

Philip Aziz Improvement Environmental Assessment, November 2022, received by ECAC from City Ecologist M. Shepley after its December 15, 2022 meeting

Working Group Comments provided by P. Baker, S. Evans, S. Hall, S. Levin, K. Mosher, V. Tai

EXECUTIVE SUMMARY

ECAC has concerns about how impacts will be avoided and mitigated based on what appears to be some incomplete data in the document.

Although ECAC appreciates AECOM's use of publically available information such as iNaturalist, ECAC strongly recommends that iNaturalist and eBird as well as the Western Biodiversity sites be reviewed during detail design for up to date data. See Appendix 1 for URLs as well as species not included in AECOM's work that have been sighted. (For example, despite what the EIS says in Section 3.7, page 31, a Cerulean Warbler was reported and photographed in the area on May 14, 2021 by several experienced birders. The eBird observation is, however, noted in Table 3-10 on the following page. The inconsistency is troubling.

ECAC is unclear how involved Scott Gillingwater, the species at risk biologist at the Upper Thames River Conservation Authority (a recognized expert in aquatic reptiles of Southern Ontario) has been in this project since the site visit indicated in the EIS.

Given the two similar projects in close proximity (this project and the upstream removal of the water pipe), ECAC is concerned there may not have been a complete sharing of data for reptiles and mussels. ECAC has been given to understand that a significant amount of site information was provided to Stantec for the water pipe removal project which may or may not also have been provided to AECOM. (See Appendix 2 to this report for extracts from the August 6, 2021 Scoping Meeting where these issues were raised).

Given the conflicting "no work windows" for various species required by legislation and best practices, who will decide which harm is least concerning for this project?

ISSUES AND RECOMMENDATIONS

PRE-CONSTRUCTION

ECAC is unclear if information from the water pipe removal project (Stantec and City of London Water Engineering) as outlined in the August 6, 2021 scoping meeting has been shared. It is unclear whether or not the mussel relocation has been to an area outside the proposed site of the new sewer outlet. We are also unaware of any reporting to date as to the success of the relocation plan.

Based on the limited project description it is not clear as to why in-water works are required.

ADDITIONAL FIELD STUDIES

The document indicates on Page: ii -

“The following additional field studies may be required during detail design:

– Visual encounter and basking surveys for Queensnake and Spiny Softshell.”

However, it is well known that many of the Spiny Softshell Turtles known to use this site have been found buried in sand/mud, not just basking in the open. Scott Gillingwater will confirm this given his many years of work with this species. Also, as the document points out, Queensnake are not confirmed at the site, but suitable habitat exists.

Basking surveys are not enough to confirm presence of Spiny Softshell or Queensnake.

RECOMMENDATION #1: If in water work is required, searches through the substrate as advised by Scott Gillingwater MUST take place before equipment is used.

RECOMMENDATION #2: Before detail design is finalized, confirmation of successful mussel relocation be required. Detail design should include consideration of monitoring results from the upstream water pipe removal project.

RECOMMENDATION #3: Scott Gillingwater be included in the development of the detailed Environmental Management Plan including re-establishing any turtle basking sites if required, as well as construction monitoring and post construction monitoring of reptiles.

RECOMMENDATION #4: The EMP include the requirement to conduct pre-construction amphibian and reptile surveys as recommended by Scott Gillingwater.

RECOMMENDATION #5: Scott Gillingwater be retained to do the SAR training for construction staff and be retained to be on site during any and all construction work affecting aquatic SAR.

CONSTRUCTION IMPACTS

The document indicates dust suppression measures may be required at some point during construction.

RECOMMENDATION #6: Before dust suppression measures are used, the site supervisor must consider any contamination it might cause to the river or to species in and around the river vs the impact of dust on those species. If the supervisor is unclear, a City Ecologist or the onsite ecologist if retained, should be able to provide advice.

ECAC also notes there is nothing in the document about reducing or limiting contaminants with this project in order to provide a net benefit.

This new outflow provides no protection from road and field contaminants.

RECOMMENDATION #7: Detail design include measures to reduce contaminants from the road and athletic fields and any water quality monitoring that may be required as part of permitting.

Given the sensitivity of the area, ECAC feels weekly inspection of ESC measures may not be sufficient particularly prior to and after rain events.

RECOMMENDATION #8: Daily or every other day inspection of ESC measures be required.

