the loss of the ecological features or functions of the component of the Natural Heritage System affected by the proposed works, such that the natural heritage feature would no longer be determined to be significant, shall be reconsidered.

The City and other relevant public authorities shall include methods for minimizing impacts when reviewing proposals to construct transportation, communication, sewerage or other infrastructure in the Natural Heritage System.

15.3.3.iii

iii) As a condition of approving infrastructure projects within the Natural Heritage System, the City shall require specific mitigation and compensatory mitigation measures that area identified in the accepted environmental impact study to address impacts to natural features and functions caused by the construction or maintenance of the infrastructure.

For the purposes of this Plan, mitigation shall mean the replacement of the natural heritage feature removed or disturbed on a one-for-one land area basis. Compensatory mitigation shall mean additional measures required to

address impacts on the functions of the natural heritage system affected by the proposed works. The extent of the compensation required shall be identified in the environmental impact study, and shall be relative to both the degree of the proposed disturbance, and the component(s) of the natural heritage system removed and/or disturbed.

Compensatory mitigation may be provided in forms such as, but not limited to:

- a) additional rehabilitation and/or remediation beyond the area directly affected by the proposed works;*
- b) off-site works to restore, replace or enhance the ecological functions affected by the proposed works; and,*
- c) replacement ratios greater than the one-for-one land area required to mitigate the impacts of the proposed works.”*

The proposed compensatory mitigation does not replace the lost habitat in particular, the provincially rare Black Walnut community (see Appendix to this report).

Even Duggan, in the SLSR states on page 36, The presence of Eastern Wood Pewee (among other area sensitive species) provides indication of the relatively intact forest/woodland canopy habitat along the Thames River Corridor. Avoiding or minimizing impacts to wooded areas that provide nesting habitat for these species should be a priority to help maintain their presence within the study areas.

The western bridge and pathway fragment a provincial rare vegetation community (Black Walnut), creating new edge effect and interferes with a MAM (marsh) community (unusual in London – less than 6% of all vegetation communities are MAM). The proposed compensation measures will not replace this riparian community.

New edges cause both direct and indirect biological effects:

- Direct changes in species abundance and distribution caused directly by physical conditions near the edge*
- Indirect biological effects involve changes in species interactions such as predation, brood parasitism, competition, seed dispersal, often invasive species.*

*Murcia, C. (1995). ["Edge effects in fragmented forests: implications for conservation"](#) (PDF). *Tree* **10** (2): 58–62.*

The habitat is being fragmented. Without any detail provided (it is all left to a future Environmental Management Plan), EEPAC sees no evidence of how impacts will be avoided. The west side (Ross Park) section of the western bridge is higher than the opposite side of the river. This will result in significant work to ensure the “run up” to the bridge is not steep. This will cause a significant change to the vegetation community.

EEPAC is also concerned about the increased traffic into Ross Park. The TVP turns northerly at the west end of the proposed western bridge. This will bring more people into the sensitive habitat from which the bridge was moved. There are no clear mitigation measures for this impact.

IS THE STUDY AREA ACTUALLY AN ESA?

The EA/EIS did not apply Council’s criteria for determining if the study area should be considered an Environmentally Significant Area (OP Policy 15.4.1.3):

To assist in the consideration of proposals to recognize Environmentally Significant Areas in the Official Plan, Council may request the submission of detailed supporting information from any agency, individual or group proposing the recognition of a candidate area. The Evaluation Criteria contained in this section will be used, together with more detailed application and boundary guidelines contained in an associated Guideline Document, to recognize Environmentally Significant Areas in this Plan. Candidate areas that clearly satisfy two or more of the following criteria will be considered for recognition:

EEPAC is of the opinion that the study area meets two or more of the seven criteria in the Official Plan, even though not all of the study area was assigned an ELC. Although the EIS indicates that the Council’s Environmental Management Guidelines were consulted, it is clear that the section dealing with the evaluation of significance as per the City’s Official Plan, was not applied.

If the area was determined to be an ESA, the Guideline Document, Planning And Design Standards For Trails In Environmentally Significant Areas would need to be applied to the area. If so, the provincially rare vegetation community would not have a paved pathway through it as it would be deemed a Nature Reserve and as such, a paved pathway would not be inconsistent with the Standards.

1. **RECOMMENDATION:** Council require the Evaluation Criteria be applied to this area prior to accepting the EA.

PUBLIC PROCESS CONCERNS

EEPAC believes if the public was clearly informed of the existence and proposed fragmentation of a Provincially Rare vegetation community, the position of the public towards the preferred option would be different. Although this is a critique of the EA process, and not the EIS, it is an important consideration. Even so, protecting the environment was ranked as the topic priority for the 140 people who attended the first PIC in January, 2015.

