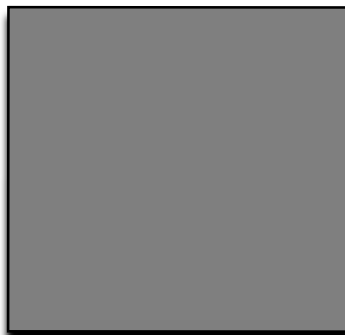
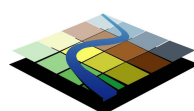




ENVIRONMENTAL IMPACT STUDY

Zoning By-law Amendment
0 Forkes Road, City of Port Colborne

11 May 2026



TERRASTORY
environmental consulting inc.

ENVIRONMENTAL IMPACT STUDY

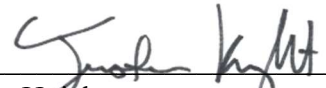
Zoning By-law Amendment
0 Forkes Road, City of Port Colborne

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Project No.: 23225
11 May 2026

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1 INTRODUCTION

1.1 Study Background

Terrastory Environmental Consulting Inc. (“Terrastory”) was retained by 2789475 Ontario Inc. (“Applicant”) to prepare this Environmental Impact Study (EIS) as part of the supporting documentation for a Zoning By-law Amendment (ZBA) application within a vacant lot of record on Forkes Road (“Subject Property”) in the City of Port Colborne. The Subject Property extends between Forkes Road and Third Concession to the west of Ramey Road, and is approximately 32 hectares (ha) or 79 acres (ac) in area. The Subject Property is further bounded by the Indian Creek Drain (south) and lands owned by the St. Lawrence Seaway Management Corporation (SLSMC) along the Welland Canal (west). The location of the Subject Property within its broader landscape setting is shown in **Figure 1**.

The Subject Property is designated “Rural Employment” per Schedule A (City-Wide Land Use) of the City’s Official Plan (“City’s OP”). Lands designated “Environmental Protection Areas” (EPA) are found along the eastern property boundary per both Schedule A and Schedule B1 (Environmental Protection Area), which partly reflect a Provincially Significant Wetland (PSW; Babion Woods Wetland Complex). Lands to the east contain a designated “Environmental Conservation Areas” (ECA) reflecting “Significant Woodlands” and an “Environmental Corridor” per Schedule B2 (Environmental Conservation Area) of the City’s OP, along with a Stratum II Deer Wintering Area identified by the Ministry of Natural Resources (MNR). “Other Wetlands” (non-evaluated) extend into the Subject Property per Schedule C2 (Natural Environment System: Individual Components and Features) of the Niagara Official Plan (NOP). The Subject Property is further zoned Industrial Development 47 with a holding provision (ID-47 H) under the City’s Comprehensive Zoning By-law (By-law 6575/30/18).

The ZBA application considered herein serves to remove a holding provision to facilitate the creation of an outdoor storage area. The outdoor storage area will be served by a small, 2-storey building serviced by a septic system. Certain road upgrades (e.g., installation of a cul-de-sac) along Third Concession (to be dedicated to the City) are also required. An internal gravel driveway will remain (requiring minor improvements/widening) and provides vehicular access to the storage area from Third Concession.

The City has requested the submission of a supporting EIS through a Pre-consultation Summary letter dated 24 July 2025. Terrastory was initially retained in late May 2024 to prepare this EIS. Extensive agency engagement occurred in spring/summer 2024 with both Regional Environmental Planning staff and Niagara Peninsula Conservation Authority (NPCA), which included a site walk and staking exercise to review on-site natural features in July 2024. Key engagement and correspondence with relevant agency staff is provided in **Section 4**.

The following terminology is employed throughout this EIS to describe certain noteworthy areas and features which are shown spatially on **Figure 1**:

- **Subject Property** – parcel in which the application considered herein is situated.
- **Area of Disturbance** – portion of the Subject Property where development and/or site alteration activities are proposed, and where ecological fieldwork was centred.

- **Adjacent Lands** – areas within 120 metres (m) of the Area of Disturbance (as defined above).
- **Study Area** – Area of Disturbance and Adjacent Lands collectively.

1.2 Study Purpose

The purpose of this study is to present a biophysical characterization of the Study Area as a means to assess the potential for adverse effects on the natural environment and natural heritage features stemming from the proposed development. The scope and approach of this study address the reporting requirements of Policy 4.1.2.2 of the City's OP and the Regional EIS Guidelines (March 2024). It is understood that this report will form part of the rezoning application package to be submitted for consideration by the City and NPCA.

Note further that NPCA staff (T. Lennard, Watershed Planner II) confirmed via email on 13 June 2025 that the Authority does not require submission of an EIS to inform their regulatory review of the ZBA application. This EIS is therefore submitted to support the City in implementing relevant natural heritage policies contained in the City's OP and PPS, and to demonstrate legislative conformity with relevant provincial and federal statutes focused on protection of significant species and habitats, including the provincial *Species Conservation Act*, federal *Fisheries Act*, and federal *Migratory Birds Conservation Act*.

The analysis, recommendations, and conclusions of this EIS should be read in conjunction with the Tree Inventory and Preservation Plan (TIPP), also prepared and submitted by Terrastory through this development application.

2 APPROACH AND METHODS

This study is composed of five (5) discrete components which are bulleted below and further described in the following sections.

1. **Acquire background biophysical information and mapping** available for the local landscape surrounding the Study Area (see **Section 2.1**).
2. **Conduct a site assessment and ecological surveys** to field-verify the accuracy of the acquired background biophysical information and collect additional biophysical information as necessary (see **Section 2.2**).
3. **Assess the significance** of the biophysical information collected and natural features identified within the context of applicable natural heritage and environmental policies (see **Section 2.3**).
4. **Predict the effects** of the application on the identified significant natural features and natural environment, particularly the net effects once mitigation measures and technical recommendations are implemented (see **Section 2.4**).
5. **Determine whether the proposed application addresses applicable natural heritage and environmental policies** at municipal, provincial, and federal levels (see **Section 2.5**).

2.1 Background Biophysical Information Assessment

This study is supported by background biophysical information and mapping acquired and reviewed from a variety of sources which are listed below in **Table 1**.

Table 1. Background Biophysical Information Acquired and Reviewed.

Type of Information Acquired	Description
Ortho-rectified Aerial Photographs	• 1934, 1954, 1965, 2009, 2013, 2015 to 2018, and 2020 to 2024.
Natural Feature Mapping	• City of Port Colborne Official Plan, including: • Schedule A (City-wide Land Use); • Schedule B (Natural Heritage); • Schedule B1 (Environmental Protection Areas); • Schedule B2 (Environmental Conservation Areas); • Schedule B3 (Vulnerable Aquifer Areas). • Niagara Region Official Plan (May 2024 office consolidation), including: • Schedule B (Regional Structure); • Schedule C1 (Natural Environment System Overlay and Provincial Natural Heritage Systems); • Schedule C2 (Natural Environment System – Individual Components and Features); • Schedule C3 (Key Hydrologic Areas Overlay). • Land Information Ontario (LIO) accessed via the “Make a Map: Natural Heritage Areas” web-based platform (last accessed 19 January 2026). • Niagara Peninsula Conservation Authority (NPCA) regulation mapping (last accessed 19 January 2026).
Physiographic Resource Mapping and Datasets	• Topographic Survey of the Subject Property. • Ontario Base Mapping produced by MNR (1:10,000) with 5 m contours. • Provincial Digital Terrain Model (LiDAR-derived). • Ontario Well Records (publicly-available). • Soil Survey of Welland County (Ontario Agricultural College 1935). • The Soils of the Regional Municipality of Niagara (Kingston and Presant 1989). • Agricultural Information Atlas (last accessed 19 January 2026). • Bedrock Topography and Overburden Thickness Mapping (Gao et al. 2006). • Paleozoic Geology of Southern Ontario (Armstrong and Dodge 2007). • Surficial Geology of Southern Ontario (Ontario Geological Survey 2010). • Physiography of Southern Ontario (Chapman and Putnam 1984).
Ecological Resource Mapping and Datasets	• Natural Heritage Information Centre (NHIC) database accessed via the “Make a Map: Natural Heritage Areas” web-based platform (squares: 17PH4255, 17PH4254, 17PH4253, 17PH4355, 17PH4354, 17PH4353, 17PH4455, 17PH4454, 17PH4453; last accessed 19 Jan 2026). • Critical Habitat for SAR National Dataset (last accessed 19 Jan 2026). • iNaturalist “(NHIC) Rare species of Ontario” project (last accessed 19 Jan 2026). • Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005 (Cadman et al. 2007) and OBBA 3 (2021–2023) existing data from the Birds Canada-NatureCounts database (square: 17PH45). • eBird (last accessed 19 January 2026). • iNaturalist “Herps of Ontario” project (last accessed 19 January 2026). • Ontario Reptile & Amphibian Atlas (square: 17PH45; last accessed 19 January 2026). • Ontario Butterfly Atlas database (square: 17PH45; last accessed 19 January 2026).

Type of Information Acquired	Description
	• iNaturalist “Ontario Odonata” project (last accessed 19 January 2026). • Atlas of Ontario Odonata (last received from NHIC on 09 April 2025). • Bumble Bee species distribution maps from iNaturalist and Bumble Bee Watch. • Aquatic Species at Risk Maps produced by Fisheries and Oceans Canada (last accessed 19 January 2026). • Atlas of the Mammals of Ontario (Dobbyn 2005). • Flowing Waters Information System (FWIS) Database (last accessed 19 January 2026). • MNRF Fish ON-line database maintained by MNRF (last accessed 19 January 2026).

2.2 Site Assessment and Surveys

The acquired background information per **Table 1** helped direct a fieldwork program carried out by Terrastory staff. **Table 2** below indicates the primary assessments/surveys performed during each site visit, weather conditions, and time on-site.

Table 2. Site Assessments and Ecological Surveys performed within the Subject Property.

Date of Site Assessment	Assessments/Surveys Performed	Terrastory Staff	Weather Conditions	Time On-site
03 June 2024	Site Reconnaissance; preliminary Habitat Mapping; Breeding Bird Survey #1, Spring Vascular Plant Survey, Incidental Wildlife Observations.	T. Knight	Air temperature: 17°C, Beaufort wind 0 to 1, cloud cover 75 to 100%, no precipitation.	06:20 to 07:20
17 June 2024	Breeding Bird Survey #2; Incidental Wildlife Observations.	T. Knight	Air temperature: 23 to 25°C, Beaufort wind 1 to 2, cloud cover 0 to 25%, no precipitation.	07:41 to 09:31
22 July 2024	Ecological Land Classification; Summer Vascular Plant Survey; Natural Feature Staking with NPCA; Incidental Wildlife Observations.	T. Knight	Air temperature: 24°C, Beaufort wind 0, cloud cover 0 to 25%, no precipitation.	10:26 to 12:30
14 April 2026	Tree Inventory; Incidental Wildlife Observations.	C. Wegenschimmel	Air temperature: 18°C, Beaufort wind 3, cloud cover 81 to 90%, no precipitation.	10:56 to 16:10

The site assessments and surveys centred on characterizing the land use (e.g., historical development patterns, existing built features, land maintenance regime), physiographic (e.g., topography, drainage, surface water features), and ecological (e.g., vegetation, wildlife, habitats, etc.) conditions and features of the Study Area. In addition to assessing natural areas, the exterior surfaces of existing built structures (where present) were visually inspected for their potential to provide wildlife habitat (e.g., nesting sites for birds). All land-use, physiographic, and ecological information described for Adjacent Lands was collected from either current aerial photographs or observations from inside the Study Area and/or publicly-accessible areas (e.g., rights-of-way). The locations and boundaries of

significant natural features and/or habitats were recorded on-site with a high-accuracy GPS supported by representative photographs.

In addition to collecting general biophysical information, the following targeted assessments (i.e., feature- or species-specific surveys) were undertaken:

- **Tree Inventory and Health Assessment:** Trees were inventoried and assessed by a Terrastory Arborist. All private trees 10 cm diameter at breast height (DBH) or greater and all municipal trees regardless of size (if present), located within or immediately adjacent to the proposed area of disturbance (e.g., building envelopes, grading, servicing etc.), were inventoried and assessed from the ground. Trees situated on adjacent private properties near the proposed areas of disturbance were reviewed as necessary and to the extent possible from areas in which access was granted. All assessed trees were: (1) labeled using metal number-stamped tags, (2) identified to species, (3) measured at breast-height (approximately 1.37 metres above ground) with calipers and/or DBH tape, (4) assessed for crown diameter, and (5) assessed for risk features, indicators of decline, and growth constraints (e.g., open wounds, live crown ratio, disease, etc.). The tree health and structural assessment was undertaken consistent with accepted arboricultural techniques. None of the assessed trees were cored, probed, or climbed, nor were their roots exposed for detailed assessment. As the tree inventory was undertaken during leaf-off, certain indicators of tree health and structural integrity (e.g., live crown ratio, etc.) could not be assessed.
- **Vegetation Mapping according to Ecological Land Classification (ELC):** Vegetation communities within the Study Area were characterized and mapped according to Ecological Land Classification (Lee et al. 1998) and the 2008 update to the Vegetation Type List (Lee 2008). Vegetation communities were initially identified based on current aerial photographs and then verified and refined (as necessary) on-site. ELC mapping was scaled to the finest level of resolution deemed appropriate (i.e., either Ecosite or Vegetation Type). Vegetation communities mapped on Adjacent Lands were delineated predominantly via aerial photograph interpretation.
- **Vascular Plant Survey:** Vascular plants were recorded based on a comprehensive area search (“wandering transects”) within naturally-occurring (i.e., non-planted) or naturalizing areas of vegetation. Particular effort was paid to areas with the greatest potential to support significant vascular plants (i.e., designated Species at Risk, provincially rare, etc.) and areas with the greatest potential for impact based on the proposed development plan. Nomenclature and common names for the recorded vascular plant species are generally consistent with the Southern Ontario Vascular Plant Species List (Bradley 2013) except where a name change has more recently been adopted by NHIC.
- **Breeding Bird Surveys according to the Ontario Breeding Bird Atlas Protocol:** Two rounds of breeding bird surveys were conducted in accordance with the Ontario Breeding Bird Atlas (OBBA) protocol (Bird Studies Canada et al. 2001). Surveys occurred within the appropriate season (May 24–July 10), time of day (between dawn and approximately 5 hours after dawn), and weather conditions (no rain, wind speed ≤ 3 on the Beaufort Wind Scale). While the OBBA protocol recommends that stations be situated at least 300 m apart (to avoid double counting), the stations established herein were often closer together to ensure more comprehensive survey coverage. Surveys occurred for a minimum duration of 10 minutes at each station. Species were also recorded during comprehensive area searches (“wandering transects”) that were completed while traveling between each station.