Pipe Capping

The issue of habitat change once the old pipe is capped (outflow changes resulting in the possibility of less sediment deposited) is a potential issue, though the island/rocky habitat created in the area, most likely as a result of the upstream bridge, should still provide sediment deposits. The confirmed nesting area upstream of the site should not be impacted by capping the current pipe.

However, how the pipe will be capped? Will machinery enter the shallow water area to do this part of the project?

RECOMMENDATION #9: If at detail design, it is determined that in water work is required, Scott Gillingwater must be consulted. If habitat disturbance is required, additional permitting may be required.

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“Loss of Candidate Queensnake Habitat – Suitable aquatic open rocky habitat with an abundance of crayfish was identified along the Thames River. The Survey Protocol for Queensnake in Ontario (MNRF, 2015c) should be used to confirm species presence. This aquatic habitat was identified outside of the Study Area and impacts are not anticipated however, individuals may occur in the Study Area to reach hibernacula and disperse to other suitable habitats. Best practices for Reptile and Exclusion Fencing (MECP, 2019) should be used to prevent individuals from entering the CDA.”

Fencing areas for Queensnake can be difficult, as the species may use underground features for movement, including crayfish burrows, plant root systems, etc. Additionally, Queensnakes are able to climb, and will follow fencing until it ends or a gap is found.

RECOMMENDATION #10: When drafted, the detailed description of fencing for this species specifically should be reviewed by Scott Gillingwater for confirmation of effectiveness.

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“Loss of Turtle Nesting Areas (including habitat for turtle SOCC and SAR) – turtle nesting habitat can occur wherever there are sun-exposed sand/gravel/soil substrates in proximity to an aquatic feature; including, for example, watercourse banks, gravel bars and islands, road shoulders and embankments, lawns, gardens and gravel laneways and lots (WSP, 2018). Proposed works along the banks of the Thames River to accommodate the new stormwater outlet may result in the removal of potential turtle nesting areas. The existing stormwater outfall is in an area where natural deposition occurs in the Thames River; deposition of soft, muddy substrates is further amplified by the rapid deceleration of the stormwater flows as it joins the main channel. This has created preferable conditions for turtle species to carry out essential life stages by providing nesting habitat, cover and resting habitat. Changes to the existing stormwater outfall that affect the rate of stormwater flow may result in the loss of suitable turtle habitat as sediment might not accumulate at the same rate. It is recommended to relocate the new outfall at least 50 m downstream from the existing outfall, which will remain in place but will be plugged and not functional, to avoid direct impacts to the sensitive turtle habitat. There is potential that the accumulation of deposited suitable substrates may erode over time if there is no water flow from the existing outfall; however, the potential effects are not well understood at this time and a fluvial geomorphological assessment with review of the hydraulic properties (HEC RAS hydraulic model output) of the Thames River and the outlet channel (if available) would be required during detail design.”

RECOMMENDATION #11: The information here should not be focussed solely on nesting, since it is the shallow, soft-bottomed habitat that is used for various life stages of Spiny Softshell, Snapping Turtle and Map Turtle. The accumulated sediment above the water line may be used for nesting, but the accumulated sediment below the waterline is used for cover, aquatic thermoregulation and foraging. This is briefly mentioned in the body of the paragraph, but should be highlighted in the title of the paragraph as well. For example, it could be changed to: Loss of Turtle Nesting, Cover, Thermoregulation and Foraging Areas.

RECOMMENDATION #12: A fluvial geomorphological assessment with a review of the hydraulic properties MUST be conducted.

Similar to the point above, the title should be changed to: Loss of Turtle Nesting, Cover, Thermoregulation and Foraging Areas.

All shallow, soft-bottomed habitat in and around this area appears to be very good for Spiny Softshell nursery/cover/aquatic-thermoregulation habitat. There are not many areas that maintain extensive shallow, muddy/sandy, south-facing habitat of this type within the city (most areas have more rock or have canopy cover, or both). It is highly likely this area is used by softshell turtles to bury into the substrate for cover and thermoregulation (a typical behaviour of this species). Softshell turtles can be very difficult to locate in this type of habitat. Any in-water work (including machinery or foot traffic) in this area could result in injury/mortality. Incidentally, there is no mention of reptiles in Section 1.2 of Appendix F – Wildlife Exclusion Measures

RECOMMENDATION #13: Before any in water work take place, Scott Gillingwater must be consulted as to best practices for this section of the river.

