

Appendix 'A' – Huron Industrial Lands SMWF EA Executive Summary

**Huron Industrial Lands Stormwater Management Facility Schedule B  
Municipal Class EA  
Executive Summary**

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## 1.0 Introduction

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The City of London recently completed the Huron Industrial Lands Master Servicing Study (MSS) (2017) to determine recommended water, sanitary, and stormwater management (SWM) servicing for lands located in the northeast of the City. The MSS was undertaken to support the objectives of the City of London's Industrial Land Development Strategy (ILDS 2012) to ensure an adequate supply of industrial land marketable within a range of industrial sectors.

The recommended SWM servicing strategy identified by the MSS included a regional SWM facility (SWMF) to service approximately 75 ha of future industrial lands. The general location of the SWMF and outlet were identified through the MSS, and are subject to the completion of a Schedule B Municipal Class EA (Class EA). This Class EA builds upon the work of the MSS to refine the layout of the SWMF and outlet location, and to assess environmental impacts and identify mitigation measures.

The catchment area for the proposed SWMF includes approximately 75 ha of City-owned land east of Clark Road, north and south of Huron Street and west of the CN Rail line. The future extension of the Veterans Memorial Parkway (VMP), currently under detailed design, generally runs northwest through the study area. The Cameron Drain, a 300mm clay tile drain currently runs north through the study area, conveying flows from south east of the study area northward towards the Fanshawe Reservoir. The outlet recommended within the MSS is located north of the catchment area, within the lower reaches of Cameron Drain north of the Fanshawe Conservation Area access road.

The study area is shown on Figure 1.

## 2.0 Class EA Phase 1 Problem/Opportunity Statement

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The following Problem/Opportunity Statement was developed for the Huron Industrial SWMF Class EA:

*The City of London currently lacks a sufficient supply of serviced, shovel-ready industrial land. In order to prepare for potential economic development opportunities as recommended in the City of London's Industrial Land Development Strategy (ILDS), the Huron Industrial Lands Master Servicing Strategy was completed in 2018 (MSS) to identify recommended water, sanitary, and SWM servicing solutions to address future development of the study area. In order to implement the SWMF and associated outlet as recommended in the 2017 MSS, a Schedule B Municipal Class EA is required in order to develop site-specific implementation considerations to reduce net impacts to the surrounding environmental features and functions. The Huron Industrial Lands SWMF Class EA is being undertaken to develop an environmentally sensitive and sustainable implementation plan that encourages public, agency, and Indigenous Community input.*



## 3.0 Phase 2 - Existing Conditions

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### 3.1 SOCIO-ECONOMIC

Within the London Plan, the subject site includes Light Industrial, Heavy Industrial, and Environmental Review Place Types (London Plan Map 1). Similarly, within the 1989 Official Plan, land use designations include Light Industrial, General Industrial, and Environmental Review.

Lands within the study area are currently owned by the City of London, and there are currently no active development proposals. While the precise form of development on the site is not currently known, a preliminary land use concept has been developed, and is shown on Figure 2.

### 3.2 CULTURAL ENVIRONMENT

Stage 1 and 2 archaeological assessments were conducted for the Huron Industrial Lands study area. Potentially significant archaeological resources were identified in certain locations for which Stage 3 and 4 assessments were conducted. All reports have been submitted to the Ministry of Tourism Culture and Sport for review, and all reports were found to be consistent with the Ministry's 2011 Standards and Guidelines for Consultant Archaeologists. Based on the assessments, no further archaeological fieldwork is required within the study area.

The checklist for Evaluating the Potential for Built Heritage Resources and Cultural Heritage Landscapes provided by the MTCS was completed for the Huron Industrial Lands Study Area. In completing the checklist, various resources were consulted including the City of London's Inventory of Cultural Heritage Resources (2006), and the Ontario Heritage Trust. Based on the results of the checklist, the area has low-potential for built heritage or cultural heritage landscapes on the property, and no further assessment is required.