2.3 Significance Assessment

2.3.1 Definitions and Criteria

“Significant natural features” as described herein represent natural features and habitats that have recognized status (and therefore policy significance) within the planning jurisdiction in which an application is proposed. Significant natural features are defined herein to include all Natural Heritage Features and Areas referenced in Section 4.1 of the 2024 Provincial Planning Statement (PPS), namely:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Other Coastal Wetlands in Ecoregions 5E, 6E, and 7E;
- Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- Significant Valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- Significant Wildlife Habitat (SWH);
- Significant Areas of Natural and Scientific Interest (ANSIs);
- Habitat of Endangered and Threatened Species; and
- Fish Habitat.

Defining “significant natural features” pursuant to the PPS is warranted as such features form part of the City’s natural heritage designations (i.e., EPA and ECA) and/or act as “features and components” of the Regional Natural Environment System (NES). Notwithstanding this, the City’s OP and NOP provide provisions that consider and/or protect additional natural features beyond the requirements of the PPS. These features are also considered “significant” herein and include:

- All natural features designated “Environmental Protection Area” (EPA) or “Environmental Conservation Area” (ECA) per Sections 4.2 and 4.3 of the City’s OP (respectively), which includes Regionally Significant Life Science ANSIs and other evaluated wetlands (which also form part of the Regional NES but are not considered by the PPS);
- Other Wetlands (per the NOP);
- Other Woodlands (per the NOP);
- Permanent and Intermittent Streams (per the NOP);
- Inland Lakes and their Littoral Zones (per the NOP); and
- Supporting Features and Areas (Section 3.1.15 of the NOP), Enhancement Areas (Section 3.1.16 of the NOP), and Linkages (Section 3.1.17 of the NOP).

Definitions for the above provincially/regionally/locally significant natural features can be found in Schedule L (Natural Environment System: Components, Definitions, and Criteria) of the NOP. Criteria used to determine the presence or absence of the above significant natural features within the Study Area were considered from a variety of sources including the City’s OPs, NOP, Natural Heritage Reference Manual (MNR 2010), Significant Wildlife Habitat (SWH) Technical Guide (MNR 2000), and SWH Criteria Schedules for Ecoregion 7E (MNR 2015).

Like significant natural features, “significant species” represent individuals of wild species which have recognized status (and therefore policy significance) within the planning jurisdiction in which an application is proposed. Significant species are defined herein to include:

- Species listed as “Extirpated”, “Endangered”, or “Threatened” under O. Reg. 60/26 (i.e., “Protected Species in Ontario”) pursuant to the provincial *Species Conservation Act* (SCA);
- Species classified as “Extirpated”, “Endangered”, “Threatened”, or “Special Concern” in Canada by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC);
- Species listed as “Extirpated”, “Endangered”, “Threatened”, or “Special Concern” under Schedule 1 of the federal *Species at Risk Act* (SARA);
- Species classified as “Provincially Rare” (i.e., S1, S2, or S3) by NHIC.
- Species considered Regionally Rare in Niagara pursuant to the *List of the Vascular Plants of Ontario’s Carolinian Zone* (Oldham 2017).

2.3.2 Determination

After collecting the background biophysical information and conducting the fieldwork program, the data was interpreted to determine whether any significant natural features and/or significant species occur within the Study Area. If a natural feature or species met the significance criteria, it is considered “confirmed”. If a natural feature or species may be present within the Study Area given the prevailing biophysical or habitat conditions but was not confirmed based on either background or site-specific biophysical data, it is considered potential or “candidate”. Candidate significant natural features and species are treated as confirmed where no additional information is available.

2.4 Effects Assessment and Mitigation

The potential ecological effects of an application can be understood spatially as zones that radiate outward from the direct project footprint (e.g., building envelope, etc.) and associated areas of site alteration (e.g., grading, etc.). While the greatest potential for effects typically occurs within areas directly subject to development or disturbance, surrounding areas may also be affected indirectly. Such indirect effects can include light or noise pollution that affects wildlife communities on Adjacent Lands, or degradation of water quality within a downstream receptor resulting from sediment runoff during construction.

The following five-pronged approach is employed herein to assess the effects of an application on significant natural features and species and (where warranted) the natural environment in general:

1. **Scope** the effects assessment to environmental components that warrant consideration. The effects assessment herein centres principally on significant natural features and species (i.e., those that have policy significance within the planning jurisdiction, as defined in **Section 2.3**) but may also consider general environmental effects where warranted.
2. **Identify the predicted direct and indirect effects** of the application on each significant natural feature or species during all project stages (i.e., pre- to -post-development) in the absence of mitigation. Direct effects are those where there is a cause-effect relationship between a proposed activity and an effect on a natural feature or species (e.g., tree clearance within a building footprint, etc.). Indirect effects result when an activity is linked to a direct effect through a chain of foreseeable interactions or steps.

3. **Evaluate the significance** of the predicted effects for each environmental component based on their attributes (i.e., spatial extent, magnitude, timing, frequency, and duration) and likelihood (i.e., high, medium, low).
4. Where the potential for negative effects are anticipated, **recommend ecologically-meaningful mitigation measures** to avoid such impacts first (where possible), and where impacts cannot be avoided to minimize, compensate, and/or enhance as appropriate.
5. **Identify the predicted residual or net effects** of the application assuming implementation of all recommended mitigation measures.

Per step 4, mitigation measures are offered where the potential for negative effects are anticipated to a degree that cannot be supported given the prevailing policy context. Whenever possible, Terrastory works iteratively with the project team as a means to identify development plan options that avoid negative effects first; options that would minimize or mitigate such negative effects are less preferred and considered secondarily. In general, avoidance measures that have already been incorporated into the application or project design are not duplicated as technical recommendations herein. The effects assessment and any recommended mitigation measures are provided in **Section 5**.

2.5 Natural Heritage Policy Context

There is an overlapping municipal, provincial, and federal policy framework respecting the protection of natural heritage features and areas across southern Ontario. These requirements include objectives, policies, and directives which are principally contained in federal and provincial statutes, regulations, policy statements, Official Plans, and guidance documents. The overarching natural heritage policy framework directing development activities within the Study Area is outlined below in **Table 3**. A determination of whether the application considered herein addresses such policies is provided in **Section 6**.

Table 3. Applicable Natural Heritage Policies.

Level of Government	Natural Heritage or Environmental Policy Requirements
Municipal	City of Port Colborne Official Plan (Updated September 2017). Regional Municipality of Niagara Official Plan (May 2024 office consolidation).
Provincial	Provincial Planning Statement 2024, pursuant to the <i>Planning Act</i> , R.S.O. 1990, c. P.13, including: • Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (MNR 2010). • Significant Wildlife Habitat Technical Guide (MNR 2000). • Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015). • Significant Wildlife Habitat Mitigation Support Tool (MNRF 2014). <i>Conservation Authorities Act</i> , R.S.O. 1990, c. C.27, including: • Ontario Regulation 41/24 – Prohibited Activities, Exemptions, and Permits. • NPCA Policy Document: Policies for Planning and Development in the Watersheds of the Niagara Peninsula Conservation Authority (April 15, 2024). <i>Species Conservation Act</i> (SCA), S.O. 2025, c. 4 including: • Ontario Regulation 75/26 – Registrable Activities • Ontario Regulation 74/26 – Permit Activities

Level of Government	Natural Heritage or Environmental Policy Requirements
	- Ontario Regulation 62/26 – Transitional Matters - Ontario Regulation 61/26 – Excepted Activities – No Permit or Registration - Ontario Regulation 60/26 – Protected Species in Ontario List <i>Fish and Wildlife Conservation Act</i>, S.O. 1997, c. 41.
Federal	<i>Species at Risk Act</i>, S.C. 2002, C. 29. <i>Fisheries Act</i>, R.S.C. 1985, c. F-14, including: - Fish and Fish Habitat Protection Policy Statement (DFO 2019). - Pathways of Effects (DFO 2024). <i>Migratory Birds Convention Act</i>, S.C. 1994, c. 22, including: - Migratory Birds Regulations, C.R.C., c. 1035.

3 EXISTING BIOPHYSICAL CONDITIONS

The following is a description of the biophysical features and conditions of the Study Area, which are shown spatially on **Figure 2**. Representative photographs are provided in **Appendix 1**.

3.1 Land-use and Landscape Setting

The Subject Property is a vacant lot of record containing a variety of natural features (mainly meadow and thicket). It is understood that the proposed Area of Disturbance was formerly farmed and contained two buildings which were demolished several decades ago (foundation and ground floor slab remain). An existing gravel driveway is also a remnant of this former use. The Subject Property is bounded by the Indian Creek Drain (south) and lands owned by the SLSMC along the Welland Canal (west). The surrounding landscape consists of a mixture of agricultural land (mostly cash crops), a recreational area owned by the City (south of Indian Creek Drain), and natural features (mostly meadow and thicket, with some marshes and swamp).

3.2 Physical Setting

3.2.1 Surficial Geology and Soils

Soils within the Subject Property are mapped as miscellaneous human-modified land units which represent fill placement during the construction of the Welland Canal (Welland By-pass) in the 1970s (Kingston and Presant 1989). Additionally, there are some lacustrine clay deposits northeast of the Subject Property comprised of Smithville, Haldimand and Lincoln soils. Smithville soils are moderately well-drained and usually slowly permeable, but may be more permeable during dry periods when cracks develop in the surface horizons. Smithville soils have limitations due to their heavy clay content and have poor to fair suitability for crops. Haldimand soils are imperfectly drained and slowly permeable. In addition to high seasonal groundwater levels, there is usually some temporary perching of groundwater in the upper horizons of Haldimand soils every year. Lincoln soils are poorly drained and usually slowly permeable.

The existing soils mapping for the local landscape conforms to Terrastory's understanding of the area, which contains a preponderance of surficial silty clay soils.

3.2.2 Topography and Drainage

Provincial LiDAR data (derived from the 2015 SWOOP digital terrain models) indicates approximately 3 m of topographic gradient within the Area of Disturbance. Overall, surface water is shed in various directions, generally associated with areas subject to the greatest amount of fill placement (see **Figure 2**).

There is a constructed municipal drain (Indian Creek Drain) flowing westward south of the Subject Property which empties into the Welland Canal. Additional constructed drainage features (reviewed with NPCA and Regional Environmental Planning staff on-site in July 2024) encircle the proposed Area of Disturbance. These drainage swales exhibit very low gradient and generally were not found to be flowing during the site assessments. The drainage swales support hydrophytic vegetation including Narrow-leaved Cattail (*Typha angustifolia*), Purple Loosestrife (*Lythrum salicaria*), and Dark-green Bulrush (*Scirpus atrovirens*).

3.3 Ecological Setting

3.3.1 Vegetation Communities

The largest vegetation community on the Subject Property by spatial extent is Graminoid Meadow (MEG). This community occupies most of central and western portions of the Study Area. This community also extends to areas northward, westward, and southward. Common species within this community include Smooth Brome (*Bromus inermis*), Orchard Grass (*Dactylis glomerata*), Tall Hawkweed (*Hieracium piloselloides*), and Spotted Knapweed (*Centaurea stoebe*) (see **Figure 2**).

The remainder of the Study Area is occupied by several communities of Gray Dogwood Deciduous Shrub Thicket (THDM2-4). Two large patches of this community type are present along the southern and northern boundary of the Subject Property with a few smaller patches being present in the centre of the Area of Disturbance. THDM2-4 is extensive north and east of the Subject Property based on air photo interpolation. Common species in this community include Gray Dogwood (*Cornus racemosa*), Common Buckthorn (*Rhamnus cathartica*), Silky Dogwood (*Cornus obliqua*) and Autumn Olive (*Elaeagnus umbellata*).

Based on aerial photograph interpolation, there appears to be areas of Deciduous Savanna (SVD) north and northeast of the Subject Property, and a Meadow Marsh (MAM) wetland community in just north of Third Concession to the east.

The full list of vegetation communities present within the Study Area is provided below:

- AG - Agriculture
- HE4 - Thicket Hedgerow
- MAM - Meadow Marsh
- MEG - Graminoid Meadow
- SVD - Deciduous Savanna
- THDM2-4 - Gray Dogwood Deciduous Shrub Thicket

3.3.2 Vascular Plants

A total of 66 vascular plant species were recorded within the Subject Property (see **Appendix 2**). Of these, approx. 37 (56.1%) are considered native to Ontario and 29 (43.9%) are exotic. No vascular plant species of conservation interest (e.g., Provincially Rare, Species at Risk, Protected Species of Ontario) were documented.

3.3.3 Trees

A tree inventory and condition assessment was completed on 14 April 2026. A total of 62 trees situated within or adjacent to the potential area of disturbance were inventoried and assessed. The full results of the tree inventory and condition assessment are provided in Terrastory's Tree Inventory and Preservation Plan (issued under a separate cover). A brief description of the overall tree composition and conditions observed is provided below and in **Table 4**.

Table 4. Composition and Abundance of Trees within and/or adjacent to the proposed Areas of Development and Disturbance.

Species	Total Assessed	Percentage of Total (%)
Black Walnut (<i>Juglans nigra</i>)	1	1.61
Cherry / Plum (<i>Prunus</i> sp.)	3	4.84
Common Apple (<i>Malus pumila</i>)	1	1.61
Eastern Cottonwood (<i>Populus deltoides</i>)	14	22.58
Eastern Red Cedar (<i>Juniperus virginiana</i>)	3	4.84
Hybrid Willow (<i>Salix x fragilis</i>)	9	14.52
Pussy Willow (<i>Salix discolor</i>)	1	1.61
Red/Green Ash (<i>Fraxinus pennsylvanica</i>)	18	29.03
Rusty Willow (<i>Salix atrocinerea</i>)	5	8.06
Toringa Crabapple (<i>Malus toringo</i>)	1	1.61
Trembling Aspen (<i>Populus tremuloides</i>)	5	8.06
White Elm (<i>Ulmus americana</i>)	1	1.61
TOTAL	62	99.98

3.3.4 Breeding Birds

Breeding bird surveys were undertaken at two (2) stations on 03 June and 17 June 2024. A total of 32 bird species were recorded during the breeding bird surveys. The assemblage and abundance of birds recorded generally reflects the prevailing structure and composition of on-site vegetation communities and variable habitats of the Study Area (e.g., agricultural, meadow and thicket). The locations of each survey station are shown on **Figure 2** while the full survey results indicating each species' breeding status by survey station can be found in **Appendix 5**. The locations of significant bird species recorded are shown on **Figure 3**. A general summary of the breeding bird communities present within the Study Area is provided below.

Of the thirty-two (32) species of birds recorded, four (4) were determined to be “Flyovers” with no breeding evidence within the Study Area. These species include Barn Swallow (*Hirundo rustica*), Caspian Tern (*Hydroprogne caspia*), Purple Martin (*Progne subis*), and Ring-billed Gull (*Larus delawarensis*). One (1) species, European Starling (*Sturnus vulgaris*), is non-native.