- a. Economic Prosperity – What is the actual cost of alternate A versus alternate E? In the panels presented at the public meeting alternate E is shown to have a negative economic impact – where are the data to support this? What are the cost differences between these alternatives?
 - a. Infrastructure Sustainability – how will this alternative address potential damage to the TVP and bridges due to flooding? This area regularly floods, and one EEPAC member has observed numerous repairs required to the trail as a result of flooding. What is the expected cost of such repairs?
2. **RECOMMENDATION:** Provide data and facts that back up preferred route (A) as being the best – particular in light of the environment, identified as most important to the public.

A member of EEPAC who attended the public open houses has this to say:

The process for determining an alternative pathway involved two public meetings. At the second meeting panels were presented that showed that following meeting 1, people had identified that the most important criterion for selecting a route was protecting the environment, and that the preferred route was A. However, in reviewing the panels at meeting 1 most SARs were not reported at this public meeting. I understand not wanting to identify specific species or their locations, but in order that people have sufficient information to evaluate the alternate routes, the number and status of SARS should have been provided. Prior to attending the EIS scoping meeting, I was keen on alternate A, although still wondering if alternate E might be better for the environment. Upon learning just how special this area is, I changed my mind completely about wanting to

support alternative A. The public was not privy to this information, so could not make a truly informed decision. Given people identified the environment as most important I expect others might feel like I do. I would recommend that the city re-examine having the bike path in the Thames corridor and consider closing the TVP “gap” with an alternate through Old North. Old North, which is well used by bikers and runners (with low car traffic), already needs better access to safe pedestrian and bike travel, so this would be a first step in this direction. There are other sections on the TVP that successfully cross residential areas. Creative thinking and involvement of the Old North community will be critical to finding a good route.

It is also unclear from the public presentation how the proposed preferred solution would fragment a rare provincial vegetation community. In fact, the presentation boards from the second public meeting say nothing about the Black Walnut community being provincially rare. There was only a reference to the UTRCA being involved “minimize the potential impact on sensitive habitat.” While it is recognized there is a limit to what can be said when SAR are present, leaving people in the dark means they are also not aware of the significance of the issue. Especially so as the highest priority given at the first public meeting, was to protecting the natural environment. It is highly probable that if the public knew the possible natural environment impacts of the preferred alignment, responses would have changed.

IDENTIFICATION OF SIGNIFICANT WILDLIFE HABITAT (SWH)

EEPAC believes there has been an incorrect application of the Provincial Significant Wildlife Habitat Ecoregional Criteria Schedules for Ecoregion 7E (2015), specific to the section – Amphibian Breeding Habitat (Woodlands). It appears an older version of the schedules was used. If page 28 of the 2015 version was consulted, EEPAC believes the Amphibian Breeding Habitat mentioned in the EIS on page 20 in Polygon R2 would also be SWH. This is because the 2015 version, unlike the earlier version, includes ponds smaller than 500 sq meters.

*Presence of a wetland, pond or woodland pool (including vernal pools) >500m² (about 25m diameter) ccvii within or adjacent (within 120m) to a woodland (no minimum size).clxxxii, lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx. **Some small wetlands may not be mapped and may be important breeding pools for amphibians.***

- 3. **RECOMMENDATION:** The City review the consultant’s conclusion that this area is not a SWH

CONCERNS WITH DATA COLLECTION

It appears no overwintering surveys of herpetofauna were conducted.

- 4. **RECOMMENDATION:** Herpetofauna overwintering and nesting surveys be conducted prior to accepting the EA/EIS.

According to “How do you avoid costly project delays? Just Ask Golder,” an undated reference card published by these consultants, the best time to do snake surveys is April to May. The cover boards were placed early in May, however, it appears the main checks were done in June.

As well, from the Appendix, “Details of Site Visits,” it appears no fall surveys were done for plants or for migratory birds. (Council approved Environmental Management Guideline - Inventory Protocol section). EEPAC would be surprised that this would not be included in the Terms of Reference for the EIS/EA.

- 5. **RECOMMENDATION:** The snake and fall vegetation surveys be conducted before the EIS is considered complete.

SPECIES AT RISK

There are apparently many species at risk in the study area as sections of the EIS, the Appendices, and Maps have been redacted.