### 3.3 NATURAL ENVIRONMENT

Portions of the Huron Industrial Lands study area are designated as Environmental Review in the City's Official Plan. A Subject Lands Status Report (SLSR) (AECOM 2016) has been completed for the subject lands in accordance with the policies of the Official Plan. The SLSR identified features including the North Huron Significant Woodland (evaluated in accordance with the City of London's *Guideline Document for Evaluation of Ecologically Significant Woodlands*) and Snapping Turtle (Significant Wildlife Habitat – MAM2 community). With respect to the Significant Woodlot and Significant Wildlife Habitat (Snapping Turtle) features, the following environmental constraints were identified and have been carried through the evaluation of servicing options within the MSS and current Class EA:

- It is recommended that the placement of infrastructure be located outside of the Significant Woodland. For proposed infrastructure within the study area, an Environmental Impact Study must be completed in accordance with the City of London's 'Guidelines for the Preparation and Review of Environmental Impact Statements (EIS)'.
- The upper reach of the Cameron Award Drain currently maintains flows to the MAM2 wetland communities located within the Significant Woodland. Flows should be maintained to preserve the Significant Wildlife Habitat for Snapping Turtle located in the MAM2 community.



The SLSR also contained a number of recommendations for additional investigations, which have been carried forward into the scope of the Environmental Impact Study (EIS) currently being completed by AECOM. An Issues Scoping Meeting was held on September 27, 2018 including representatives from the City of London, UTRCA, AECOM, and Stantec. An interim constraints analysis was undertaken which included Ecological Land Classification, Bat Cavity Searches, Species at Risk Habitat Assessment, Significant Wildlife Habitat Assessment, Aquatic Habitat Assessment, and a Preliminary Tree Assessment.

A summary of the environmental constraints is included in the memo found in Appendix B. These constraints have been used to refine the SWMF concept and specific mitigation measures will be identified to protect adjacent significant features.

## 4.0 Phase 2 – Alternative Solutions and Recommendations

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Three stormwater drainage servicing strategy concepts were developed and assessed as part of the MSS. Alternative strategies were developed to both delineate general drainage areas and identify end-of-pipe requirements to address quantity and quality of stormwater runoff within the study area. The recommended strategy included one (1) regional SWMF to service lands north of Huron Street, with an outlet to the Cameron Drain requiring an easement through UTRCA lands. A culvert or multiple culverts would be required to convey flows across the Veterans Memorial Parkway extension along with an open channel along the northern boundary to the SWM facility. The remaining parcel southwest of the intersection of Huron Street and the VMP would be serviced by an on-site SWMF toward the south of the property, outletting to the existing Cheapside Street storm sewer. On-site controls were also recommended in order to reduce the required SWMF size. The preferred SWM strategy identified within the MSS is shown on Figure 3.

In order to refine the recommendations of the MSS with respect to the Regional SWMF and develop a preferred concept for the SWMF, the following alternatives were reviewed:

- **Alternative 1. Do Nothing** – No quality or quantity control of stormwater runoff from the future development areas.
- **Alternative 2. All quality and quantity control for the entire catchment provided within the SWM Facility.**
- **Alternative 3. SWM Facility along with on-site controls to provide quality and quantity controls for the catchment area.** Considering the future land use, we've identified a target that would reduce the impervious coverage to 45% through the use of on-site controls. This could be achieved through the use of rooftop storage, or through other measures such as parking lot infiltration galleries, and other Low Impact Development measures.

### 4.1.1 Evaluation and Preliminary Recommendations

Based on an assessment of these solutions with respect to their impacts to the socio-economic, natural, technical, and economic environments, **Alternative 3** is being carried forward, and a conceptual design for the SWMF and associated outlet are being developed. The Preliminary Preferred Concept is shown on Figure 4.



## 5.0 Phase 2 Consultation

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A stakeholder contact list has been prepared for the study which includes relevant provincial and local agencies, Indigenous communities, and properties located within 120m of the Huron Industrial Lands study area.

An open house Public Information Centre (PIC) was held April 4<sup>th</sup>, 2019, between 4:30-6:30pm at the Upper Thames River Watershed Conservation Centre (1424 Clarke Road, London). The PIC was held to provide background information on the study including the recommendations of the Master Servicing Strategy, environmental inventories, as well as the preliminary recommended SWMF concept for public and stakeholder review and comment. Additional follow-up is also being undertaken with identified Indigenous Communities to provide opportunities for information sharing and to identify any questions or concerns with respect to the project.

The study team has also been working closely with the Upper Thames River Conservation Authority (UTRCA) to address specific concerns associated with the proposed SWMF and associated outlet.