Of the twenty-seven (27) potentially breeding native bird species recorded, fifteen (15) were determined to be “Possible” breeders within the Subject Property, evidenced by codes Singing male (S) and observed in suitable Habitat during the breeding season (H). These species include birds that were only observed during one of the two breeding bird surveys conducted. Twelve (12) species were determined to be “Probable” breeders within the Subject Property, evidenced by codes Pair (P) observed in suitable nesting habitat during the species’ breeding season, Presumed Territory (T) based on the presence of an adult bird (usually singing, but not necessarily so), in the same suitable nesting habitat patch on at least two visits and Agitated behavior (A) in suitable nesting habitat during the species’ breeding season.

MNR considers Eastern Meadowlark (*Sturnella magna*), Grasshopper Sparrow (*Ammodramus savannarum*) and Savannah Sparrow (*Passerculus sandwichensis*) to be Area Sensitive species (MNR 2000). Area Sensitive species require large areas of suitable habitat to carry out their life processes.

Two (2) species recorded are considered Provincially both having a subnational ranks of S3B (Vulnerable, Breeding), including Caspian Tern and Purple Martin. Both of these species were considered to be flyovers, with no breeding evidence in the Subject Property. The remainder of the bird species recorded have subnational ranks of either S4 or S5 by the NHIC which indicates that their provincial populations are “apparently secure” or “secure”, respectively.

An additional three (3) bird species are considered Species at Risk (SAR) pursuant to the federal *Species at Risk Act* (SARA), though all were recorded from Adjacent Lands beyond the Subject Property and Area of Disturbance:

- Barn Swallow;
- Eastern Meadowlark; and
- Grasshopper Sparrow.

As none of the Provincially Rare (Caspian Tern, Purple Martin) or SAR (Barn Swallow, Eastern Meadowlark, Grasshopper Sparrow) bird species recorded are breeding within or adjacent to the Area of Disturbance, none of these species are considered in detail further herein, with the exception of Barn Swallow (which is currently nesting beneath the Ramey Road culvert nearby). Potential impacts to Barn Swallow are considered further in **Section 4.3**.

3.3.5 Incidental Wildlife Recorded

Efforts to incidentally document wildlife were made during all site visits by Terrastory. Incidental wildlife observations (i.e., species which were not recorded during targeted wildlife surveys) include the following:

- Two (2) **bee** species: Common Eastern Bumblebee (*Bombus impatiens*) and Two-spotted Bumblebee (*Bombus bimaculatus*).
- Four (4) **butterfly** species: Cabbage White (*Pieris rapae*), Least Skipper (*Ancyloxypha numitor*), Question Mark (*Polytonia interrogationis*), and Red Admiral (*Vanessa atalanta*).

- Three (3) **mammal** species: Beaver (*Castor canadensis*), Coyote (*Canis latrans*), and White-tailed Deer (*Odocoileus virginianus*).
- One (1) **odonate** species: Eastern Forktail (*Ischnura verticalis*).

At a provincial/subnational level, all of the incidental species recorded have been assigned subnational ranks of either S4 or S5 by NHIC, which indicates that their provincial populations are “apparently secure” or “secure”, respectively.

4 SIGNIFICANCE ASSESSMENT

Based on the biophysical information collected during background information gathering (per **Table 1**) and the results of Terrastory’s fieldwork program (per **Sections 2.2** and **3**), **Table 5** below provides a determination of the presence (or potential presence) of each significant natural feature considered herein. Shaded rows denote features which were confirmed or may be present within the Study Area and are considered further as part of the effects assessment in **Section 5**. Significant natural feature mapping is provided in **Figure 3**.

Table 5. Summary of the Assessment of Significant Natural Features within the Study Area.

Significant Natural Feature	Status within the Proposed Area of Disturbance	Status within Adjacent Lands (i.e., < 120 m from the Proposed Area of Disturbance)
PPS Significant Natural Features		
Significant and/or Coastal Wetlands	Absent. See Section 4.1.	Absent. See Section 4.1.
Significant Woodlands	Absent. See Section 4.2.	Absent. See Section 4.2.
Significant Valleylands	Absent.	Absent.
Significant Wildlife Habitat	Absent. See Section 4.3.	Confirmed/Candidate. See Section 4.3.
Significant Areas of Natural and Scientific Interest	Absent.	Absent.
Protected Species of Ontario (provincially Endangered/Threatened Species)	Candidate (bats). See Section 4.4.	Candidate (bats). See Section 4.4.
Fish Habitat (per <i>Fisheries Act</i>)	Absent. See Section 4.5.	Confirmed. See Section 4.5.
Locally and Regionally Significant Natural Features (i.e., beyond PPS requirements)		
Evaluated and Other Wetlands	Absent. See Section 4.1.	Confirmed. See Section 4.1.
Other Woodlands	Absent. See Section 4.2.	Candidate. See Section 4.2.
Regionally Significant ANSIs	Absent.	Absent.
Permanent or Intermittent Streams	Absent. See Section 4.6.	Candidate. See Section 4.6.
Lakes and their littoral zones	Absent.	Absent.
Supporting Features and Areas, Enhancement Areas, and Linkages	Candidate. See Section 4.7.	Confirmed. See Section 4.7.

4.1 Wetlands

No PSWs are present within the Study Area. Units associated with the Provincially Significant Babion Woods Wetland Complex are present over 150 m northeast of the proposed Area of Disturbance.

Several “other wetlands” are mapped by the Region under Schedule C2 (Natural Environment System – Individual Components and Features) of the NOP. These areas of supposed wetland were found by Terrastory to be moist thickets (i.e., not wetland), per **Figure 2**.

Terrastory scheduled a site walk/staking exercise with Regional Environmental Planning (A. Boudens) and NPCA (T. Bukovics), occurring on 22 July 2024. While the edges of the perimeter drainage swales were staked at that time, NPCA subsequently confirmed that these drainage swales are neither regulated wetlands nor watercourses under the *Conservation Authorities Act* (see **Appendix 4**).

On the basis of the above, no further assessment of potential impacts to wetlands is warranted.

4.2 Significant and Other Woodlands

“Woodland” is defined in the PPS (p. 55) as follows:

Woodlands: means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels. Woodlands may be delineated according to the Forestry Act definition or the Province’s Ecological Land Classification system definition for “forest.”

“Significant” in the context of a “woodland” is defined in the PPS (p. 52) as follows:

in regard to *woodlands*, an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. These are to be identified using criteria and procedures established by the Province;

Policy 4.3.5.1(b) of the City’s OP provides the following criteria for establishing woodland significance

To be classified as significant, a woodland must contain a threatened or endangered species or species of concern, be equal or greater than 2 hectares in size, overlap or contain one or more significant natural heritage features, or abut or be crossed by a water body greater than 2 hectares in area. Significant Woodlands are identified in accordance with the criteria provided in Section 7.B of the Regional Policy Plan.

Schedule L of the NOP defines “Other Woodlands” (i.e., non-significant woodlands which retain some degree of policy significance) as:

woodlands determined to be ecologically important in terms of features, functions, representation, or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system. Other woodlands include all terrestrial treed vegetation communities where the percent tree cover is >25%. Other woodlands would not include woodlands meeting the criteria as significant woodlands.

To be identified as an other woodland, a terrestrial treed area must have ≥ 25 per cent tree cover and meet one or more of the following criteria:

- a. an average minimum width of 40 m and is ≥ 0.3 ha, measured to crown edges; or
- b. any size abutting a significant woodland, wetland or permanent stream.

Treed areas that “abut” a significant woodland, wetland or permanent stream are considered adjacent when located within 20 m of each other. Other woodlands are identified based on the Ecological Land Classification methodology. Terrestrial vegetation communities that would meet the ≥ 25 per cent tree cover are identified in Table 5-1.

There are no “forest” communities (i.e., containing at least 60% canopy coverage) within the Study Area. By extension, there are no “Significant Woodlands”. The deciduous savannah (SVD) occurring on Adjacent Lands (delineated approximately based on aerial photograph interpretation) appears to meet relevant criteria as an “Other Woodland” under Schedule L of the NOP.

As the Other Woodland is a minimum of 34 m from the edge of disturbance, the potential for impact to this feature is deemed negligible, and no further assessment of potential impacts to Other Woodland is considered warranted.

4.3 Significant Wildlife Habitat

An assessment of the likelihood that any candidate or confirmed SWH types occur within the Study Area or Adjacent Lands is provided in **Appendix 5**. Based on the results of this assessment, four (4) SWH types are considered further through this study:

- Seasonal Concentration Areas of Animals
 1. Bat Maternity Colonies
 2. Turtle Wintering Areas
- Habitat of Species of Conservation Concern
 3. Special Concern and Rare Wildlife Species
 4. Terrestrial Crayfish

Also based on this assessment, a total of 10 federal SAR or Provincially Rare species are considered to have at least a possible likelihood of occurrence on the Subject Property given their habitat associations and current distribution in southern Ontario (or were confirmed based on the fieldwork program):

- 1) Barn Swallow (*Hirundo rustica*)

- 2) Great Plains Mudbug (*Lacunicambarus nebrascensis*)
- 3) American Bumble Bee (*Bombus pensylvanicus*)
- 4) Lemon Cuckoo Bumble Bee (*Bombus citrinus*)
- 5) Monarch (*Danaus plexippus*)
- 6) Unicorn Clubtail (*Argemphus villosipes*)
- 7) Yellow-banded Bumblebee (*Bombus terricola*)
- 8) Eastern Milksnake (*Lampropeltis triangulum*)
- 9) Northern Map Turtle (*Graptemys geographica*)
- 10) Snapping Turtle (*Chelydra serpentina*)

An assessment of potential effects to the identified candidate SWH types and federal SAR/Provincially Rare species associated with the proposed development plan is provided in **Section 5.1.1**.

4.4 Protected Species of Ontario (Provincially Endangered and Threatened Species)

An assessment of the likelihood that any provincially Endangered and Threatened species or their habitats occur within the Study Area is provided in **Appendix 6**. A total of six (6) Endangered or Threatened species are considered to have a possible likelihood of occurrence within the Study Area given their habitat associations and current distribution in southern Ontario:

- 1) Eastern Red Bat (*Lasiurus borealis*)
- 2) Little Brown Myotis (*Myotis lucifugus*)
- 3) Northern Hoary Bat (*Lasiurus cinereus*)
- 4) Northern Myotis (*Myotis septentrionalis*)
- 5) Silver-haired Bat (*Lasionycteris noctivagans*)
- 6) Tri-colored Bat (*Perimyotis subflavus*)

A general description of each Endangered/Threatened species and their habitat is offered below. An assessment of potential effects to these Endangered/Threatened species associated with the proposed development plan is provided in **Section 5.1.2**.

4.4.1 Endangered Bats

Per the assessment in **Appendix 6**, Little Brown Myotis, Northern Myotis, and Tri-colored Bat have the potential to roost and forage within the Study Area. Each of these bat species are designated Endangered in Ontario per O. Reg. 60/26 pursuant to the provincial SCA and are listed as Endangered on Schedule 1 of the federal *Species at Risk Act* (SARA). Little Brown Myotis and Northern Myotis form maternity colonies that roost in large-diameter trees with cracks, crevices, and/or exfoliating bark; Little Brown Myotis will also frequently roost in buildings (e.g., attics, barns, etc.). Roosting sites for Tri-colored Bat maternity colonies are less understood but have been documented in dead or dying leaf clusters of oaks (*Quercus* spp.) and maples (*Acer* spp.), along with live foliage and buildings (Humphrey and Fotherby 2019). Individuals (i.e., non-reproductive females and males) of all three bat species may roost in smaller diameter trees and other spaces (e.g., beneath house siding, etc.) which are not occupied by maternity colonies. Overwintering habitat includes caves and mines that maintain temperatures above 0°C. White Nose Syndrome (a fungal disease caused by an introduced pathogen) has devastated populations of each species across their ranges. The fungus causes hibernating individuals to become dehydrated, leading to excessive arousal, depleted fat reserves, and ultimately emaciation and/or death.

Per the assessment in **Appendix 6**, migratory bats (Eastern Red Bat, Hoary Bat, and Silver-haired Bat) also have the potential to roost and forage within the Study Area. Each of these bat species are designated Endangered in Ontario per O. Reg. 60/26 pursuant to the SCA and have been assessed as Endangered by COSEWIC but are not listed on Schedule 1 of the federal SARA. These migratory species are primarily found in Ontario during the summer months, and their summer habitat is generally comprised of foraging, drinking, and roosting sites (COSEWIC 2023).

Eastern Red Bat and Hoary Bat typically roost with dependent young (i.e., pups) in deciduous or coniferous forests of all age classes, with a preference for roosting in tall, large diameter trees, and at sufficient heights to deter predators (i.e., at a height greater than five metres; COSEWIC 2023). Eastern Red Bat is also known to roost in shrubs. Occurrences of Eastern Red Bat and Hoary Bat roosting in anthropogenic structures are rare. Silver-haired Bat reproductive females typically roost in decaying, large diameter deciduous or coniferous trees with heart-rot or exfoliating bark, and are known to occasionally roost on or in buildings (COSEWIC 2023). Roost switching is common among all three migratory species. All three migratory bats species undergo seasonal migrations during the fall and spring which expose them to numerous threats, including fatalities associated with wind energy facilities. Other threats to these species include declines in prey abundance, and losses of forested roosting habitat and foraging habitat.

Targeted bat roosting habitat assessments and/or acoustic monitoring were not undertaken as part of this study, as no development or site alteration activities are proposed within any woodland. Suitable maternity roosting habitat for Little Brown Myotis, Northern Myotis and migratory bats occurs within the Study Area. Potential roosting habitat for Tri-colored Bat is relatively limited (given limited presence of oaks and maples).

4.5 Fish Habitat

Indian Creek Drain provides direct fish habitat. The specific fish community occupying Indian Creek Drain is unknown; however, this watercourse is considered to have a warmwater thermal regime pursuant to the provincial Aquatic Resource Areas (ARA) database for watercourse GU-7076-ind.

An assessment of potential effects to fish habitat associated with the proposed development plan is provided in **Section 5.1.3**.

4.6 Key Hydrologic Features

Indian Creek Drain is shown as a “Permanent & Intermittent Stream” per Schedule C2 of the NOP. Based on hydrological conditions observed during the 2024 fieldwork program, it is expected that Indian Creek Drain meets the definition of “Permanent Stream” under Schedule L of the NOP, which includes “watercourses that contain water during all times of the year”.

4.7 Candidate/Supporting Features

Lands to the east and north of the proposed Area of Disturbance are broadly naturalized and provide a supporting, linkage function to the adjacent significant natural features in the broader landscape, including the identified PSW and Stratum II Deer Wintering Area. Areas to the northeast of the proposed Area of Disturbance are shown as an “Environmental Corridor” per Schedule B2 of the City’s OP.