The construction of the bridges will directly threaten the SAR through noise pollution, water pollution, and sediment build up, among other issues. The resources of that unique stretch of land cannot be said to be used sustainably if it means increased harassment of species by domestic dogs (on a field visit to public lands, dogs off leash were seen at both proposed bridge locations by EEPAC members), increased water pollution from run off arising from any winter maintenance, and potential removal of native species by visitors. Clearly the project itself results in further fragmentation of habitat.

Several times the EIS says (e.g., p. 28) that the preferred alternative will avoid areas “heavily used” by SAR – what is meant by “heavily used”? Shouldn’t all areas used by SAR be avoided?

- 6. **RECOMMENDATION:** All areas used by SAR as well as their habitat should be avoided.

UTRCA COMMENTS (Appendix 5)

Letter from UTRCA to Ms. Stanlake-Wong

- *‘much of the study area is located within flooding and erosion hazard areas’*
- *‘the City of London should not develop new sections of pathway which are highly prone to flooding and erosion’*
- *‘Any pathway should be kept a minimum 50m from the water’s edge to help maintain the recommended Riparian buffer. Alternatively, keep the trail 30m, from the edge of the riparian vegetation’*

- 7. **RECOMMENDATION:** EEPAC supports these UTRCA comments, noting the Athletic Fields regularly flood early in the calendar year in years with normal snow pack.

NET EFFECTS TABLE (Table 6 on page 35-37 of the EIS)

EEPAC strongly disagrees with Table 6. Given our position that there are Medium Net Effects, we take the position that as proposed, there would be impacts on the natural features and a reduction in ecological functions, **contrary to the PPS**.

In this case, the City cannot guarantee the project will not result in a net loss. Clearly this project will adversely affect a threatened species so sensitive that even the Environmental and Ecological Planning Advisory Committee was not privy to the full details of the specific species and its (their?) location. When a threatened species is found near a project, the ecological risk arising from the project is even greater, and we must assume that the project in this case is not appropriate. Negative impacts should be avoided, and in this instance, it appears that the alternatives have not been given their due weight. In addition, when questioned at public meetings, citizens made clear that they would like the new link but only if it would not cause environmental damage (protecting the environment was selected as the highest consideration at the first PIC). It can be assumed that if there were greater disclosure of the ecological impacts, a section of the attendees would not approve the current preferred routing for the TVP.

EEPAC's COMMENTS ON NET EFFECTS (see pages 36 of EIS):

CONSTRUCTION

- *Construction related to run off sedimentation* – there is no conceivable way to put a crane in a river without having any erosion or changes in sediment inputs; if sediment inputs increase for some unforeseen reason how will it be dealt with?
- Even short-term increases in sediment inputs could potentially harm terrestrial or aquatic SAR. Low water levels will concentrate sediment inputs and potentially increase risk to aquatic organisms.
Disturbance to Fish and Fish Habitat – How will riffles be avoided? There are riffles at the proposed eastern bridge location. This will have a negative effect on aquatic life.

8. **RECOMMENDATION:** Avoid in water work.

- *Damage to root zones*
 - o What defines a 'mature forest'. Are the forests the path is going along not considered mature?
 - o Argue **Low Net Effect**
- *Soil compaction*
 - o Incomplete information about: De-compaction methods
 - o Have you factored in soil filling/recycling and activation of seed banks that include invasive species?
 - Invasive species seed banks have high germination rates after disturbance occurs, as well as low seedling mortality (see invasive removal section)

Argue **Medium Net Effect**

POTENTIAL LONG TERM IMPACTS

- *Tree and vegetation loss*
 - o Which area is considered compensatory restoration area?
 - o Addition of saplings does not negate negative effects of removing mature, reproducing trees
 - o Argue **Medium Net Effect**
 - o Incomplete information about: – How many young trees equal one old tree? What is the rationale to back this reasoning up? Where is the data to back this up? No matter what compensatory mitigation is offered – fragmentation of a black walnut community with on-going pathway use will have negative effect associated with it (see appendix).
- 9. **RECOMMENDATION:** The pathway not go through the provincially rare Black Walnut community and be diverted around it. If the pathway is left in this general area but outside the Black Walnut community, the City should either:
 - expropriate lands from the Scouts as it appears the Scouts do not support an easement through the presently cleared lands on their property
 - separate the pathway from the Scouts lands with a fencing treatment that would prevent viewing of its lands.

EEPAC is unclear how diverting the pathway into and fragmenting the FOD7-4 community will prevent people from viewing the adjacent lands.