## 6.0 Closing and Next Steps

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The preferred SWMF concept has been developed to minimize impacts to significant natural features and functions, and an EIS is being completed to identify site specific mitigation requirements. The Huron Industrial SWMF Class EA Project File will be made available for the statutory 30-day public review period, and provided no Part II Orders are received during the review period, the City will proceed with detailed design and construction.



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**APPENDIX A – FIGURES**

**Figure 1 – Study Area**

**Figure 2 – Future Development Concept**

**Figure 3 – Preferred SWM Strategy (Master Servicing Study)**

**Figure 4 – Preferred SWMF Concept**



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**APPENDIX B – Environmental Constraints**



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**APPENDIX A – FIGURES**

**Figure 1 – Study Area**

**Figure 2 – Future Development Concept**

**Figure 3 – Preferred SWM Strategy (Master Servicing Study)**

**Figure 4 – Preferred SWMF Concept**



Legend



Huron Industrial Lands  
Study Area

Client/Project  
CITY OF LONDON

HURON INDUSTRIAL LANDS

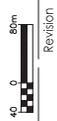
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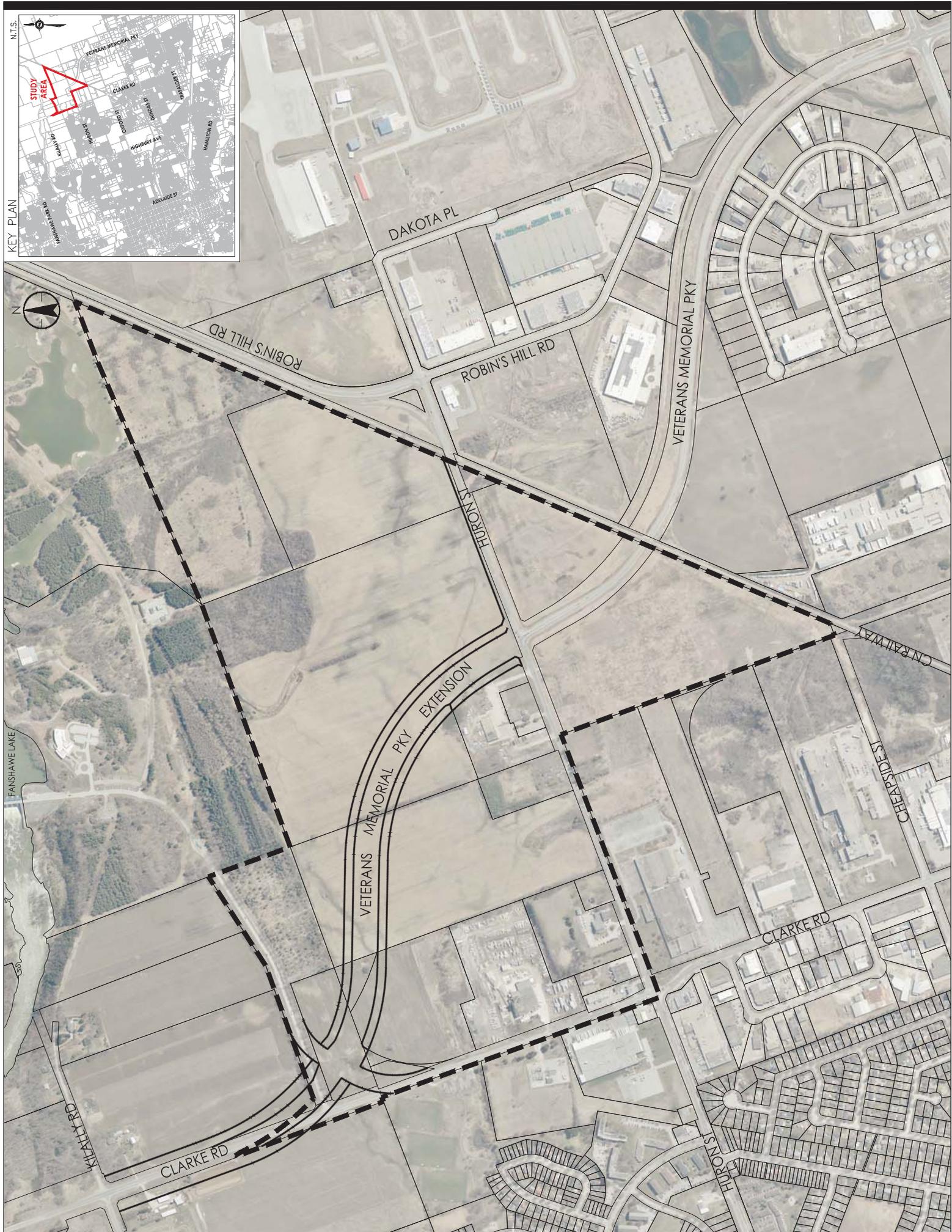
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**Huron Industrial Lands Stormwater Management Facility Schedule B  
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Executive Summary**