5 IMPACT ASSESSMENT AND MITIGATION

The purpose of this EIS is to present a biophysical characterization of the Study Area as a means to identify the potential for “negative impacts” (as defined) on significant natural heritage features/areas and other adverse effects on legislatively protected species stemming from the proposed construction of an outdoor storage area and associated outbuilding and septic system. Several significant natural features and species were documented (or may occur) within the Subject Property pursuant to the assessments presented in **Section 4**. The following effects assessment provides an evaluation of the potential for the proposed rezoning application to result in negative impacts to such environmental components and offers technical recommendations to mitigate such impacts where warranted. Certain technical recommendations offered herein apply to several natural features and/or species simultaneously; as such, all technical recommendations should be read and considered in their entirety. The baseline or existing conditions against which the application is assessed are treated as the state of the Subject Property at the time of the fieldwork program. The impact assessment herein is based on the civil drawings provided in **Appendix 7**.

5.1 Feature-based Effects Assessment and Technical Recommendations

5.1.1 Significant Wildlife Habitat

Per the assessment in **Section 4.3**, a total of four (4) candidate SWH types were considered further through this study:

- Seasonal Concentration Areas of Animals
 1. Bat Maternity Colonies
 2. Turtle Wintering Areas
- Habitat of Species of Conservation Concern
 3. Special Concern and Rare Wildlife Species
 4. Terrestrial Crayfish

Also based on this assessment, a total of ten (10) federal SAR/Provincially Rare species have at least a possible likelihood of occurrence within the Study Area given their habitat associations and current distribution in southern Ontario (or were confirmed based on the fieldwork program):

- 1) Barn Swallow (*Hirundo rustica*)
- 2) Great Plains Mudbug (*Lacunicambarus nebrascensis*)
- 3) American Bumble Bee (*Bombus pensylvanicus*)
- 4) Lemon Cuckoo Bumble Bee (*Bombus citrinus*)
- 5) Monarch (*Danaus plexippus*)
- 6) Unicorn Clubtail (*Argemphus villosipes*)
- 7) Yellow-banded Bumblebee (*Bombus terricola*)
- 8) Eastern Milksnake (*Lampropeltis triangulum*)
- 9) Northern Map Turtle (*Graptemys geographica*)
- 10) Snapping Turtle (*Chelydra serpentina*)

No specific recommendations are offered herein to minimize impacts to most of the above SWH types and species of conservation interest for the following reasons:

- No removal or impacts to candidate significant bat maternity colony habitat or turtle wintering habitat are anticipated.
- In general, Barn Swallow nesting on human structures is not appropriately considered SWH. The occupied nests within the Ramey Road culvert are 10 m south of the proposed area of road works and are sheltered within the culvert. Nesting Barn Swallows within the Ramey Road culvert would be acclimated to routine vehicular traffic. No works on or in the culvert are proposed through this development application.
- Habitat for the above-noted bumble bees, Monarch, and Eastern Milksnake is not limited in either the Subject Property or local landscape.
- Potential habitat for Northern Map Turtle and Snapping turtle in the Indian Creek Drain will not be negatively impacted by the works.

The only SWH type requiring further consideration is habitat for Terrestrial Crayfish, particularly Great Plains Mudbug (which is also Provincially Rare/S3). Terrestrial crayfish chimneys were documented within the perimeter drainage swales along the northern boundary of the Area of Disturbance; these drainage swales are proposed to be regraded and otherwise modified through the proposed works. On this basis, Terrastory recommends as follows:

- **A Wildlife Scientific Collector's authorization will be secured from MNR pursuant to the *Fish and Wildlife Conservation Act* to relocate the terrestrial crayfish, and is to include a formal Terrestrial Crayfish Relocation Plan.**
- **Terrestrial crayfish will be relocated to the edge of the Indian Creek Drain (or other ecologically similar location as deemed by MNR) prior to any grading or other modifications within 30 m of any documented crayfish chimneys (see Figure 3).**

Terrastory has successfully captured and relocated terrestrial crayfish in several parts of southern Ontario.

5.1.2 Protected Species of Ontario (Provincially Endangered and Threatened Species)

Per the assessment in **Appendix 6** a total of six (6) Endangered or Threatened species are considered to have a possible likelihood of occurrence on the Subject Property (or were confirmed) given their habitat associations and current distribution in southern Ontario:

- 1) Eastern Red Bat (*Lasiurus borealis*)
- 2) Little Brown Myotis (*Myotis lucifugus*)
- 3) Northern Hoary Bat (*Lasiurus cinereus*)
- 4) Northern Myotis (*Myotis septentrionalis*)
- 5) Silver-haired Bat (*Lasionycteris noctivagans*)
- 6) Tri-colored Bat (*Perimyotis subflavus*)

The proposed Area of Disturbance provides generalized roosting habitat for several of the above-noted bats. The following measures are recommended:

- **All necessary woody vegetation removals will be completed outside the primary bat activity period (i.e., to be completed between December 1 and March 31). If limited tree removal is required during the restricted timing window, consult a qualified ecologist or MECP for further direction.**
- **Any lighting incorporated into the final building designs should be directed downward (i.e., towards the ground) to the extent practicable.**

5.1.3 Fish Habitat

Where development and/or site alteration activities are proposed adjacent to watercourses that support (or are assumed to support) fish and/or aquatic organisms, adverse effects may occur via the following pathways (amongst others):

- Alterations to surface water and/or groundwater contributions to the watercourse from construction (e.g., dewatering, etc.), grading that modifies the existing topography or drainage, and/or increased coverage of impervious surfaces (e.g., roads, roofs, etc.);
- Increased sediment loadings and/or nutrient enrichment within the watercourse via runoff exiting from development areas during and post construction. This may alter water quality and/or degrade habitat quality via increased turbidity, eutrophication, contamination by toxic substances, changes in pH, etc.
- Introduction of invasive species including aquatic organisms and aquatic plants.
- Increased human activity (i.e., encroachment) in the vicinity of the watercourse which may result in bank compaction, exploitation of fish, dumping, etc.

To protect the Indian Creek Drain (and fish habitat therein) from construction-related impacts, the following measures are recommended:

- **All works will be undertaken consistent with an Erosion and Sediment Control Plan.**
- **Should any fill placement below the high-water mark of Indian Creek Drain be required (i.e., to install drainage swale outlets), the project works may require circulation to Fisheries and Oceans Canada as part of a Request for Review under the *Fisheries Act*.**

5.1.4 Other Natural Environment Considerations

While the recommendations offered herein restrict development activities from all significant natural heritage features, some vegetation removal (i.e., woody and herbaceous vegetation) is required to facilitate development. To further minimize potential adverse effects to the natural environment and wildlife during construction, the following measures are recommended:

- **The removal of trees will be restricted to areas in direct conflict with the footprints of the proposed development features (e.g., residence, septic system, driveway, etc.) and grading, along with any hazardous trees in the immediate vicinity that pose an unacceptable risk to human life or property.**

- All necessary vegetation removal (e.g., trees, meadow vegetation) will be completed outside the primary bird nesting period (i.e., to be completed between September 1 and March 31). Should minor vegetation removal be proposed during the restricted timing window within readily searchable habitat types, a bird nesting survey will be undertaken to confirm the presence or absence of nesting birds or bird nests within or adjacent to the areas subject to vegetation clearance. The bird nesting survey is to take place within 48 hours of vegetation removal.
- All vehicles and machinery (i.e., construction equipment) entering the Subject Property during construction shall follow relevant best practices for reducing the spread of invasive species outlined in the Clean Equipment Protocol for Industry (Halloran et al. 2013).
- Incorporation of Bird-Friendly Guidelines for the proposed buildings/structures such as those published in City of Toronto's "Best Practices for Bird-Friendly Glass" (City of Toronto 2016) and "Best Practices for Effective Lighting" (City of Toronto 2017) should be considered as part of the building design, including:
 - The use of masonry or non-reflecting surfaces (buildings with high components of glass in their exteriors are more prone to bird strikes).
 - Where glass is proposed, the application of glass treatments such as applied coverings, frit patterns, internal blinds, shades, tinting, and/or landscape design.
 - Where tinted glass is proposed, warm spectrum colours (yellow/red) are discouraged (they may cause more disorientation than cold spectrum colours such as blue/green).
- Incorporation of Best Management Practices for the use of road salt such as those published in the Transportation Association of Canada's "Syntheses of Best Practices Road Salt Management" should be considered at detailed design.
- Any Landscape Plans prepared as part of the development approval should incorporate native tree replacements (minimum 1:1 ratio) and application of native seed mixes to any areas of disturbance.

5.1.5 Summary of Technical Recommendations

All technical recommendations provided in **Section 5.1** are reiterated in **Appendix 8**.

6 APPLICABLE NATURAL HERITAGE AND ENVIRONMENTAL POLICIES

The following sections summarize the various municipal, provincial, and federal environmental policies that may apply to the proposed development plan and describe how the recommendations provided in this EIS will address these policies (where applicable).

6.1 City of Port Colborne Official Plan (September 2017)

The City's OP is a legal document prepared as required under section 14.7(3) of the *Planning Act*. An OP sets out goals, objectives, and policies that direct and manage land-use and future development activities and their effects on the social and natural environment of a municipality. Provincial plans that offer direction on matters of provincial interest are implemented principally through the City's OP. Provided herein is a description of relevant environmental and natural heritage policies contained within the City's OP and an assessment of whether the development concept addresses such policies.

The Subject Property is designated "Rural Employment" per Schedule A (City-Wide Land Use) of the City's OP. Lands designated EPA are found along the eastern property boundary per both Schedule A and Schedule B1 (Environmental Protection Area), which partly reflect the presence of a Provincially Significant Wetland (PSW; Babion Woods Wetland Complex). Lands to the east also contain designated ECA reflecting "Significant Woodlands" and an "Environmental Corridor" per Schedule B2 (Environmental Conservation Area), along with a Stratum II Deer Wintering Area identified by the Ministry of Natural Resources (MNR).

The City's primary natural heritage policy framework is outlined in Section 4 (Natural Heritage) of their OP. Pertinent natural heritage policies are summarized below.

- The preamble to **Section 4** clarifies that the "objective of these policies is to identify and protect significant natural areas while focusing on conservation and remediation, where appropriate."
- **Section 4.1** directs that "Natural Heritage Features" are shown on Schedule B as Environmental Protection Areas, Environmental Conservation Areas, Significant Valleylands, Stream Corridors and Fish Habitat, and are further delineated on Schedules B1 and B2.
 - **Policy 4.1.1** outlines "General Policies" for natural heritage protection, including that the City is to promote the protection and/or conservation (and where appropriate, restoration and enhancement) of Natural Heritage Features within its boundaries (4.1.1a).
 - **Policy 4.1.1i** requests the completion of an EIS where development or redevelopment is proposed through a *Planning Act* application which may impact an Environmental Protection Area or Environmental Conservation Area per Schedule B.
 - **Policy 4.1.1j** provides buffer distances for a variety of natural heritage features, which can be reduced where determined through completion of an EIS.
 - **Policy 4.1.2.2** provides general guidelines for completion of an EIS.
 - **Policy 4.1.3** prohibits development or site alteration which may have negative impacts on surface and ground water resources.
- **Section 4.2** provides policies for Environmental Protection Areas as shown on Schedule B, which include Provincially Significant Wetlands, Provincially Significant Areas of Natural and Scientific Interest (ANSIs), Significant Habitat of Threatened and Endangered Species, and Natural Hazard Areas.
 - **Policy 4.2.1.1** prohibits development and site alteration within Provincially Significant Wetlands.

- **Policy 4.2.2.1** prohibits development and site alteration within Provincially Significant ANSIs.
- **Policy 4.2.3.1** prohibits development and site alteration within Significant Habitat of Threatened and Endangered Species except where undertaken in accordance with Provincial requirements.
- **Section 4.3** provides policies for Environmental Conservation Areas as shown on Schedule B, which include Regionally Significant Areas of Natural and Scientific Interest (ANSIs), Non-Provincially Significant Wetlands, Significant Wildlife Habitat, Significant Woodlands, Significant Valleylands, Habitats of Species of Concern, and Environmental Corridors and Linkages.
 - Overall, development within or adjacent to natural features comprising the Environmental Conservation Area designation are only permitted where it has been demonstrated that there will be no negative impacts on the feature or its ecological functions.
 - **Policy 4.3.6.1** directs that environmental corridors and linkages will be incorporated into development proposals, where feasible.

Terrastory reviewed potential impacts to the identified significant natural features in **Section 5.1** of this EIS. Provided that Terrastory's recommended mitigation measures (summarized in **Appendix 8**) are carried out in full, no negative impacts are anticipated to any EPA or ECA feature identified herein. Based on the preceding discussion, the proposed development plan appropriately addresses the natural heritage protection provisions of the City's OP.

6.2 Regional Municipality of Niagara Official Plan (May 2024)

The NOP was approved by the Province with modifications on 4 November 2022, which replaced the previous 2014 ROP.

The Subject Property is located outside of any "Urban Areas" (i.e., settlement areas) or other "Strategic Growth Areas" per Schedule B (Regional Structure) under the NOP. "Other Wetlands" (non-evaluated) extend into the Subject Property per Schedule C2 (Natural Environment System: Individual Components and Features) of the NOP. A "Permanent & Intermittent Stream" (Indian Creek Drain) is mapped on Schedule C2 (Natural Environment System – Individual Components and Features) of the NOP flowing westward just south of the Subject Property, and emptying into the Welland Canal.

The NOP does not carry forward the EPA/ECA designation framework for significant natural features as contained in the City's current OP (and previous 2014 ROP). The natural heritage policy framework is largely contained in Chapter 3 (Sustainable Region) of the NOP. A simplified and condensed summary of relevant Regional natural heritage policies which the development application must address is as follows:

- **Policy 3.1.1.1** establishes a Natural Environment System (NES) for Niagara Region, the features and components of which are identified in Schedule L
- **Policy 3.1.1.2** clarifies that the NES also includes groundwater features, surface water features, and other hydrologic functions.