NET IMPACT TABLE (Table 7-1)

There seems to be a disconnect in places. For example, potential impacts are listed as none or low yet on page 83 it says “Avoidance measures *can aid* in addressing these potential impacts”. It doesn’t say that avoidance measures will *ensure* no impacts – so how do we know there will be minimal impacts? What evidence is there? ECAC is unclear as to how the loss of turtle nesting areas is considered a low net negative impact when Medium Net Impact is defined as “indicating loss of habitat possessing moderate potential habitat value, or loss of a portion of habitat that may result in long term impact to the remaining habitat, or loss of associated key ecological functions.” Given the current outlet is already KNOWN habitat of value to a SAR species, the EA seems to be highly subjective.

RECOMMENDATION #14: Change 2.1.2 Loss of Turtle Nesting Areas (including habitat for turtle SOCC and SAR) in the net impacts table to MEDIUM from LOW.

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

RECOMMENDATION #15: The EMP include a compensation plan for any loss of habitat (assuming such information will be required for some of the permits the city will need for the work).

RECOMMENDATION #16: The EMP include detailed compensation plans for loss of trees in the study area as it affects the FOD7-4 community.

The Table also suggests that impacts to SAR mussels will be low. However this is predicated on a successful relocation. If the removal is outside the required window (temperature over 16 degrees C), then the impact will be much more severe. It is also unknown to ECAC whether the relocation of mussels during the upstream water pipe removal relocation was a success, particularly with regard to mussel survival after relocation.

RECOMMENDATION #17: The table in 2.1.3, *Harmful Alteration, Disruption, or Destruction of Fish Habitat, Death of Fish, and alteration of Aquatic Species at Risk Individuals or Habitat* be changed to include “medium net impact if measures taken are not successful.”

INVASIVE SPECIES

RECOMMENDATION #18: The Invasive Species Plan to be included at detail design must also include an invasive species removal plan and monitoring program of no less than three years.

OTHER ISSUES

The project includes widening of roads in an area very close to the new Wampum Learning Center, which includes outdoor learning spaces. What are the potential impacts to the learning center? Has the *Western Office of Indigenous Initiatives* been consulted?

Although there is a list of the proposed components of the project, ECAC found it hard to envision the project. Maybe a visual description doesn't belong in the EA, but we have seen more detail in other EAs. It would really help to see this to properly evaluate the potential impacts. An overlay of the ELC areas using the air photo provided in the June 2022 presentation to the Committee would have been helpful.

In several places wording is “wishy washy” – for example in two places in Table 3.4 it says that Western University and sports fields *may be* sources of pollution – it should say that they *are* sources of pollution. In section 6.1 Fragmentation and Natural Vegetation and Habitat – the Thames River *is* a movement corridor – it is not necessary to say the Thames River is *likely* a movement corridor.

RECOMMENDATION #19: Wording to be changed

Will Western's decision on the entrance to the parking lot off Philip Aziz have an effect on the detail design? If so, a decision from Western is required before detail design is finalized.

APPENDIX 1

MISSING/INCORRECT SPECIES OCCURRENCE DATA

Below is a list of missing/incorrect species occurrence data from iNaturalist or eBird for the Philip Aziz EIS. Additionally, here is a link to the Western Biodiversity Inventory Project for review at detail design: <https://inaturalist.ca/projects/biodiversity-inventory-at-western>

UPDATES:

Silver Shiner: In the document it says 2021 as latest year. Observed in 2022 on iNat around the study area: <https://inaturalist.ca/observations/125492012>

Wavy-rayed Lampmussel: Document says NA as latest year. Observed in 2022 in study area: <https://inaturalist.ca/observations/111576562>

Spiny softshell: Document says 2021 as latest year. Many observations in 2022 in study area: <https://inaturalist.ca/observations/130957409>

Eastern Wood Pewee: Document says 2021. Observed in 2022 in study area on both Ebird and iNat: <https://ebird.org/map/eawpew?neg=true&env.minX=-81.29591028973744&env.minY=42.995806533965876&env.maxX=-81.24509852215931&env.maxY=43.01570358131446&zh=true&gp=false&ev=Z&excludeEx=&mr=1-12&bmo=1&emo=12&yr=all&byr=1900&eyr=2023>

<https://inaturalist.ca/observations/133824897>

Peregrin Falcon: Document says 2014. Observed flying in the vicinity of the study area in 2021. <https://ebird.org/checklist/S98948342>

Hackberry Emperor: Document says 2021. Observed right in the study area in 2022. <https://inaturalist.ca/observations/131363096>

Green Dragon: Document says N/A. Observed in study area in 2022. <https://inaturalist.ca/observations/121496045>