**APPENDIX B – Environmental Constraints**



To: Chris McIntosh, City of London  
Adam Kristoferson, Stantec  
Stephanie Bergman, Stantec

Date: February 26, 2019

Project #: 60596951

From: Nataliya Simonova

Andrew Aberdein

cc: Gary Epp, AECOM  
Jessica Walker, AECOM  
Ian Burnett, AECOM

# Memorandum

Subject: **North Huron Industrial Lands – Summary of Preliminary Constraints Related to the Proposed Stormwater Management Facility and Outlet to the Cameron Drain**

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## 1. Introduction

AECOM was retained by the City of London to complete an Environmental Impact Study (EIS) for the proposed North Huron Industrial Lands stormwater management (SWM) facility. This memorandum provides a summary of preliminary environmental constraints based on field investigations completed within the Subject Lands Status Report (SLSR) (AECOM 2016) as well as supplemental field investigations completed in 2018 and 2019.

The proposed SWM facility includes a main quality outlet north of Griffith Street just west of Cameron Award Drain and a main quantity outlet located 300 m upstream (south) of Griffith Street where it would directly outlet from the proposed wetland area. The proposed SWM facility is shown on **Figure 1** attached.

## 2. Field Investigations

Ecological surveys were focused along the Cameron Award Drain and associated riparian habitats to determine potential environmental constraints relating to the location of the proposed outlet locations. The following investigations were undertaken within the study area during field work conducted on October 25, 2018 and February 5, 2019:

- Ecological Land Classification (ELC) as per the *Ecological Land Classification for Southern Ontario Manual* (Lee *et al.*, 1998) to identify or refine previously identified vegetation communities.
- A bat habitat assessment which included bat cavity searches within woodland areas;
- Species at Risk (SAR) habitat assessment;
- Significant Wildlife Habitat (SWH) was assessed throughout the site;
- Aquatic habitat assessments were conducted on Cameron Award Drain;
- Preliminary Tree Assessment.

### 3. Existing Conditions

The following section provides a summary of existing conditions based on field investigations completed as described above.

#### **Ecological Land Classification**

Seven (7) ELC communities were identified and delineated during field investigations and included a mix of forest, swamp, marsh and meadow communities. **Table 1** below summarizes the ELC communities identified adjacent to Cameron Award Drain during site investigations.

**Table 1. ELC Communities within the Study Area**

Code	Description
CUM1-1	Dry-Moist Old Field Meadow Type
FOD6-5	Fresh-Moist Sugar Maple Hardwood Deciduous Forest Type
FOD4	Dry Fresh Deciduous Forest Ecosite
FOD6-5	Fresh-Moist Sugar Maple Hardwood Deciduous Forest Type
SWD3-2	Silver Maple Mineral deciduous Swamp Type
SWD4-1	Willow Mineral Deciduous Swamp Type
MAM2-2	Reed-canary Grass Mineral Meadow Marsh

#### **Bat Cavity Searches**

A bat habitat assessment was completed within the treed communities adjacent to Cameron Award drain. The assessment identified twenty-nine (29) bat cavity trees within the Silver Maple Mineral Deciduous Swamp (SWD3-2) and adjacent Fresh-Moist Sugar Maple Hardwood Deciduous Forest Type (FOD6-5). The location of bat cavity trees can be found on **Figure 1 and Figure 1a**. These communities have been identified as potential SAR Bat habitat as well as Candidate Bat Maternity Roosting Habitat (SWH).

#### **Species at Risk Habitat Assessment**

Ecologists conducted a Species at Risk (SAR) habitat assessment during site investigations which included noting potential SAR habitat within the study area. ELC communities identified north of Griffith Street have the potential to provide habitat for SAR, including listed SAR bats, which are known to occur with vicinity of the study area. ELC communities delineated north of Griffith Street have the potential to provide suitable habitat for other SAR known within the area. No aquatic SAR were identified within Cameron Award Drain during the background review or observed on site during preliminary field investigations. A full SAR screening will be provided in the EIS.