- **Policy 3.1.2.1** directs that natural heritage features and areas, key natural heritage features, key hydrologic features, and other individual components of the NES are indicated as an overlay on Schedule C2 of the NOP.
- **Policy 3.1.2.2** lists the individual features and components of the NES (mapped on Schedule C-2), which include:
 - a) significant woodlands;
 - b) other woodlands;
 - c) provincially significant wetlands;
 - d) other wetlands and non-provincially significant wetlands;
 - e) life science areas of natural and scientific interest;
 - f) earth science areas of natural and scientific interest;
 - g) permanent and intermittent streams;
 - h) inland lakes; and
 - i) linkages.
- **Policy 3.1.3.1** directs that not all features and components of the NES can or have been mapped, and as such detailed area-specific or site-specific studies (e.g., EIS, SWS) are required for their identification).
- **Policy 3.1.3.3** directs the highest level of environmental protection shall apply where lands containing two or more components of the NES.
- **Policy 3.1.4.1** allows for changes to the limits of individual features or components of the NES where justified through an EIS and/or hydrological evaluation.
- **Policy 3.1.4.9** directs that applications for a lot boundary adjustment shall avoid the fragmentation of provincially significant wetlands and significant woodlands.
- **Policy 3.1.4.10** directs that applications for lot boundary adjustment should avoid the fragmentation of other natural heritage features and areas, key natural heritage features or key hydrologic features wherever possible and practical.
- **Section 3.1.9** applies to lands in designated Settlement Areas and other lands which are outside of the Provincial NHS (i.e., Growth Plan NHS and Greenbelt Plan NHS) and Niagara Escarpment Plan area.
- **Policy 3.1.9.5.1** prohibits development and site alteration within the following significant natural features:
 - a) Provincially Significant Wetlands,
 - b) Significant Coastal Wetlands, and
 - c) Significant Woodlands.
- **Policy 3.1.9.5.2** permits development in the following natural heritage features only where it can be demonstrated that no negative impacts on the feature or its ecological functions is anticipated:
 - a) Other Woodlands,
 - b) Significant Valleylands,
 - c) Significant Wildlife Habitat, and
 - d) Areas of Natural and Scientific Interest.
- **Policy 3.1.9.5.4** recognizes the overlapping regulatory authority of NPCA as it pertains to development within or adjacent to Watercourses, Provincially Significant Wetlands, and Other Wetlands.

- **Table 3-1** provides Adjacent Lands distances for various natural heritage features and areas contained in the NES.
- **Policy 3.1.9.8.1** mandates minimum setbacks from several features and components of the NES per Table 3-2, which includes:
 - a) 30 m from PSWs.
 - b) 20 m from Significant Woodlands
 - c) 10 m from Other Woodlands
- **Policy 3.1.10.1** prohibits development and site alteration within key hydrologic areas, key hydrologic features, and other important water resources unless no negative impacts are demonstrated on several hydrological features and functions.
- **Policy 3.1.11** directs that development and site alteration are not permitted in Other Woodlands unless it has been demonstrated through the preparation of an environmental impact study that there will be no negative impacts on the other woodland or its ecological functions.
- **Policy 3.1.12.1** directs that development or site alteration shall not be permitted in fish habitat except in accordance with Federal and Provincial requirements.
- **Policy 3.1.13.1** directs that development or site alteration shall not be permitted in habitat of endangered and threatened species except in accordance with Federal and Provincial requirements.
- **Policy 3.1.15.1** clarifies that supporting features and areas are lands that have been restored or have the potential to be restored, and include:
 - a) grasslands, thickets, and meadows that support the ecological functions of adjacent key natural heritage features, key hydrologic features, and/ or natural heritage features and areas;
 - b) valleylands, which includes lands that may have ecological and/or hydrologic functions, that are not significant valleylands, and are not the site of a permanent or intermittent stream that is regulated by the Conservation Authority;
 - c) wildlife habitat that is not considered to be significant wildlife habitat; and
 - d) enhancement areas, which are the subject of Section 3.1.16 of this Plan.
- **Policy 3.1.15.2** directs that supporting features and areas shall be screened for through an EIS and/or hydrological evaluation both inside and outside settlement areas.
- **Policy 3.1.16.1** clarifies that enhancement areas are intended to consist of natural self-sustaining vegetation that increase the ecological resilience and function of individual key natural heritage features, key hydrologic features and/or natural features and areas, or groups of such features, by:
 - a) increasing the size of key natural heritage features, key hydrologic features and/or natural heritage features and areas;
 - b) connecting key natural heritage features, key hydrologic features and/or natural heritage features and areas to create larger contiguous natural areas;
 - c) improving the shape of key natural heritage features, key hydrologic features and/or natural heritage features and areas to increase interior habitat conditions; or
 - d) including critical function zones and important catchment areas for sustaining ecological functions.
- **Policy 3.1.16.2** directs that potential enhancement areas shall be screened for through an EIS and/or hydrological evaluation both inside and outside settlement areas.

- **Policy 3.1.20.2** directs that an EIS demonstrate how enhancements to ecological function, ecological integrity, or biodiversity of the natural environment system can be achieved.

Consistent with the conformity assessment provided under the City's OP in **Section 6.1** above, it has been determined that the proposed development has been made consistent with relevant natural heritage provisions contained in the NOP provided that the recommendations made herein are captured through the development approvals process.

6.3 Provincial Planning Statement 2024, pursuant to the *Planning Act*, R.S.O. 1990, c. P. 13

The Provincial Planning Statement (PPS) is promulgated under the authority of the *Planning Act* and came into effect on 20 October 2024, replacing the previous PPS that came into effect on 1 May 2020. The PPS provides direction to municipalities on land-use matters of provincial interest and sets the policy framework for regulating the use and development of land. Municipal OP's must be consistent with the PPS. Per its preamble, the PPS *provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment.*

The principal PPS policies that apply to natural heritage protection are outlined in section 4.1. While recognizing that the natural heritage protection framework is not intended to limit the ability of agricultural uses to continue (Policy 4.1.9), the PPS instructs that *natural features and areas shall be protected for the long term* (Policy 4.1.1) and that their diversity and connectivity be *maintained, restored or, where possible, improved* (Policy 4.1.2). In Ecoregions 6E and 7E the PPS separates significant features into three categories:

- 1) Those in which development and site alteration are not permitted, including 1) Provincially Significant Wetlands and 2) Significant Coastal Wetlands (Policy 4.1.4);
- 2) Those in which development and site alteration are not permitted unless it can be demonstrated that no negative impacts on the significant natural feature and/or its functions will occur, including: 1) Significant Woodlands, 2) Significant Valleylands, 3) Significant Wildlife Habitat, 4) Significant Areas of Natural and Scientific Interest, 5) Non-significant Coastal wetlands, and 6) Adjacent Lands (Policy 4.1.5 and 4.1.8).
- 3) Those in which development and site alteration are not permitted except in accordance with federal/provincial requirements, including: 1) fish habitat (Policy 4.1.6) and 2) habitat of Endangered and Threatened Species (Policy 4.1.7).

In considering the aforementioned PPS policies, it has been determined that the proposed development plan addresses relevant natural heritage provisions of the PPS for the following reasons:

- Per **Table 5** of this report, no Significant Wetlands, Significant Valleylands, or Areas of Natural or Scientific Interest are present within the Study Area.
- Per **Section 5.1** of this report, no negative impacts to candidate/confirmed Significant Wildlife Habitat are anticipated given implementation of the proposed development plan provided that the recommended mitigation measures are implemented in full.
- Per **Section 5.1** of this report, Fish Habitat and Endangered/Threatened species habitat will be protected in accordance with provincial and federal requirements.

6.4 O. Reg. 41/24, pursuant to the *Conservation Authorities Act*, R.S.O. 1990, c. C.27

Conservation Authorities (CAs) in Ontario regulate “development” (as defined) within and adjacent to “hazardous lands”, which include “land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock” as provided under O. Reg. 41/24 pursuant to the *Conservation Authorities Act*. Section 2 under O. Reg. 41/24 serves to define the regulatory jurisdiction of CAs, which include confined valleylands, unconfined valleylands, shorelines of the Great Lakes and inland lakes, and wetlands. More specifically, the limits of CA regulatory jurisdiction encompass the following spatial areas:

- 15 m from the physical top of bank (TOB) or long-term stable top of slope (LTSTOS), whichever is greater, of confined valleylands;
- 15 m from flooding or meander belt erosion hazards, where valleyland morphology associated with a watercourse is not apparent (excepting NPCA, where no additional 15 m regulatory allowance is provided beyond the hazard limit);
- 15 m from the limit of flooding, erosion, or dynamic beach hazards associated with the Great Lakes shoreline or inland lakes; and
- 30 m from wetlands.

Most CAs have prepared various policy documents to guide the administration of O. Reg. 41/24. CA regulatory jurisdiction centres on avoiding development within “hazardous lands”, and does not explicitly extend to natural heritage features or ecological functions. Beyond their regulatory responsibilities under the *Conservation Authorities Act*, CAs also possess delegated responsibilities from the Province to represent provincial interests regarding natural hazards under Section 5.2 of the 2024 PPS, and may also act as “public bodies” under the *Planning Act*.

To support NPCA’s regulatory review of the development application in the context of natural hazards, it is highlighted that no development or site alteration is proposed within 30 m of any wetland. Permission from NPCA under O. Reg. 41/24 is expected to be required to facilitate future development of the lands as contemplated by the proposed land-use changes assessed herein where development or site alteration activities overlap with a regulated area.

6.5 Provincial *Species Conservation Act*, S.O. 2025, c. 4, Sched. 10

The *Species Conservation Act* (SCA) was promulgated on 30 March 2026 and replaced the *Endangered Species Act* (ESA) which was concurrently repealed. The SCA is administered by MECP and protects “Extirpated”, “Endangered”, and “Threatened” species (collectively known as “Protected Species in Ontario”) which are designated on O. Reg. 60/26, along with their “habitat”. Habitat is defined in the SCA separately for animals, vascular plants, and “other species”:

- **Animal habitat:** a “dwelling-place” (i.e., a den, nest, or similar occupied or habitually occupied place) including the immediately surrounding area;
- **Vascular plant habitat:** the “critical root zone” surrounding a member of the species, which MECP currently interprets as follows:
 - **Woody vegetation (trees and shrubs):** the radial distance from the stem equal to 18 times the species’ reported maximum diameter at breast height (DBH) in Ontario or a jurisdiction with comparable growing conditions, rounded up to the nearest metre;

- **Herbaceous vegetation:** determined on a case-by-case basis using the best available information and subject to the biological needs and local environmental conditions, but at a minimum would represent the greatest radial distance of:
 - the reported maximum height of the species in metres;
 - 2 m from each stem for rhizomatous plants; and
 - 1 m from each stem for all other herbaceous plants.
- **All other species (e.g., bryophytes, lichens):** an area on which any member of a species directly depends in order to carry on its life processes.

An activity that “kills”, “harms”, or “captures” a designated Protected Species or “damages” or “destroys” its habitat (as described above) is referred to as a “Section 16 Activity”, which is prohibited under the SCA without securing the appropriate regulatory permission. Activities involving possessing/transporting or selling/trading a Protected Species are also Section 16 Activities and are prohibited.

Section 16 Activities must either be registered (“Registrable Activity”) or permitted (“Permitted Activity”), unless they qualify as an “Excepted Activity” under O. Reg. 61/26. Registrable Activities are outlined under O. Reg. 75/26 and include all Section 16 Activities which do not require a permit. All Registrable Activities must be supported by a “Conservation Plan” prepared by a “Qualified Professional” and are to incorporate the mandatory content requirements outlined in Schedule 1 of O. Reg. 76/26. Conservation Plans must further include “Mitigation Measures” outlined in Schedule 2 and (where residual adverse effects are anticipated) “Conservation Measures” outlined in Schedule 3.

Permitted Activities are outlined under O. Reg. 74/26 and include activities that result (or are likely to result) in the killing or harming of a member of a listed animal species, provided that the activity is direct and intentional (i.e., not an “incidental” result of engaging in the activity).

A detailed assessment of potential and confirmed Endangered and Threatened species habitat within the Subject Property is provided in **Appendix 6**. Per this assessment, and provided that relevant technical recommendations outlined in **Section 5.1** are implemented in full, it has been determined that the proposed development plan is consistent with the species and habitat protection provisions of the SCA.

6.6 Federal *Species at Risk Act*, S.C. 2002, C. 29

The federal *Species at Risk Act* (SARA) was enacted in 2003 to prevent wildlife and plant species in Canada from disappearing, and to enable legislative provisions that recover and/or manage listed species. While the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is the independent, scientific body responsible for assessing species status in Canada, the decision to proceed with designating (or “listing”) a species as “Extirpated”, “Endangered”, “Threatened”, or “Special Concern” under Schedule 1 of SARA is made by the Governor in Council (i.e., relevant Minister) per subsection 27(1.1).

Section 32 of SARA protects species listed as Extirpated, Endangered, or Threatened on Schedule 1 from being killed, harmed, harassed, captured, or taken, while section 33 prohibits damage or destruction of a “Residence” which is defined under subsection 2(1) as:

a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.

Environment and Climate Change Canada (ECCC) has issued formal “Residence Descriptions” for certain listed species, which are used to support enforcement, compliance promotion, recovery planning, and environmental assessment.

Sections 34 and 35 restrict the general prohibitions of SARA which protect individuals and Residences of species listed as Extirpated, Endangered, or Threatened to federal lands only (including First Nations reserves), except for “aquatic species” (which include fish and marine plants as defined in the *Fisheries Act*) and migratory birds (per the MBCA). Both aquatic species and migratory birds are afforded such protections on both federal and non-federal land. SARA prohibitions on killing/harming individuals or damaging/destroying Residences of terrestrial species do not apply beyond federal lands unless the Governor in Council has issued an Order under subsections 34(2) or 34(5) of SARA, which (to date) has never been applied to an Extirpated, Endangered, or Threatened species in Ontario.

Subsection 58(1) of SARA further prohibits the destruction of “Critical Habitat”, which is defined under subsection 2(1) as:

the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species.

Critical Habitat is only protected in Canada where it has been described in an approved “Recovery Strategy” (per SARA sections 37 to 46) or “Action Plan” (per SARA sections 47 to 55) and once a Critical Habitat Order has been issued by the Governor in Council. The Governor in Council is obligated to make such an order within 180 days after the Recovery Strategy or Action Plan is included in the public registry; otherwise, the Minister must make a statement setting out how the Critical Habitat is already protected under other legislation. Similar to other SARA prohibitions, the protection of “Critical Habitat” (once specified in an approved Recovery Strategy) is restricted to federal land for all listed Extirpated, Endangered, and Threatened species, except for aquatic species and migratory birds. Still, ECCC has interpreted Critical Habitat protection for migratory birds narrowly, such that Critical Habitat protections under SARA section 58 extend automatically only to nests themselves (which are dually protected under the MBCA) rather than the surrounding breeding/foraging habitat or other areas identified as Critical Habitat within a Recovery Strategy or Action Plan. Protection of Critical Habitat for migratory birds (beyond nests) and other listed terrestrial species on non-federal land only applies where specifically ordered under SARA section 61, which (to date) has never been applied to an Extirpated, Endangered, or Threatened species in Ontario.

Any activities which impact individuals, Residences, or Critical Habitat of Extirpated, Endangered, or Threatened species (where the provisions of SARA apply) must be addressed through securement of an agreement or permit under section 73.

As the Subject Property represents privately-owned land, only those Endangered or Threatened species listed under Schedule 1 of SARA which are aquatic species or migratory birds are afforded legislative protection. In the context of the proposed development considered herein, this includes:

- Barn Swallow (federally Threatened);

A general description of relevant SARA prohibitions which apply to Barn Swallow can be found in the sections that follow.