Disturbance to sensitive wildlife

- Portion of redacted pages in EIS indicates the presence of significant wildlife habitat
- Organisms will still be affected by the presence of human and pet-related disturbances regardless of moving the crossing 100m further
- Signage to encourage TVP users to stay on the pathway does not work – the number of trails that lead down to the river along existing parts of the TVP (e.g. Killaly) are indicative of this. While it might be said anecdotally that 90% of people stay on paths, when you increase the number of users from say 100 to 1000, the number of people in the 10% that don't stay on a path increases from 10 to 100, a tenfold increase.
- Herpetofauna - The eggs at the top of a nest may be covered by only a few centimeters of sand and gravel. Many nests in high-people-traffic areas get stepped on unknowingly, and many eggs can be dinged, damaged or completely crushed. This makes the nest even more vulnerable to predation by mammals because the eggs can start to rot, which can then attract scavengers. From an EEPAC member: *I have observed turtles laying eggs on the northern edge of the sports fields. Turtles had to cross the bike path to get to this site. A day after I saw the turtle lay its eggs, I returned and found they had been dug up. It could have been by humans, dogs or other predators. I also observed an injured turtle on the soccer fields. How will adding a pathway provide better protection for these animals?*
- Herpetofauna bask on pavement and are subject to being run over by bikes or maintenance vehicles either by accident or deliberately (as was found at Long Point –Ashley, E. Paul, Kosloski, Amanda and Petrie, Scott A. (2007) 'Incidence of Intentional Vehicle-Reptile Collisions', Human Dimensions of Wildlife, 12:3, 137 – 143. URL: <http://dx.doi.org/10.1080/10871200701322423>)
- A measure taken has been to move the western bridge 100 m further away from sensitive habitat. How does this avoid other areas used by these and other SARs, which are known to move significant distances?
- How will impacts to SAR be determined? What will be done if SAR are impacted by this plan? What will be the mitigation/compensation for loss of SARs in this region should it occur post construction?
- Argue **Medium Net Effect**
- *Decreased invasive species*
 - Length of monitoring for establishment of native flora takes multiple years and requires active removal of re-emerging invasive seedlings
 - Increased presence of people leads to increased presence of pets (dogs)
 - Will the removal of established flora be only subjected to areas near the trail system?
 - This is not a positive effect – removal of invasives could occur without building the TVP extension, so how can it be argued that adding the TVP reduces invasive species? In fact, bringing in construction equipment potentially increases invasive species.
 - Argue **Low Net Effect**

- *Increased litter*
 - Affected areas will likely continue to include unmarked side trails within the entire region; not just along TVP trail
 - Management of waste receptacles requires the use of carts/cars – source of movement of invasive species, disturbance to wildlife, attraction to waste receptacles by scavenging fauna (squirrels, raccoons*, birds, etc)
 - Use of wildlife-proof garbage receptacles would be required
 - Incomplete information about: Garbage cans presently located in the soccer fields are only there in summer. Is this the plan for the new section of TVP? How will garbage cans be accessed? By truck? Litter is very high along the present TVP in this area. Presumably there is a waste diversion system in place there now?
 - Compliance with no littering rules is not feasible – therefore argue **Low Net Effect**

10. **RECOMMENDATION:** Don't increase infrastructure in this area.

*Raccoons are natural predator of the species at risk indicated. By introducing litter containers, you introduce an attractor of a greater population of this natural predator. As it is unlikely containers will be cleared each day, there is a **low net effect** NOT no net effect.

- Potential Off-leash dog use
 - Off-leash dogs disturb nesting areas and damage sensitive wildlife habitat
 - Dogs urinating in nesting and sensitive wildlife habitats "marks" the territory, which makes it undesirable or uninhabitable to the wildlife living there
 - Dog fur/paws pick up seeds, which can spread invasive plant species
 - Unleashed dogs can injure (or even kill) wildlife
 - Proper pet waste disposal does not occur in the winter – evidenced by the amount of excrement that appears after the snow melts
 - Enforcement policy is not consistent nor adequate enough to monitor the length of TVP, let alone the collective extent of unmarked side trails. For example, it is unlikely the City will have an Animal Control Officer on site during all day light hours to enforce the dog off leash by law which is routinely ignored in Ross Park, the Athletic Fields and in ESAs which are managed by the UTRCA under contract to the City.
 - Full, let alone high compliance with on-leash dog rule is not feasible – argue **Medium Net Effect**

Theme #2 - If the project is approved, EEPAC has the following recommendations for project requirements

Duggan (p.36, SLSR) recommended the following. EEPAC concurs:

11. **RECOMMENDATIONS:** for the protection of Significant Woodlands include:
- Ensuring that hydrological functions of the wooded lands are not disturbed
 - Not reducing the amount of natural cover present such that it reduces the patch contribution to 10% within 2km of the study lands; avoid increasing the perimeter to area ratio of the entire patch.
 - Ensure existing connectivity to other natural areas along the Thames River are maintained; enhance connectivity where appropriate/feasible
 - Avoid disturbance to trees that make up the mature structure of the floodplain forest (in particular, avoid disturbance to large diameter trees)

- Avoid habitat components that include amphibian breeding areas, rare wetland plant assemblages, and during the core of breeding bird season (late April – mid July)
- Avoid disturbance and/or plan for restoring lands within the forest community type (FOD7-4); compensate and/or enhance the understory vegetation communities associated with this community type where the understory and ground layers may be disturbed and dominated by non-indigenous plant species
- Avoid disturbance and impacts to endangered and threatened SAR and their habitat.

PRE-CONSTRUCTION

12. **RECOMMENDATION:** Training requirements in the identification and protection of Species at Risk for all contractor staff be included in the bid documents. The training requirements should be reviewed by a qualified species at risk biologist before being included in the bid documents. It is important that the training be provided by a qualified person approved by a City Ecologist or the UTRCA Species at Risk biologist.

13. **RECOMMENDATION:** The Environmental Management Plan be detailed and before acceptance, reviewed by EEPAC and the UTRCA Species at Risk biologist and require the approval of a City Ecologist.

14. **RECOMMENDATION:** Herpetofauna nesting and overwintering sites be identified prior to construction and protection measures put in place to the satisfaction of a species at risk biologist.

15. **RECOMMENDATION:** The proposed natural fences be made up of non-fruit bearing thorny plants to reduce the likelihood of humans or predator species being attracted to the screening vegetation.

16. **RECOMMENDATION:** The screening vegetation be planted as early in the process in possible to increase the effectiveness of the screening prior to the opening of the pathway.

If it is Council’s decision to proceed with the preferred option, EEPAC is concerned with the increase of human and dog “traffic” to the area of Ross Park where sensitive habitat is located. EEPAC notes that the bridge was moved from this area to protect the habitat. There is no clear plan to minimize future interference of this habitat.

17. **RECOMMENDATION:** A specific screening and deterrence plan be prepared for the section of Ross Park adjacent to this sensitive habitat. The work should consist of both native, non-invasive plant species and physical barriers as approved by the Species At Risk Biologist at the UTRCA.

SEDIMENT AND CONTROL MEASURES

More detail is needed when describing the actual measures that will be taken to reduce erosion and control sediment. There is concern about construction related run-off sedimentation. Perhaps there needs to be monitoring before and after construction?

In its submission included in the EIS, UTRCA cautions regarding flooding and the fluvial nature of the River in the study area is still changing.

Bridge piers in the water can lead to local scour holes and can act as a barrier to floating debris in the water. By not considering high flows and not providing the actual locations of the bridge piers, there is a gap in the report. The EIS indicates that a temporary bridge (east) may be built which will require two piers in the water. This may have effects on flow, benthic invertebrates, fish habitat and cause changes to the sediment substrate.

- 18. **RECOMMENDATION:** The proposed erosion and sediment control measures should be reviewed by a qualified inspector

IMPLEMENTATION AND MONITORING OF THE PROPOSED COMPENSATION PLAN AND INVASIVE SPECIES MANAGEMENT PLANS

Monitoring will be very important. The results from a previous city infrastructure project (Medway Sewer) were mixed. On a site visit a few years ago with an EEPAC member, Mr. Soldo and Mr. Copeland were shown where soil had run off each end of the first bridges built north of Fanshawe Park Road. There was no vegetation and no soil left for any plantings. The original restoration plan called for prairie species rather than floodplain species.

There must be, as proposed in the Executive Summary, a compensation / enhancement Plan and an Invasive Species Management Plan developed during the Detailed Design stage and implemented during operation. Monitoring for establishment of native flora takes multiple years and requires active removal of re-emerging invasive seedlings.

- 19. **RECOMMENDATION:**

The Compensation Plan and Invasive Species Management Plan from the project bidders must be reviewed by EEPAC and a City Ecologist before a contract is awarded. High weighting should be given to the quality of the Plans and the monitoring in determining the winning bid even to the extent of not awarding the contract to the lowest bidder but to the bidder with the best Compensation and Invasive Species Management Plans. A City Ecologist's approval be required before either Plan is implemented.