#### **Significant Wildlife Habitat Assessment**

A Significant Wildlife Habitat Screening (SWH) was completed as part of the SLSR (AECOM 2016) with supplemental field investigations completed in 2018 and 2019 to document any changes in existing conditions. Based on the findings present in the SLSR (AECOM 2016), the meadow marsh community identified adjacent to Cameron Award Drain provides confirmed Significant Wildlife Habitat for snapping turtle (*Chelydra serpentina*). Candidate SWH, including Bat Maternity Roosting habitat, is present within treed communities adjacent to the Cameron Award Drain. A full description of Candidate and Confirmed SWH will be provided in the EIS.

### ***Aquatic Habitat Assessments***

Ecologists conducted aquatic habitat assessments for Cameron Award Drain at the proposed outlet locations for the North Huron Industrial Lands SWMF. Cameron Award Drain at the location of the proposed main quality outlet downstream of Griffith Street consisted of a permanent, natural watercourse with surrounding land use of deciduous swamp and forest associated with the UTRCA lands. Gravel and sand substrates were present at and immediately downstream of the location of the confluence of the proposed main quality outlet with Cameron Award Drain. These substrates provide spawning habitat for small bodied fish species identified within Cameron Award Drain from UTRCA fish sampling records obtained during the background review. Documented species within the Cameron Award Drain are considered abundant and have widespread distributions in southern Ontario. Watercress, an indicator of groundwater upwelling, was also documented in Cameron Award Drain further downstream of Griffith Street on October 28, 2018, but none was observed within the proximity of the proposed outlet location.

Cameron Award Drain upstream of Griffith Street at the location of the proposed main quantity outlet consisted of a permanent, channelized watercourse with surrounding land use of cultural meadow bordering the watercourse and agricultural land beyond. The reach of Cameron Award Drain upstream of the proposed outlet location was observed to be intermittent on October 28, 2018. No critical spawning habitat or groundwater indicators were observed in Cameron Award Drain at the proposed main quantity outlet location.

### ***Preliminary Tree Assessment***

During the site visit completed on February 5, 2019, a preliminary assessment of impacts to trees was completed at the proposed outlet locations. During investigations, an arborist noted potential constraints as it related to trees. A full tree inventory will be completed at the detailed design stage to capture all trees within the area of impact.

## **4. Summary of Environmental Constraints**

Based on the findings of field investigations completed to date, the following section outlines the environmental constraints requiring considerations for the proposed North Huron Industrial Lands SWM facility.

**Area 1** – This area contains numerous large crack willows (*Salix fragilis*) which were identified as potential bat cavity trees (See **Figure 1**). These cavity trees provide potential SAR bat habitat as well as candidate Bat Maternity Roosting Habitat (SWH). Tree removal within this area should be avoided and construction of the proposed outlet at this location should occur outside of the Tree Protection Zones (TPZ) to avoid impacts which may negatively affect the health of the tree. In addition, the proposed outlet should be positioned in such a way that outflow avoids erosion of the tree's root zones. The spawning substrate present within Cameron Award Drain adjacent to the proposed location of the main quality outlet does not present a substantial constraint to the proposed location of the outlet; however, proposed work should be restricted to outside the high water mark (top of bank) and an erosion and sediment control plan implemented during construction. In addition, an appropriate flow mitigation structure should be incorporated into the outflow design and the confluence angled such that degradation of aquatic habitat within Cameron Award Drain is mitigated.

**Area 2** – Two large dead trees were observed within this area and pose a high hazard risk to any future work within the vicinity. The proposed installation of the outlet will result in an increase in ground vibrations and pedestrian traffic within the area which may result in higher level of risk. It is recommended that hazard trees within this area be removed prior to commencing any work.

**Area 3** – The confirmed SWH for snapping turtle identified within the meadow marsh community and candidate SAR/SWH bat habitat identified within the deciduous swamp community adjacent to Cameron Award Drain downstream of the proposed main quantity outlet do not pose a constraint to the proposed location of the outlet; however, all proposed work should be restricted to outside the SWH boundary and continuous flow within Cameron Award Drain required to support this community should be maintained.