6.6.1 Barn Swallow

Barn Swallow is listed as Threatened under Schedule 1 of SARA. As a migratory bird species under federal jurisdiction, Barn Swallow Residences are protected under section 33 of SARA on both federal and non-federal land.

ECCC has published a formal Residence Description for Barn Swallow (Government of Canada 2019), wherein a residence includes both active and inactive nests during the occupancy period, which extends from approximately May 1 (or the date when adults are first seen building or occupying the nest) to August 31 (or the date when a bird is last seen at the nest). No damage or destruction of any active or inactive nests during the occupancy period is proposed through this development application.

No Critical Habitat Order has been published for Barn Swallow under SARA, and thus there is no Critical Habitat (as defined under SARA) afforded to this species within the Subject Property.

6.7 Federal *Fisheries Act*, R.S.C. 1985, c. F-14

The amended federal *Fisheries Act* (Bill C-68) received Royal Assent in June 2019 while the updated fish and fish habitat protection provisions came into force in August 2019. Subsection 34.4(1) of the amended *Fisheries Act* prohibits all work, undertaking, or activity from causing the death of fish (other than fishing). Subsection 35(1) requires that project activities not result in the “*harmful alteration, disruption or destruction of fish habitat*” (HADD) unless undertaken in accordance with the requirements of a statutory exemption per subsection 35(2). Based on the Fish and Fish Habitat Protection Policy Statement (August 2019), HADD is interpreted by DFO to include “*any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat’s capacity to support one or more life processes of fish*”.

Consistent with the assessment carried out in **Section 5.1** and provided that relevant technical recommendations outlined in **Section 5.1.3** are implemented in full, it has been determined that the proposed development plan is consistent with the fish and fish habitat protection provisions outlined in the *Fisheries Act*. Should any in-water works or fill placement below the high-water mark of a surface water feature (i.e., Indian Creek Drain) be proposed, a formal Request for Review of the project works may require circulation to DFO.

6.8 Federal *Migratory Birds Convention Act*, S.C. 1994, c. 22

Subsection 5(1) of the Migratory Birds Regulations under the *Migratory Birds Convention Act, 1994* (MBCA) prohibits the disturbance or destruction of nests, eggs, or nest shelters of a migratory bird without authorization. Subsection 5(2) of the Migratory Birds Regulations allows for damage or destruction of nests which lack a live bird or viable egg with the exception of inactive nests

associated with species listed under Schedule 1. In Ontario, the nests of Schedule 1 species are afforded year-round protection (i.e., regardless of the presence or absence of a live bird or viable egg), inclusive of the following species:

- Black-crowned Night Heron (*Nycticorax nycticorax*)
- Cattle Egret (*Bubulcus ibis*)
- Great Blue Heron (*Ardea herodias*)
- Great Egret (*Ardea alba*)
- Green Heron (*Butorides virescens*)
- Pileated Woodpecker (*Dryocopus pileatus*)
- Snowy Egret (*Egretta thula*)

The provincial *Fish and Wildlife Conservation Act, 1997* (FWCA) extends the protection of bird nests and eggs to certain non-migratory species not listed under the Migratory Birds Regulations (e.g., Corvids, Strigids, Accipitrids). Section 7(1) of the FWCA prohibits a person from destroying, taking, or possessing the nest or eggs of a bird that belongs to a species that is wild by nature. Section 7(3) identifies that section 7(1) of the FWCA does not apply to a person who destroys, takes, or possesses the nest or eggs of a bird described in subsection (a) in accordance with the authorization of the Minister, or subsection (b) in the circumstances prescribed by the regulations. The nests of certain non-migratory bird species are not protected under the FWCA (e.g., Red-winged Blackbird).

Provided that the recommendations outlined in **Section 5.1.4** are implemented in full (i.e., prohibition on vegetation removal during the bird breeding season), no impacts to breeding birds or bird nests protected by the MBCA or FWCA are anticipated.

7 CONCLUSIONS

In accordance with the Terms of Reference for this study (**Appendix 4**) and relevant environmental policies, the preceding Environmental Impact Study provides a detailed characterization of the natural environment occurring within and adjacent to a vacant lot of record on Forkes Road (near Third Concession) in the City of Port Colborne. This EIS has been prepared as part of the supporting documentation for a Zoning By-law Amendment application submitted to remove a holding provision and facilitate the establishment of an outdoor storage area and associated building and septic system.

Included herein is a comprehensive approach to identifying the presence or absence of several significant natural features afforded varying degrees of protection by applicable environmental policies. Potential negative impacts to the identified significant natural features are described with mitigation measures and technical recommendations offered to avoid or minimize such impacts and/or offer enhancements as appropriate.

Based on the findings presented in this report, the following natural features with ecological and/or policy significance have been identified:

- **Terrestrial Crayfish (Significant Wildlife Habitat)** are present in perimeter drainage swales within the proposed Area of Disturbance (and will be relocated).

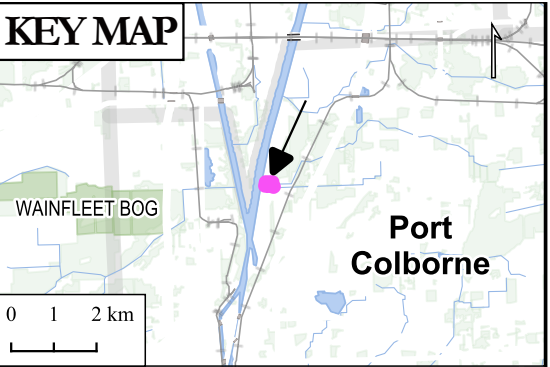
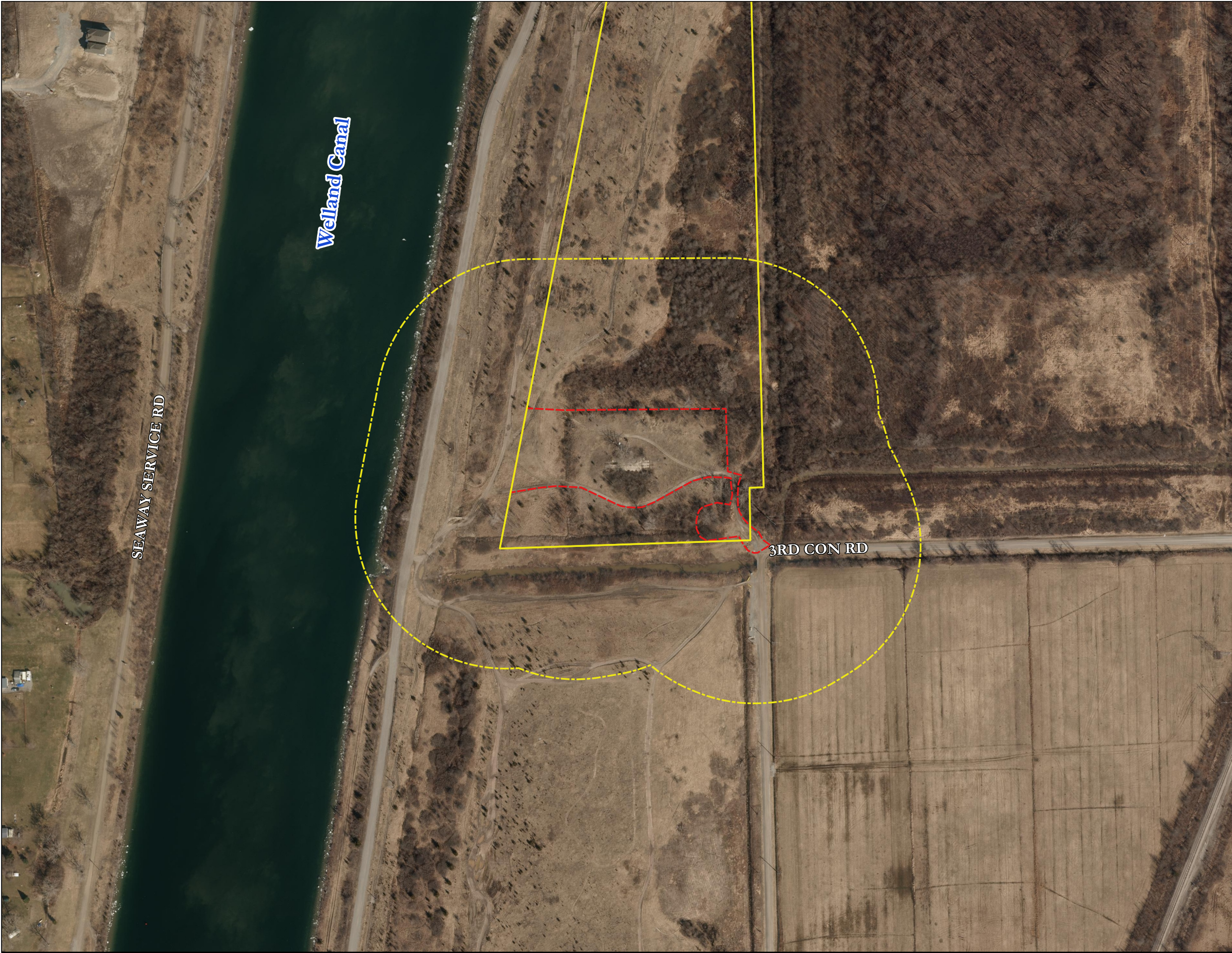
- **Indian Creek Drain** occurs to the south of the proposed Area of Disturbance and contains **warmwater fish habitat** and **candidate habitat for species of conservation interest** (e.g., turtles).
- Other **Candidate Significant Wildlife Habitat** is present including potential habitat for certain bumble bees.
- Confirmed habitat for the **Threatened Barn Swallow** (nesting within a culvert beneath Ramey Road) and potential habitat for three **Endangered bats** (Little Brown Myotis, Northern Myotis, and Tri-colored Bats).

Based on the presence of the above-mentioned significant natural heritage features, a comprehensive set of recommendations and mitigation measures are offered in **Section 5.1** to achieve “no negative impact” and address applicable municipal, provincial, and federal policies outlined in **Section 6**. It has been determined that no “negative impacts” to the above-noted features will occur and that the application appropriately addresses applicable natural heritage policies provided that all technical mitigation measures recommended herein (summarized in **Appendix 8**) are implemented in full. It is advised that such technical recommendations be incorporated into any necessary development approvals that permit the application.

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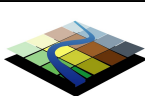


Legend

Area of Assessment

- Subject Property
- Area of Disturbance
- Study Area (120 m Adjacent Lands)

GENERAL NOTES:
-Features depicted herein should not be used in place of a professional survey.
-Numeric scale is for a 11x17 inch print.



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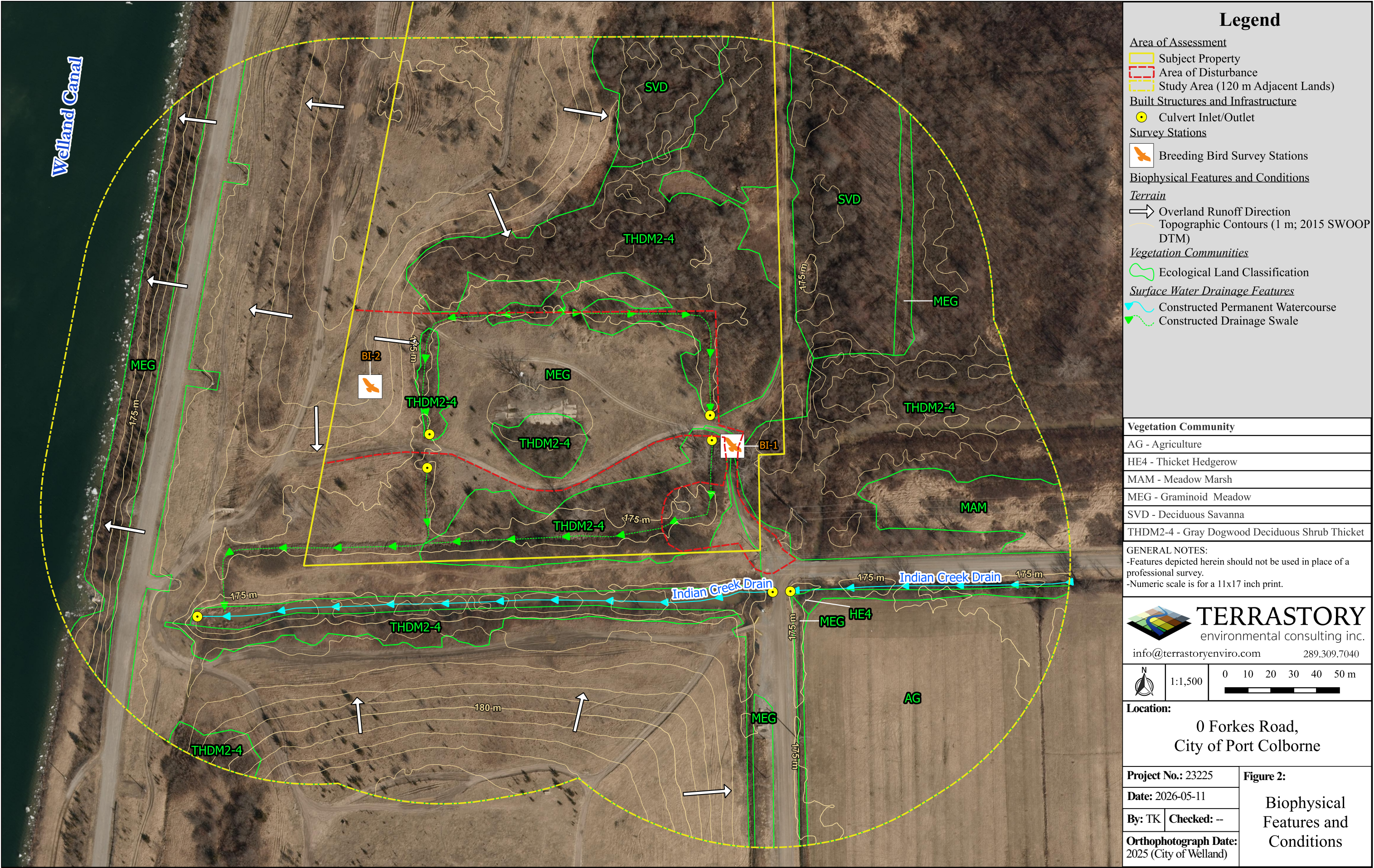
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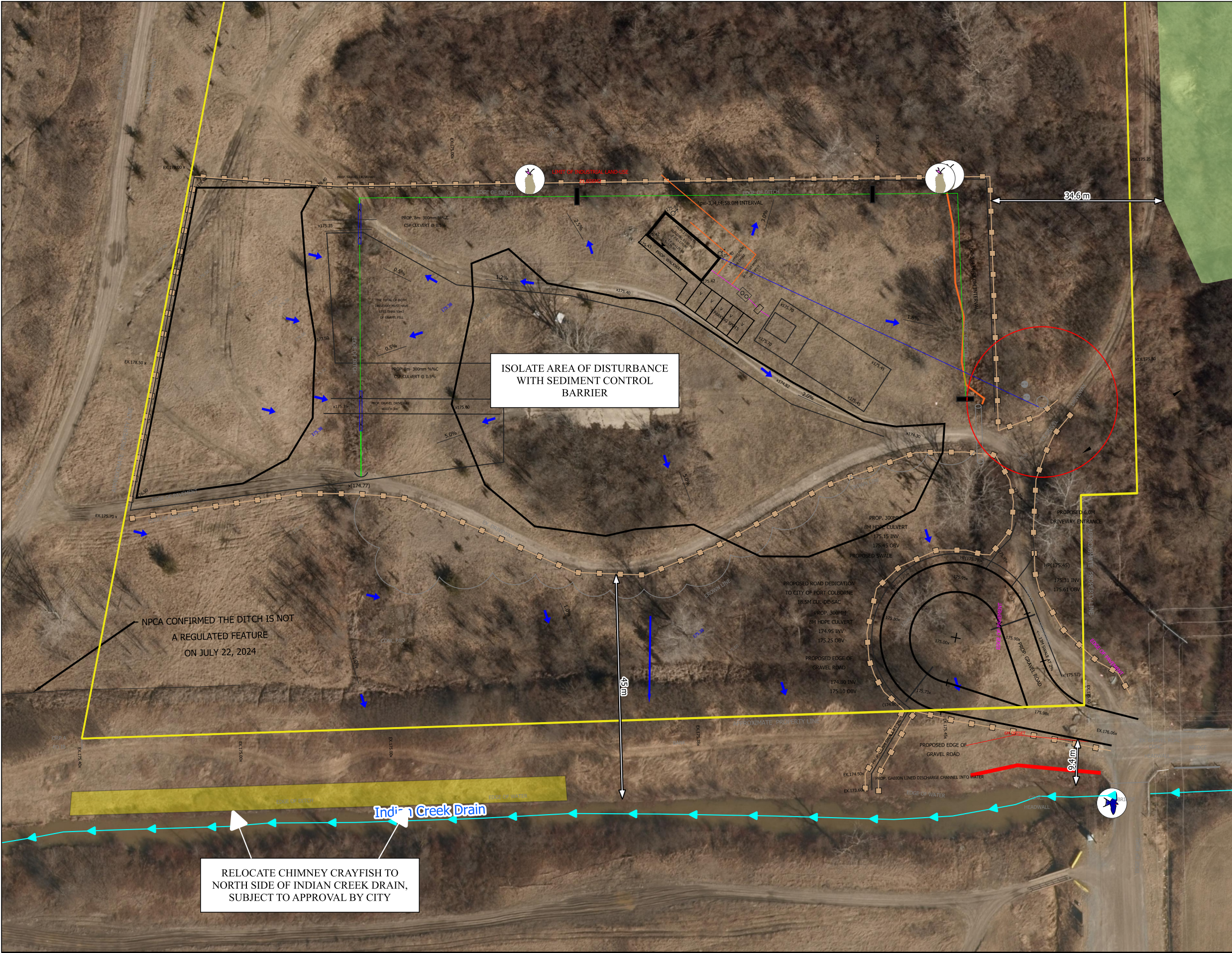