The endangered Eastern Flowering Dogwood was found in the study area. According to the Five-Year Review of Progress Towards the Protection and Recovery of Ontario's Species at Risk (2015) which includes this plant, there are a variety of habitat measures. Given the redaction of the document, EEPAC is unclear as to the location of this endangered species. Hence we are unclear as to whether or not the Provincial regulations will be applied or included in the Environmental Management Plan.

20. **RECOMMENDATION:** The City include a specific Restoration Plan requirement in the bid documents which follows the recovery plan for Eastern Flowering Dogwood as set out by the Province:

Other conditions designed to minimize adverse effects included, but are not limited to:

Transplanting Eastern Flowering Dogwood trees to suitable habitat on site to protect them from adverse effects;

Planting additional Eastern Flowering Dogwood trees; and

Ensuring no soil disturbance within 20 metres of Eastern Flowering Dogwood trees that do not interfere with hydro transmission lines.

Further information regarding ‘overall benefits permits’ is available through Ontario’s Environmental Registry.

A total of 15 agreements were entered into for Eastern Flowering Dogwood. These agreements were enabled through Ontario Regulation 242/08 (prior to the July 1, 2013 amendment). Conditions of the agreements involve implementing actions in the mitigation plan, including, but not limited to:

Minimizing adverse effects (e.g., measures to minimize disturbance to trees and herbaceous plants such as identifying and marking individuals, establishing a buffer area and avoiding compaction of soil);

Monitoring, collecting and maintaining information on the species and the mitigation measures taken; and

Submitting an annual report summarizing the results and the effectiveness of the work.

There are significant challenges in bringing in construction equipment (p. 2-3 EIS). A laydown area and possibly a laydown area in the Thames River in the area of the eastern bridge in particular are noted. The eastern bridge construction may also require a temporary bridge with two piers in the water. Given the sensitivity of the area (floodway and riffles) and the proposed compensation measures, there are challenges in trying to restore the areas damaged. Cobble and gravel are the most common substrate for Ontario fishes. Additionally, many fish prefer to mate in shallow water less than 1 meter in depth. While it is unclear if any species spawn in the areas proposed for bridge construction, some of the common fish would use the riffle habitat. July 16th is outside of the darter spawning season but not outside of the season for other native fish species. Longnose gar spawns in early July and most sunfish in early to mid-summer. Therefore, caution should be taken.

21. **RECOMMENDATION:** The UTRCA and a City Ecologist review the construction plans prior to commencement of work (during detailed design and the subsequent design phase) and their recommendations for changes be given priority.
22. **RECOMMENDATION:** A detailed survey of these reaches of the river be done by a qualified reviewer of aquatic habitats to determine if any fish or mussel species of concern are there, and the required avoidance and mitigation measures take place.

23. **RECOMMENDATION:** A qualified reviewer should be retained to determine the risk of flood damage for any temporary piers prior to project approval.

The EIS recommends on page 33 additional design measures for the western bridge that are visual barriers between the bridge and what is a redacted section (we assume it is a SAR). We agree. While there are no barriers currently, there will be more people with access to this sensitive area.

24. **RECOMMENDATION:** Treatments on the western bridge and the section of the TVP in Ross Park adjacent to the River should be included in the Compensation Plan to make it difficult to observe or approach any species at risk or their habitat.

CONSTRUCTION

25. **RECOMMENDATION:** The Clean Equipment Protocol for Industry: Inspecting and cleaning equipment for the purposes of invasive species prevention must be followed

26. **RECOMMENDATION:** In river works must be outside fish spawning season as per Department of Fisheries and Oceans requirements and as recommended by a specialist in Thames River aquatic species.

27. **RECOMMENDATION:**

- a. if in-water construction is done, sediment quality be preserved
- b. water levels and quality need to be maintained for fish and benthic habitats both upstream and downstream of the in-water works. Once the works are completed, the construction site must be restored to pre-construction sediment and water quality standards.

28. **RECOMMENDATION:** As per page 29 of the EIS, no tree cutting or disturbance take place between April and October 15th. (We do not agree with the suggestion on this page of the EIS that some tree clearing take place outside this window).

29. **RECOMMENDATION:** A tree cavity search (p.29-30) take place prior to any tree cutting or disturbance to determine if nesting bird or bat habitat will be disturbed. There are recognized experts at Western University who should be consulted if bats are found to determine if they are also species at risk. Trees identified as maternity roosting habitat must be protected as three endangered species of bats are known to be in the London area and they and their habitat is automatically protected under Provincial legislation.

30. **RECOMMENDATION:** A qualified biologist (preferably a Species at Risk Biologist from the UTRCA) should be on site at all times during construction. This biologist must have the authority to stop work if required to avoid harm to species at risk or their habitats.