No environmental constraints posed by aquatic habitat features were identified at the proposed location of the main quantity outlet; however, realignment and other potential in-water work within the high water mark may require authorization under the Fisheries Act and a request for review from Fisheries and Oceans Canada (DFO). Fish collection and relocation may also be required and should be conducted within the appropriate fisheries timing window to be determined pending consultation with the Ministry of Natural Resources and Forestry (MNRF). Maintenance of an open channel and continuous downstream flow is recommended to protect the Snapping Turtle SWH and fish and aquatic habitat features downstream within Cameron Award Drain.

Given no aquatic SAR have been documented within Cameron Award Drain, aquatic SAR habitat protection is not expected to impose a constraint on the proposed locations of the outlets; however, the list of protected species under the Endangered Species Act (ESA) and Species at Risk Act (SARA) is regularly updated and should be reviewed during the EIS phase.

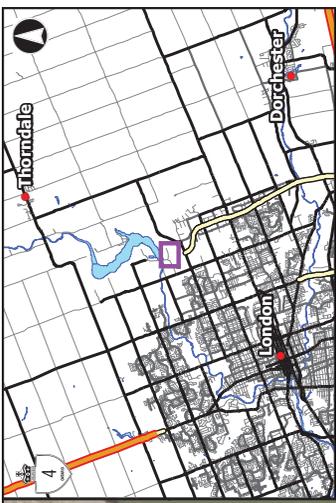
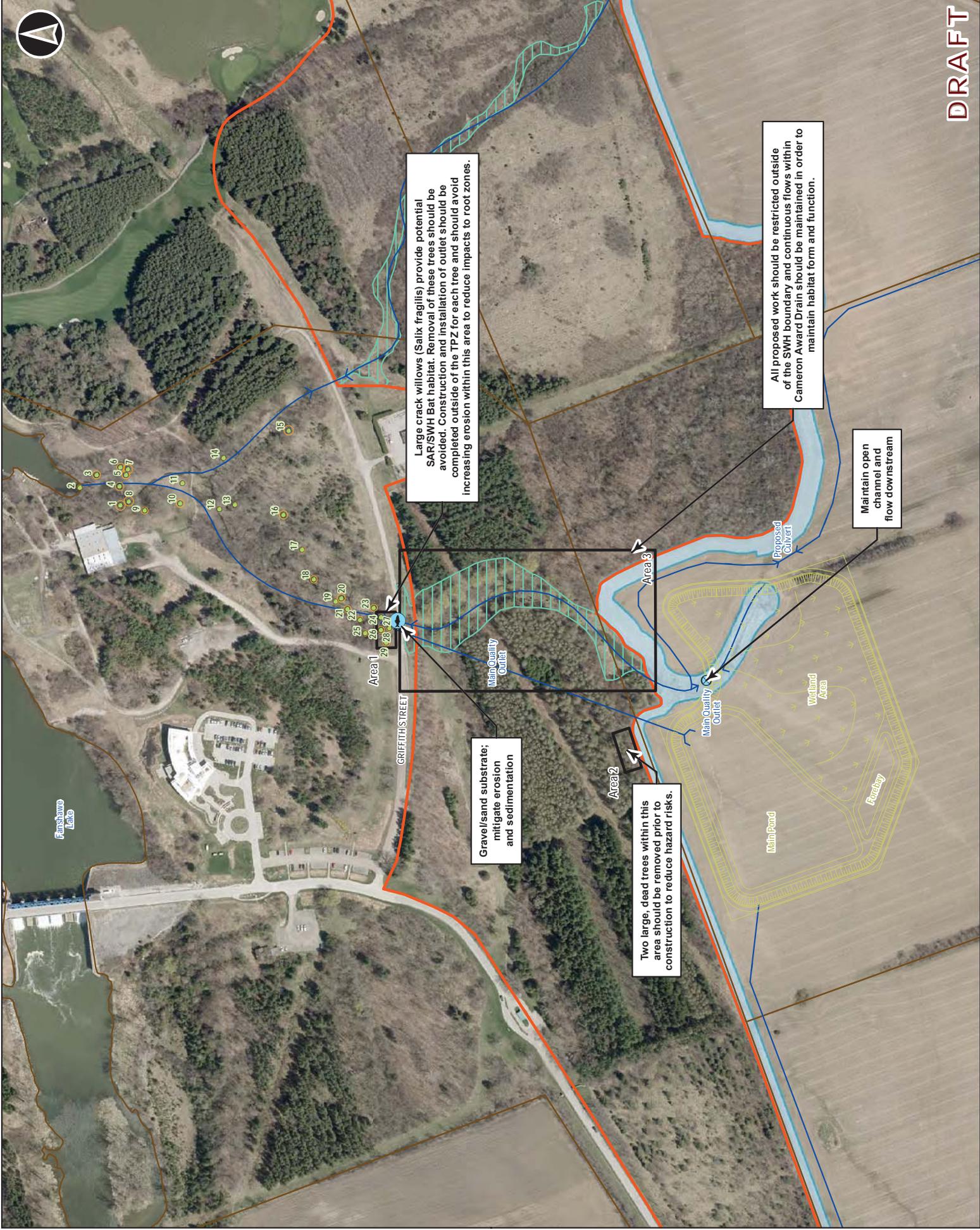
On **Figure 1a** we have indicated our recommended outlet location based on the above-noted constraints. This area i. avoids the large willow trees adjacent to and on the west side of the watercourse, ii. Reduces potential impacts to bat cavity trees (although it may require removal of one bat cavity tree), iii. reduces the need to remove significant vegetation, and iv. allows for discharge to the Cameron Drain without impinging directly on the drain and thereby affecting fish habitat.