Cream Violet: Document says N/A. Observed in 2022 in study area: <https://inaturalist.ca/observations/117932698>

Northern Map Turtle: BREEDING EVIDENCE IN STUDY AREA IN 2022! Document says 2019: <https://inaturalist.ca/observations/122029456>

Snapping Turtle: BREEDING EVIDENCE IN STUDY AREA IN 2022! Document says 2021: <https://inaturalist.ca/observations/122106574>

SPECIES MISSED COMPLETELY:

Hazel Dodder: This species does not have a SAR designation, but it is extremely rare in Ontario and is considered critically imperiled (CR) on iNat. It was observed across the river from the study area in August. ID confirmed by Corey Burt from WSP, an expert on this Genus. Here is the link: <https://inaturalist.ca/observations/130959049>

Olive-sided flycatcher: It is designated as Special Concern in Ontario. Observed on campus in 2022. <https://inaturalist.ca/observations/118385059>

Evening Grosbeak: Special concern in Ontario. Observed in study area in 2022
<https://ebird.org/map/evegro?neg=true&env.minX=-81.29583252676836&env.minY=42.99927546635194&env.maxX=-81.24502075919024&env.maxY=43.01917139026299&zh=true&gp=false&ev=Z&excludeEx=&mr=1-12&bmo=1&emo=12&yr=all&byr=1900&eyr=2023>

Rusty Blackbird: Special Concern in Ontario. Observed in 2022 in study area. <https://ebird.org/map/rusbla?neg=true&env.minX=-81.29444047808217&env.minY=42.99830247200294&env.maxX=-81.24362871050404&env.maxY=43.018198711032205&zh=true&gp=false&ev=Z&excludeEx=&mr=1-12&bmo=1&emo=12&yr=all&byr=1900&eyr=2023>

Despite what the EIS says in Section 3.7, page 31, a Cerulean Warbler was reported and photographed in the area on May 14 2021 by several experienced birders. The eBird observation is, however, noted in Table 3-10 on the following page. The inconsistency is troubling.

<https://ebird.org/checklist/S88054789>

APPENDIX 2 (full minutes follow)

From Aug 6, 2021 Scoping Meeting attending by ECAC member S. Levin

“EOPAC: questioned if mussel studies in the Thames River are included. City of London indicated that a detailed EIS and permitting has been completed for the Huron Street Watermain which has an overlapping study area with this project. Detailed surveys have been completed to document presence of mussel species in the reach already. AECOM indicated that fish habitat assessments at the Thames River do not include in-water studies. Presence of mussels will be assumed or confirmed via background documentation and recommendations for a mussel relocation plan will be made if in-water works are proposed for the new or upgrade storm sewer outfall.”

“EEPAC noted that there was an EA completed a number of years ago for a repair/relocation of an exposed water line within the study area done for the city of London (Pat Lupton). City of London/EEPAC to provide referenced EA report.”

“City of London requested recommendations on whether there is a wait period between when mussels can be relocated again (i.e., if there is a rest period required), as mussels may need to be relocated again for this project after they have been relocated for the Huron Street Watermain. AECOM referenced the DFO Mussel Relocation Plan, which will be provided to City of London, and indicated that relocation is limited based on timing of year and temperature of the water (has to be >16°C). It is also recommended that mussels relocated for the Huron Street Watermain project should not be moved to the future construction footprint for the proposed outfall for this project. AECOM to provide DFO Mussel Relocation Plan. City of London to provide Mussel Relocation Plan for Huron Watermain for AECOM’s reference.”

“City of London requested recommendations on whether there is a wait period between when mussels can be relocated again (i.e., if there is a rest period required), as mussels may need to be relocated again for this project after they have been relocated for the Huron Street Watermain. AECOM referenced the DFO Mussel Relocation Plan, which will be provided to City of London, and indicated that relocation is limited based on timing of year and temperature of the water (has to be >16°C). It is also recommended that mussels relocated for the Huron Street Watermain project should not be moved to the future construction footprint for the proposed outfall for this project. AECOM to provide DFO Mussel Relocation Plan. City of London to provide Mussel Relocation Plan for Huron Watermain for AECOM’s Reference.”