POST-CONSTRUCTION

There is no mention of winter maintenance. It should be stated one way or the other. If there will be winter maintenance on the bridges, this needs to be considered in bridge design. Using salt could have serious negative impacts on water quality and aquatic species.

31. RECOMMENDATION: Given the sensitivity of the habitat and the species, no winter maintenance be considered for any parts of this section of the TVP.

Maintenance in general must be done differently for this area. There should be minimal disturbance to the SAR and the habitat of SAR. There is no mention of truck access and its potential impacts. If garbage is to be removed and trails maintained there will have to be truck access – what are the potential impacts to SARs and significant habitat and woodlands?

Generally, maintenance of the TVP includes clearing at least a 0.5 m on either side of the path to provide a safe place for a pedestrian to get away from a speeding bike. The more asphalt, the more basking area is created which can lead to herpetofaunal mortality.

32. RECOMMENDATION: The pathway be a maximum of 3 m noting that it will be a least a metre wider due to maintenance activities.

Summer staff who do cutting of grass along pathways change more regularly than other city staff. This means that the training recommended in the EIS must be regular and re-occurring. The onus is on the city to provide this.

33. RECOMMENDATION:

- a. A species at risk biologist provide training each year for city summer staff.
- b. Summer staff be assigned to this area for the entire work season to reduce the chance of an untrained worker in the area.
- c. Any replacement staff be provided with the same training as the regular staff for this area prior to working in the area.
- d. Any sightings of species at risk be reported immediately to a supervisor and then to a City Ecologist or the UTRCA. Each staff member be given this contact information during their training.

34. RECOMMENDATION: An annual report of training and any SAR species sightings be provided to a City Ecologist and a Species at Risk biologist at the UTRCA by October of each year.

35. RECOMMENDATION: No lighting be provided for this section of the TVP. This would mean an ever greater negative impact on Species at Risk. Even the EIS recommends that no lighting be part of this project.

MISCELLANEOUS COMMENTS

a. There is a small community shown on Figure 3A – Vegetation Communities under ELC ‘SA.’ Shallow Aquatic communities are some of the rarest communities in London according to the Regionally Significant Vegetation Communities table prepared by Bergsma and DeYoung in 2006.

This is troubling because this community is shown to be in the area of a possible future Broughdale/Old North connection. Even Duggan in the SLSR (p. 35-36), in discussing all the wetland communities, indicated “Special consideration must be given to avoiding impacts to these communities and the species that are present.”

36. RECOMMENDATION: If there is a future connection in this location, additional work be done to determine the extent of the SWH. Otherwise, this area should be avoided for any future connection.

b. The species at risk in some places where it should have been redacted. This should be corrected in future versions of this document and the ESR.

c. The number of SARs is ambiguous – on page v in the summary – 4 threatened species and 2 special concern species are listed for a total of 6, and two provincially rare species, which would put the total number of SAR (plants and animals) at **8**. In table 1 pg. 13, 13 plant and animal species are listed. The UTRCA identifies at least one additional SAR, as well as its habitat on pg. 14, and also potentially several aquatic species. On page 20 snakes are identified and blacked out – presumably this indicates another SAR not in the count in the summary? Table 3 lists 5 provincially significant plants, which could reduce the number in table 1 from 9 to 5. Between page 13 and 20, between **9 and 14+** different SARs (plants and animals) are identified. On page 24, species at risk include one endangered species (outside study area) and the Eastern Sand Darter, three threatened birds, at least 2 threatened reptiles, two (maybe 4) threatened aquatic species and two species of special concern for total of 10+ (this does not include plants, for which there are at least five listed in Table 3). Does this put the total to **15**? Certainly there seems to be more than the 8 suggested in the summary and the presentation panels at public meeting one.

37. RECOMMENDATION: There needs to be a very clear statement of how many SARs could be potentially affected and their status in the summary. This needs to be consistent with the main text. EEPAC understands why SAR species names should be removed and their locations not identified, but sees no reason why Table 1 and Table 2 could not include SRank, SARA and ESA, 2007. This would make it possible to at least check consistency in numbers.