The outlet structure should be designed to reduce erosion impacts to the watercourse, minimize loss of existing natural vegetation and habitat, and should include naturalization methods.

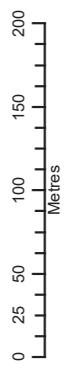
## 5. References

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig, and S. McMurry. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and its Application*. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Ministry of Natural Resources and Forestry (MNR). (2015). *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E*. Ontario MNR Southern Region Resources Section: Peterborough, ON.



- Legend**
- ⊗ Aquatic Constraint
  - ⊙ Spawning Habitat
  - Bat Cavity Tree
  - Tree Protection Zone (TPZ)
  - Proposed Culverts and Waterways
  - Proposed SWMF
  - Parcels
  - Significant Wildlife Habitat - Snapping Turtle Habitat
  - Significant Woodland Designation
  - Preliminary Buffers



**North Huron Industrial Lands**

**Preliminary Constraints**

Feb 26, 2019	1:3,500	<small>           Datum: NAD83 UTM zone 17N            Source: MNR, MMAH, AECOM, City of London            Image: ERSI         </small>
P#: 60596951	V#: 001	

**Figure 1**



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**DRAFT**

Large crack willows (*Salix fragilis*) provide potential SAR/SWH Bat habitat. Removal of these trees should be avoided. Construction and installation of outlet should be completed outside of the TPZ for each tree and should avoid increasing erosion within this area to reduce impacts to root zones.

All proposed work should be restricted outside of the SWH boundary and continuous flows within Cameron Award Drain should be maintained in order to maintain habitat form and function.

Maintain open channel and flow downstream

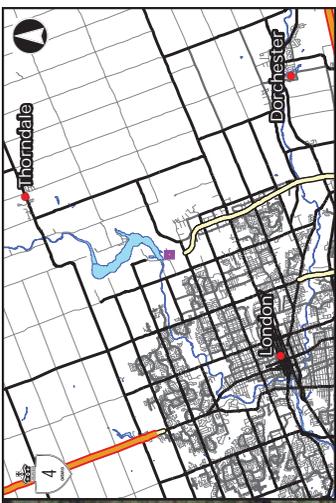
Gravel/sand substrate; mitigate erosion and sedimentation

Two large, dead trees within this area should be removed prior to construction to reduce hazard risks.



4

4



- Legend**
- Spawning Habitat
  - Bat Cavity Tree
  - Tree Protection Zone (TPZ)
  - Watercourse
  - Proposed Culverts
  - Parcels
  - Significant Wildlife Habitat - Snapping Turtle Habitat
  - Significant Woodland Designation
  - Preliminary Buffers
  - Recommended Outlet Location



**North Huron Industrial Lands**

**Preliminary Constraints**

Feb 26, 2019	1:1,000	Datum: NAD83 UTM zone 17N Source: MNR, MMAH, AECOM, City of London Image: ERSI	
P#: 60596951	V#: 001		
<b>AECOM</b>		<b>Figure 1a</b>	

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**DRAFT**

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