Minutes of Meeting

Meeting name

Environmental Impact Study Scope Consultation (Meeting #5)

Subject

Western Road – Sarnia Road / Philip Aziz Environmental Assessment

Meeting date

6-August -2021

Time

11:00 am

Location

Microsoft Teams

AECOM Project Number

60661402

Prepared By: AECOM

Attendees:

Emily Williamson, City of London
Brent Verscheure, UTRCA
Sandy Levin, EEPAC

Olga Hropach, AECOM
John Pucchio, AECOM
Karl Grueneis, AECOM
Katie Easterling, AECOM
Paul Adams, AECOM

Circulation:

Jane Fullick, City of London
Karl Grabowski, City of London

PLEASE NOTE: If this report does not agree with your records of the meeting, or if there are any omissions, please advise, otherwise we will assume the contents to be correct

Ref	Item	Action
01	Introductions	
	.1 General introduction of the project team was completed.	INFO
02	Background/Overview	INFO
	.1 AECOM initiated consultation and conceptual design work as part of an original Municipal Class Environmental Assessment (MCEA) between 2015 to 2016 for this same study area. The project was placed on hold in 2016 to consider alternatives for Rapid Transit routes through the study area.	
	.2 Project background was presented for work previously completed in support of the 2015 EA and proposed 2021 Natural Heritage Scope of Work as described in the attached slideshow presentation.	
03	General Discussion	AECOM / City
	.1 EEPAC: questioned if mussel studies in the Thames River are included. City of London indicated that a detailed EIS and permitting has been completed for the Huron Street Watermain which has an overlapping study area with this project. Detailed surveys have been completed to document presence of mussel species in the reach already. AECOM indicated that fish habitat assessments at the Thames River do not include in-water studies. Presence of mussels will be assumed or confirmed via background documentation and recommendations for a mussel relocation plan will be made if in-water works are proposed for the new or upgrade storm sewer outfall.	

Ref	Item	Action
.2	EEPAC noted that the London BRT EIS also has overlapping study area and may have additional information about Species at Risk (SAR). City of London noted that AECOM is already in possession of this report.	
.3	EEPAC noted that there was an EA completed a number of years ago for a repair/relocation of an exposed water line within the study area done for the city of London (Pat Lupton). City of London/EEPAC to provide referenced EA report.	
.4	City of London indicated there are sensitive areas relating to reptile SAR along the east and west banks of the Thames River at the outlet and that extreme caution need to be taken during field investigations not to disturb habitat or potential SAR. AECOM noted that no in-field investigation work is proposed along the east bank. The City is to provide a high level map showing ecological concerns.	
.5	City of London noted that they can share Scott Gillingwater's report of his findings along the Thames River at the proposed outfall location with AECOM in order to provide better understanding of site sensitivity. City of London has already provided UTRCA report, which contains sensitive SAR information and is meant for AECOM's internal ecology team to review.	
.6	AECOM asked if someone from UTRCA needs to accompany AECOM field staff while completing work along the Thames River. UTRCA responded that its not required but Scott may want to attend, and AECOM should extend an invitation. AECOM to extend an invitation for field site visit which is currently planned for August 12, 2021.	
.7	City of London requested recommendations on whether there is a wait period between when mussels can be relocated again (i.e., if there is a rest period required), as mussels may need to be relocated again for this project after they have been relocated for the Huron Street Watermain. AECOM referenced the DFO Mussel Relocation Plan, which will be provided to City of London, and indicated that relocation is limited based on timing of year and temperature of the water (has to be >16°C). It is also recommended that mussels relocated for the Huron Street Watermain project should not be moved to the future construction footprint for the proposed outfall for this project. AECOM to provide DFO Mussel Relocation Plan. City of London to provide Mussel Relocation Plan for Huron Watermain for AECOM's reference	
.8	AECOM noted that the northwest area of the intersection of Western Road / Sarnia Road / Phillip Aziz Avenue, will consider future road connections from the University but development will be done by the University. Field work has been completed in that area in 2015 and will be re-confirmed in 2021 from publicly accessible areas.	
.9	EEPAC noted the presence of an environmentally significant area (ESA) in the area and mentioned that there has been restoration works with the University and a native nursery. Suggested contacting Michael Lunau for more information. City of London identified that there may be a new edge delineation for the ESA which they will provided once available. AECOM to confirm if work was previously done in the ESA. City of London provided contact for Michael Lunau. City of London to provide ESA delineation.	
.10	City of London, AECOM and EEPAC reviewed the EIS checklist. City of London requested that the PDF checklist be used instead and re-sent. City of London to provide vegetation patch numbers. AECOM to provide PDF checklist.	
.11	AECOM requested UTRCA to provide most recent regulated flood plain limits for the study area. UTRCA to provide regulation limits mapping.	