Location:

0 Forkes Road,
City of Port Colborne

Project No.: 23225		Figure 1: Location of the Study Area
Date: 2026-05-11		
By: TK	Checked: --	
Orthophotograph Date: 2025 (City of Welland)		





Legend

- Area of Assessment
- Subject Property
 - Study Area (120 m Adjacent Lands)
- Significant Natural Features - Terrastory
- Fish Habitat
 - Barn Swallow - Occupied Nests
 - Terrestrial Crayfish Chimney
 - Other Woodland
 - Potential Chimney Crayfish Relocation Area
 - Tree Protection Barrier / Silt Fence

GENERAL NOTES:
-Features depicted herein should not be used in place of a professional survey.
-Numeric scale is for a 11x17 inch print.



TERRASTORY
environmental consulting inc.
info@terrastoryenviro.com 289.309.7040



1:750

0 10 20 30 m

Location:

0 Forkes Road,
City of Port Colborne

Project No.: 23225	Figure 3: Significant Natural Features with Proposed Development Overlay
Date: 2026-05-11	
By: TK Checked: --	
Orthophotograph Date: 2025 (City of Welland)	

Appendix 1. Representative Photographs



Photo 1. Driveway entrance at Third Concession, facing northwest (14 April 2026).



Photo 2. Driveway entrance, looking south towards Third Concession (14 April 2026).



Photo 3. Proposed Area of Disturbance, facing west from the existing driveway (14 April 2026).



Photo 4. Proposed Area of Disturbance and ground floor slab, facing west (14 April 2026).



Photo 5. Hybrid Willow (*Salix x fragilis*), tree #389 (14 April 2026).



Photo 6. American Elm (*Ulmus americana*; Tree #379) and Rusty Willow (*Salix atrocinerea*; Tree #378) (14 April 2026).



Photo 7. Red ash (*Fraxinus pennsylvanica*; Tree #349) (14 April 2026).



Photo 8. Eastern Cottonwood (*Populus deltoides*; Tree #339). (14 April 2026).

Appendix 2. Vascular Plant List

Scientific Name	Common Name	Family	S-Rank (per NHIC)	Coefficient of Conservatism	Coefficient of Wetness
<i>Agrostis stolonifera</i>	Creeping Bentgrass	Poaceae	SNA	n/a	-3
<i>Ambrosia trifida</i>	Great Ragweed	Asteraceae	S5	0	0
<i>Arcium lappa</i>	Great Burdock	Asteraceae	SNA	n/a	3
<i>Asclepias incarnata</i>	Swamp Milkweed	Asclepiadaceae	S5	6	-5
<i>Asclepias syriaca</i>	Common Milkweed	Asclepiadaceae	S5	0	5
<i>Bromus inermis</i>	Smooth Brome	Poaceae	SNA	n/a	5
<i>Carex cristatella</i>	Crested Sedge	Cyperaceae	S5	3	-3
<i>Carex granularis</i>	Limestone Meadow Sedge	Cyperaceae	S5	3	-3
<i>Carex vulpinoidea</i>	Fox Sedge	Cyperaceae	S5	3	-5
<i>Centaurea stoebe</i>	Spotted Knapweed	Asteraceae	SNA	n/a	5
<i>Cornus obliqua</i>	Pale Dogwood	Cornaceae	S5	2	-3
<i>Cornus racemosa</i>	Gray Dogwood	Cornaceae	S5	2	0
<i>Crataegus coccinea</i>	Scarlet Hawthorn	Rosaceae	S5	4	5
<i>Crataegus crus-galli</i>	Cockspur Hawthorn	Rosaceae	S4	4	0
<i>Dactylis glomerata</i>	Orchard Grass	Poaceae	SNA	n/a	3
<i>Dichanthelium implicatum</i>	Slender-stemmed Panicgrass	Poaceae	S5	3	0
<i>Dipsacus fullonum</i>	Common Teasel	Dipsacaceae	SNA	n/a	3
<i>Echium vulgare</i>	Common Viper's Bugloss	Boraginaceae	SNA	n/a	5
<i>Elaeagnus umbellata</i>	Autumn Olive	Elaeagnaceae	SNA	n/a	3
<i>Eleocharis elliptica</i>	Elliptic Spikerush	Cyperaceae	S5	7	-5
<i>Eleocharis erythropoda</i>	Red-stemmed Spikerush	Cyperaceae	S5	4	-5
<i>Elymus repens</i>	Creeping Wildrye	Poaceae	SNA	n/a	3
<i>Erigeron annuus</i>	Annual Fleabane	Asteraceae	S5	0	3
<i>Erigeron strigosus</i>	Rough Fleabane	Asteraceae	S5	4	3
<i>Frangula alnus</i>	Glossy Buckthorn	Rhamnaceae	SNA	n/a	0
<i>Fraxinus pennsylvanica</i>	Green Ash	Oleaceae	S4	3	-3
<i>Galium aparine</i>	Cleavers	Rubiaceae	S5	4	3
<i>Hypericum perforatum</i>	Common St. John's-wort	Clusiaceae	SNA	n/a	5
<i>Juncus effusus</i>	Soft Rush	Juncaceae	S5	4	-5
<i>Juncus pylaei</i>	Pylae's Soft Rush	Juncaceae	S5?	4	-5
<i>Juncus torreyi</i>	Torrey's Rush	Juncaceae	S5	3	-3
<i>Juniperus virginiana</i>	Eastern Red Cedar	Cupressaceae	S5	4	3
<i>Lepidium densiflorum</i>	Dense-flowered Peppergrass	Brassicaceae	SNA	n/a	3
<i>Leucanthemum vulgare</i>	Oxeye Daisy	Asteraceae	SNA	n/a	5
<i>Lolium arundinaceum</i>	Tall Fescue	Poaceae	SNA	n/a	3
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	Fabaceae	SNA	n/a	3
<i>Lythrum salicaria</i>	Purple Loosestrife	Lythraceae	SNA	n/a	-5
<i>Phleum pratense</i>	Common Timothy	Poaceae	SNA	n/a	3
<i>Phragmites australis ssp. australis</i>	European Reed	Poaceae	SNA	n/a	-3
<i>Pilosella piloselloides</i>	Tall Hawkweed	Asteraceae	SNA	n/a	5
<i>Poa compressa</i>	Canada Bluegrass	Poaceae	SNA	n/a	3
<i>Poa pratensis</i>	Kentucky Bluegrass	Poaceae	S5	0	3

Scientific Name	Common Name	Family	S-Rank (per NHIC)	Coefficient of Conservatism	Coefficient of Wetness
<i>Populus deltoides</i>	Eastern Cottonwood	Salicaceae	S5	4	0
<i>Populus grandidentata</i>	Large-toothed Aspen	Salicaceae	S5	5	5
<i>Populus tremuloides</i>	Trembling Aspen	Salicaceae	S5	2	0
<i>Potentilla recta</i>	Sulphur Cinquefoil	Rosaceae	SNA	n/a	5
<i>Prunus virginiana</i>	Choke Cherry	Rosaceae	S5	2	3
<i>Quercus palustris</i>	Pin Oak	Fagaceae	S4	9	-3
<i>Rhamnus cathartica</i>	Common Buckthorn	Rhamnaceae	SNA	n/a	0
<i>Rumex crispus</i>	Curly Dock	Polygonaceae	SNA	n/a	0
<i>Salix amygdaloides</i>	Peach-leaved Willow	Salicaceae	S5	6	-3
<i>Salix atrocinerea</i>	Rusty Willow	Salicaceae	SNA	n/a	-3
<i>Salix interior</i>	Sandbar Willow	Salicaceae	S5	1	-3
<i>Salix petiolaris</i>	Meadow Willow	Salicaceae	S5	3	-3
<i>Schoenoplectus tabernaemontani</i>	Soft-stemmed Bulrush	Cyperaceae	S5	5	-5
<i>Scirpus atrovirens</i>	Dark-green Bulrush	Cyperaceae	S5	3	-5
<i>Securigera varia</i>	Common Crown-vetch	Fabaceae	SNA	n/a	5
<i>Spiraea alba</i>	White Meadowsweet	Rosaceae	S5	3	-3
<i>Symphyotrichum lanceolatum</i>	Panicked Aster	Asteraceae	S5	3	-3
<i>Toxicodendron radicans</i>	Poison Ivy	Anacardiaceae	S5	2	0
<i>Trifolium hybridum</i>	Alsike Clover	Fabaceae	SNA	n/a	3
<i>Trifolium pratense</i>	Red Clover	Fabaceae	SNA	n/a	3
<i>Typha angustifolia</i>	Narrow-leaved Cattail	Typhaceae	SNA	n/a	-5
<i>Ulmus americana</i>	American Elm	Ulmaceae	S5	3	-3
<i>Vicia cracca</i>	Tufted Vetch	Fabaceae	SNA	n/a	5
<i>Vitis riparia</i>	Riverbank Grape	Vitaceae	S5	0	0

Subnational Ranks (S-Ranks) are interpreted as follows:

S1: Critically Imperiled - Extremely rare in Ontario; usually 5 or fewer occurrences in the province, or very few remaining hectares.

S2: Imperiled - Very rare in Ontario; usually between 5 and 20 occurrences in the province, or very few remaining hectares.

S3: Vulnerable - Rare to uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.

S4: Apparently Secure – Apparently secure in the province, with many occurrences.

S5: Secure – Demonstrably secure in Ontario.

SH: Possibly Extirpated – Known from only historical records but still some hope of discovery.

SX: Extirpated – A species or vegetation community that is extirpated from Ontario.

SNA: Not Applicable – A conservation status risk is not applicable because the species or vegetation community is not a suitable target for conservation activities.

SNR: Unranked – Conservation status not yet assessed.

SU: Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Appendix 3. Breeding Bird Survey Results

Common Name	Scientific Name	Srank	SARA Status	Area Sensitive ³	Bird Survey Station	
					BI-1	BI-2
Alder Flycatcher	<i>Empidonax alnorum</i>	S5B				Po
American Goldfinch	<i>Spinus tristis</i>	S5			Pr	Po
American Robin	<i>Turdus migratorius</i>	S5			Po	Po
Barn Swallow	<i>Hirundo rustica</i>	S4B	THR		Fl	Fl
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	S4S5B				Po
Black-capped Chickadee	<i>Poecile atricapillus</i>	S5				Po
Blue Jay	<i>Cyanocitta cristata</i>	S5			Po	
Brown Thrasher	<i>Toxostoma rufum</i>	S4B			Po	
Brown-headed Cowbird	<i>Molothrus ater</i>	S5				Pr
Canada Goose	<i>Branta canadensis</i>	S5			Po	
Caspian Tern	<i>Hydroprogne caspia</i>	S3B, S5M				Fl
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S5			Po	Po
Common Grackle	<i>Quiscalus quiscula</i>	S5			Pr	Pr
Common Yellowthroat	<i>Geothlypis trichas</i>	S5B, S3N			Po	Po
Downy Woodpecker	<i>Dryobates pubescens</i>	S5			Po	
Eastern Meadowlark	<i>Sturnella magna</i>	S4B, S3N	THR	x	Po	Po
European Starling	<i>Sturnus vulgaris</i>	SNA				Po
Field Sparrow	<i>Spizella pusilla</i>	S4B, S3N				Pr
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	S4B		x	Po	
Gray Catbird	<i>Dumetella carolinensis</i>	S5B, S3N				Po
Mourning Dove	<i>Zenaida macroura</i>	S5			Pr	
Northern Cardinal	<i>Cardinalis cardinalis</i>	S5				Pr
Purple Martin	<i>Progne subis</i>	S3B			Fl	
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	S5				Pr
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S5			Po	Pr
Ring-billed Gull	<i>Larus delawarensis</i>	S5			Fl	Fl
Savannah Sparrow	<i>Passerculus sandwichensis</i>	S5B, S3N		x	Pr	
Song Sparrow	<i>Melospiza melodia</i>	S5			Po	Pr
Spotted Sandpiper	<i>Actitis macularius</i>	S5B				Po
Tree Swallow	<i>Tachycineta bicolor</i>	S4S5B			Po	

Common Name	Scientific Name	Srank	SARA Status	Area Sensitive ³	Bird Survey Station	
					BI-1	BI-2
Willow Flycatcher	<i>Empidonax traillii</i>	S4B			Pr	Pr
Yellow Warbler	<i>Setophaga petechia</i>	S5B			Pr	Pr

¹ - Locations of breeding bird survey stations are indicated on Figure 2.