38. RECOMMENDATION: Schedules to the Official Plan be updated through an Official Plan Amendment and in the London Plan, to reflect the Significant Woodlands, Wetlands and Corridors identified and shown in the EIS. (Figure 5 + the wetland on the Sisters of St. Joseph property)

APPENDIX**Why compensatory mitigation is neither compensation nor mitigation**

Compensatory mitigation violates the spirit of fundamental international agreements on the protection of biodiversity, notably the Convention on Biological Diversity and the Aichi Targets, specifically [Strategic Goal C](#): To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity. Furthermore, under this Goal is Target 12: “By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.” The preferred route for the TVP cannot be said to uphold this target as it involves the removal of important woodland and threatens the local survival of a threatened species. As EEPAC does not have comprehensive details to complete our analysis, the members are left to speculate as to which species is affected. If our suspicions are correct, the species of concern is already suffering from difficulties in breeding, a trend that is still puzzling scientists. Placing a bridge even in proximity of this species, fragmenting its habitat and disrupting its breeding grounds, is in complete contradiction to the targets set out in Aichi.

A number of problems arise from the City permitting compensatory mitigation when the alternative arrived at in the EA is not the best for the natural environment. In particular, any project, which will lead to a loss of biodiversity and where offsets are proposed as a solution, must first be scrutinized under the mitigation hierarchy (avoid, mitigate, compensate). In simple terms, the City must first seek to avoid any loss of biodiversity or environmental damage, then work to minimize any loss of biodiversity, and then finally, in the case where loss of biodiversity cannot be avoided, any losses must be offset with improvements in biodiversity elsewhere, either offsite or in close proximity to the development. The ultimate goal of biodiversity offsetting is to have no net loss of biodiversity, and, where possible, to achieve a net gain in biodiversity. What is proposed in the compensatory mitigation does not achieve this goal as the City land available for compensation will not replace the loss.

In regards to the Thames Valley Parkway, the chosen path directly violates the idea behind the mitigation hierarchy. The plan seems driven more by a desire to have an off-road link between the river paths, than to avoid loss of biodiversity or disturbance to rare or threatened species or ecosystems. **A number of the alternate routes suggested easily offer opportunities for a link that would cause less environmental harm.**

The decision to place the bridge 100m away from the original planned location of the bridge suggests that the City sought to minimize the loss of biodiversity. However, 100 metres is an insignificant distance to move a development project in this case. The TVP is not a one-time disturbance; creation of the pathway will leave a permanent mark on the area and will lead to continuous threat of incursion by humans and/or their pets. Thus, assuming that the threatened species is mobile, it is logical to assume that the presence of the species will quickly become public which could lead to even greater levels of danger.

Furthermore, the project incorporates elements of level three of the mitigation hierarchy with references to planting trees to offset the loss of tree cover (in this case, a loss which would include patches of black walnut). Offsetting, however, is problematic for several reasons. In most cases a metric is used to determine the ratio of the offset. For instance, Section 15.3.3.iii states, in part, “For the purposes of this Plan, mitigation shall mean the replacement of the natural heritage feature removed or disturbed on a one-for-one land area basis.” (nb: land area basis is not explained). In the second draft of the London Plan, the compensation for loss of trees is found at 323_2_b:

Except where otherwise specified in City by-laws, trees shall be replaced, on the same site, at a ratio of one replacement tree for every ten centimetres of tree diameter that is removed. Guidelines may be prepared to assist in the implementation of this policy.

Simply stated, young trees take time to grow. It is also likely that the restoration plan will focus on City property which is not near to the river corridor being fragmented. It is primarily the city parkland south of Tetherwood Blvd and the Athletic Fields that could be locations for plantings. It is unclear what plantings are proposed or even budgeted for or what would be necessary to create a new, intact forest that would support forest interior or area sensitive species.

The issue is that these metrics are subjective and imprecise. A patch of black walnut trees has a very specific intrinsic value that cannot be reduced to a metric whereby a certain number of replacement trees can have equal value. Those replacement will take decades to reach the stature and functional value of the current trees. Furthermore, a wealth of evidence supports the fact that many of the seedlings perish and consequently this solution to the loss of a stand of black walnut trees and other older trees is unacceptable. It is unclear in the report who will monitor the success rate of the new trees, who will ensure their care and watering during periods of drought, and who will replace any lost trees.

Page 32 of the EIS has some “wishful thinking” about who might carry on the ongoing invasive species management. At this stage, there is no way to know what the City will commit to do.

Moreover, while the current woods have a high value at present, the newer trees will have a lesser value (will the City will establish a Black Walnut community?), which will make them at risk for removal in the future for further development or site alteration or infrastructure. Such instances can occur regularly with biodiversity offsetting unless an offset is established to remain in perpetuity. Otherwise, the lower valued offset can be viewed as an ideal site for a different project only decades later. Thus, the community will have lost not only the original high value ecosystem, but its replacement as well.