² - Co = Confirmed Breeder; Pr = Probable Breeder; Po = Possible Breeder; O = Observed (no evidence of breeding). Breeding status determined based on the results of the formal breeding bird surveys; where a higher level of breeding status was documented incidentally (i.e., during other field surveys), this is noted in within the main body of the report (where applicable).

³ - x = species considered to be Area Sensitive by the MNR per Appendix G - Table G-4 of the SWH Technical Guide.

Subnational Ranks (S-Ranks) are interpreted as follows:

S1: Critically Imperiled - Extremely rare in Ontario; usually 5 or fewer occurrences in the province.

S2: Imperiled - Very rare in Ontario; usually between 5 and 20 occurrences.

S3: Vulnerable - Rare to uncommon in Ontario; usually between 20 and 100 occurrences.

S4: Apparently Secure – Apparently secure in the province, with many occurrences.

S5: Secure – Demonstrably secure in Ontario.

SH: Possibly Extirpated – Known from only historical records but still some hope of discovery.

SX: Extirpated – A species that is extirpated from Ontario.

SNA: Not Applicable – A conservation status risk is not applicable because the species is not a suitable target for conservation activities.

SNR: Unranked – Conservation status not yet assessed.

SU: Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Breeding status qualifiers are interpreted as follows:

B: Breeding - Conservation status refers to the breeding population of the species.

N: Non-breeding - Conservation status refers to the non-breeding population of the species.

M: Migrant - Migrant species occurring regularly on migration at particular staging areas or concentration spots where the species might warrant conservation attention. Conservation status refers to the aggregating transient population of the species in Ontario.

Appendix 4. Correspondence with NVCA

Tristan Knight

From: Taran Lennard <tlennard@npca.ca>
Sent: July 31, 2024 1:26 PM
To: Tristan Knight
Subject: NPCA Site Visit - 0 Forkes Road/Third Concession (Port Colborne)
Attachments: NPCA July 22.2024_0 Forkes Road xThird Concession_Port Colborne.jpg

Good Afternoon Tristan,

I am following up on behalf of NPCA Staff who attended the site visit on July 22nd, 2024.

The NPCA recognizes that the majority of the on-site drainage is as a result of spoils from the canal. It is the opinion of NPCA that there are no regulated watercourses or wetlands within the area that was traversed (blue polygon in attached file). The NPCA would request that appropriate site drainage is maintained. ESC measures shall be installed to prevent sediment from leaving the work area.

Further, the Indian Creek Drain is found near the subject lands. Species at Risk are present around the Drain. Take note that the Municipal Drain has a 100-year flood elevation associated with it that shall be reflected on topographic surveys. The flood elevation is 175.71 CGVD 28:79 from the Drain along the east side, and the south section may overtop the road at 175.38 CGVD 28:78. These elevations shall be plotted on a survey. Development and/or site alteration shall remain outside of the 100-year floodplain.

Thank you.



Taran Lennard
Watershed Planner II

Niagara Peninsula Conservation Authority (NPCA)
3350 Merrittville Highway | Unit 9 | Thorold, ON L2V 4Y6

905.788.3135 ext. 277
www.npca.ca
tlennard@npca.ca

For more information on Permits & Planning, please go to the Permits & Planning webpage at <https://npca.ca/administration/permits>.

For mapping on features regulated by the NPCA please go to our GIS webpage at <https://gis-npca-camaps.opendata.arcgis.com/> and utilize our Watershed Explorer App or GIS viewer.

To send NPCA staff information regarding a potential violation of Ontario Regulation 155/06 please go to the NPCA Enforcement and Compliance webpage at <https://npca.ca/administration/enforcement-compliance>

The information contained in this communication, including any attachment(s), may be confidential, is intended only for the use of the recipient(s) named above. If the reader of this message is not the intended recipient, you are hereby notified that any disclosure of this communication, or any of its contents, is prohibited. If you have received this communication in error, please notify the sender and permanently delete the original and any copy from your computer system. Thank-you. Niagara Peninsula Conservation Authority.

IMPORTANT NOTICE

Effective April 15, 2024 the Niagara Peninsula Conservation Authority head office has moved to 3350 Merrittville Highway, Thorold Ontario L2V 4Y6

Tristan Knight

From: Taran Lennard <tlennard@npca.ca>
Sent: June 13, 2025 3:21 PM
To: Amir Samadi
Cc: Tony Wang; Angela Shi; Tristan Knight
Subject: Meeting Follow up - NPCA

Good Afternoon,

Thank you for taking the time to meet and discuss with us today. A few comments as they were requested:

Forkes Rd / Third Concession -

Respecting the environmental work, Tristan, the NPCA does not offer any objections as the concerns from our perspective are focused on the 100-year floodplain. No further studies required on our end for the EIS.

130 Niagara St, Welland:

The NPCA will not require a Geotechnical Addendum to support the stormwater outflows that are slated to sheet flow toward the River. Additionally, we offer no concerns regarding any negative impacts to the floodplain. We are pleased to review the next circulation through the city once prepared and will also formalize these comments for their records.

Thank you.



Taran Lennard
Watershed Planner II

Niagara Peninsula Conservation Authority (NPCA)
3350 Merrittville Highway | Unit 9 | Thorold, ON L2V 4Y6

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tlennard@npca.ca

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For mapping on features regulated by the NPCA please go to our GIS webpage at <https://gis-npca-camaps.opendata.arcgis.com/> and utilize our Watershed Explorer App or GIS viewer.

To send NPCA staff information regarding a potential violation of Ontario Regulation 41/24 please go to the NPCA Enforcement and Compliance webpage at <https://npca.ca/administration/enforcement-compliance>

From: Amir Samadi <amsamadi@kingepcm.com>
Sent: May 20, 2025 10:35 AM
To: Taran Lennard <tlennard@npca.ca>
Cc: Tony Wang <Twang@kingepcm.com>; Angela Shi <AShi@kingepcm.com>; Colleen Bain <cbain@npca.ca>; 253339471@qq.com; tristan@terrastoryenviro.com
Subject: 0 Forkes Road/Third Concession (Port Colborne) - pre-con. / technical progress meeting

Hi Taran,

I hope this message finds you well. On behalf of our client at 0th Forks Rd, Port Colborne, we are requesting to schedule a pre-consultation / technical progress meeting regarding the proposed development at 0th Forks Rd, Port Colborne. Our client intends to:

1. Construct a small office building, and
2. Apply for a Zoning By-law Amendment to remove the Holding Provision for outdoor storage use on the site.

The main Purposes of the Meeting:

- To provide an update on the new topographic survey and floodplain data
- To review technical progress and confirm the final development constraint limit
- To move forward with finalizing the site plan and dwelling location

We would greatly appreciate your earliest availability for this meeting. Please let us know your available times.

Thank you very much for your time and support.

Best regards,

Amir

* Amir Samadi, PhD, PEng
* Senior Engineer- Water Resources
* Email: amsamadi@KingEPCM.com
* www.KingEPCM.com
* Cell(Mobile): +1 (416) 871-1991



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Appendix 5. Significant Wildlife Habitat Assessment

Table 1. Results of the Significant Wildlife Habitat Assessment.

Ecoregion 7E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas o within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Confirmed SWH?	Likelihood that “Negative Impacts” to SWH (i.e., “degradation that threatens the health and integrity” as defined in the 2024 PPS) will occur based on the Proposed Development Plan and any related Site Alteration Activities.
Seasonal Concentration Areas of Animals			
Waterfowl Stopover and Staging Areas (Terrestrial)	No. Meadows, fields, and/or thickets that annually flood during spring and could support significant congregations of migrating waterfowl are absent.	--	--
Waterfowl Stopover and Staging Areas (Aquatic)	No. Large surface water features (e.g., ponds, lakes, bays, coastal inlets, large watercourses, etc.) and/or wetlands that annually flood during spring could support significant congregations of migrating waterfowl are absent.	--	--
Shorebird Migratory Stopover Areas	No. Unvegetated open areas adjacent to surface water features (e.g., shorelines, beaches, mudflats, etc.) and could support significant congregations of migrating shorebirds are absent	--	--
Raptor Wintering Areas	No. While forest and (to a lesser extent) meadow habitats are present, which may occasionally support wintering raptors, such habitats are too small to support significant congregations of wintering raptors.	--	--
Bat Hibernacula	No. Natural features and habitats that could support hibernating bats (e.g., caves, mine shafts, crevices, karsts, etc.) are absent.	--	--
Bat Maternity Colonies	Yes. Mature deciduous and mixed forests with a high-density (i.e., >10/ha) of large-diameter (i.e., ≥25 cm DBH) trees containing cracks/cavities are present.	Unknown. Acoustic monitoring devices not deployed as part of this study.	Negligible. Development and site alteration activities do not overlap with any vegetation communities which provide candidate significant habitat for bat maternity colonies. See report for greater details pertaining to Endangered bats.
Turtle Wintering Areas	Yes. Surface water features and/or wetlands with soft muddy substrate which do not freeze to the bottom during winter are present.	Unknown. The Indian Creek Drain southward of the Area of Disturbance may support significant turtle wintering.	Negligible. Proposed limit of development and site alteration is mostly located a considerable distance northward from the Indian Creek Drain. Proposed roadworks (i.e., cul-de-sac installation) will be isolated by a sediment control barrier at construction.
Reptile Hibernaculum	No. Features (e.g., small mammal burrows, rock crevices, etc.) and/or habitats (e.g., certain wetlands with a fluctuating water table, etc.) that could provide snakes with access below the frost line are absent.	--	--
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	No. Features that could support nesting by Cliff Swallow and Northern Rough-winged swallow (e.g., eroding banks, sandy hills, borrow pits, steep slopes, cliff faces, etc.) are absent.	--	--
Colonially - Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	No. Swamp and treed fen communities are absent.	--	--
Colonially - Nesting Bird Breeding Habitat (Ground)	No. Rocky islands or peninsulas along lakes or large rivers are absent.	--	--
Migratory Butterfly Stopover Areas	No. A mixture of fields and forests within 5 km from the shoreline of Lake Erie or Lake Ontario are absent.	--	--

Ecoregion 7E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas o within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Confirmed SWH?	Likelihood that “Negative Impacts” to SWH (i.e., “degradation that threatens the health and integrity” as defined in the 2024 PPS) will occur based on the Proposed Development Plan and any related Site Alteration Activities.
Landbird Migratory Stopover Areas	No. While migrating landbirds may temporarily stopover to feed and rest, the Subject Property is unlikely to support significant congregations of migrating landbirds as it is greater than 5 km from the shoreline of Lake Erie.	--	--
Deer Winter Congregation Areas	No. The Study Area lacks designated deer wintering areas as identified by MNR; however, a Stratum II Deer Wintering Area occurs nearby to the northeast.	--	--
Rare Vegetation Communities or Specialized Habitats for Wildlife			
Cliffs and Talus Slopes	No. Cliffs and talus slope communities are absent.	--	--
Sand Barren	No. Sand barren communities are absent.	--	--
Alvar	No. Flora characteristic of alvars are absent.	--	--
Old Growth Forest	No. Based on a review of historical aerial photographs, deciduous forests likely to exhibit old-growth characteristics (e.g., old trees, abundant snags and downed woody debris, canopy gaps caused by species turnover, limited disturbance, etc.) are absent.	--	--
Savannah	No. Flora characteristic of savannahs are absent.	--	--
Tallgrass Prairie	No. Flora characteristic of tallgrass prairies are absent.	--	--
Other Rare Vegetation Community	No. Provincially rare vegetation communities are absent.	--	--
Waterfowl Nesting Area	No. Wetlands which may support nesting waterfowl are absent.	--	--
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	No. Forest communities adjacent to large surface water features are absent.	--	--
Woodland Raptor Nesting Habitat	No. On-site forest communities are too small to support nesting raptors.	--	--
Turtle Nesting Areas	No. Exposed mineral soils adjacent to surface water features (e.g., lakes, ponds, etc.) and/or wetlands that may support turtles are absent.	--	--
Seeps and Springs	No. Areas where groundwater emerges at the surface and may support specialized habitat for plants and wildlife are absent.	--	--
Amphibian Breeding Habitat (Woodland)	No. Forests with wetlands, ponds, and/or pools that may support significant congregations of breeding amphibians are absent.	--	--
Amphibian Breeding Habitat (Wetlands)	No. Wetlands and surface water features (e.g., ponds, lakes, etc.) that may support significant congregations of breeding amphibians are absent.	--	--

Ecoregion 7E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas o within the Study Area meet relevant criteria (Ecoregion 7E Criteria Schedule) as Confirmed SWH?	Likelihood that “Negative Impacts” to SWH (i.e., “degradation that threatens the health and integrity” as defined in the 2024 PPS) will occur based on the Proposed Development Plan and any related Site Alteration Activities.
Woodland Area-Sensitive Bird Breeding Habitat	No. Interior forest interior conditions (i.e., >200 m from edge) are absent.	--	--
Habitat for Species of Conservation Concern			
Marsh Bird Breeding Habitat	No. Wetlands with shallow water and emergent aquatic vegetation are absent.	--	--
Open Country Bird Breeding Habitat	No. Meadow habitats of sufficient size are absent.	--	--
Shrub/Early Successional Bird Breeding Habitat	No. Shrub/early-successional habitats of sufficient size are absent.	--	--
Terrestrial Crayfish	Yes. Marsh and swamp communities and/or wet fields are present	Yes. Three (3) Terrestrial crayfish chimneys were documented along the perimeter drainage swale.	Negligible. Given proposed works to the internal drainage swale system, all Chimney crayfish will be relocated to the Indian Creek Drain prior to construction.
Special Concern and Rare Wildlife Species	Yes. See Table 2 below.	Yes. See Table 2 below.	Possible. See Table 2 below.
Animal Movement Corridors			
Amphibian Movement Corridors	No. Significant amphibian breeding habitat is absent. Subject Property is not expected to act as a significant movement corridor between breeding and summer habitat for amphibians.	--	--

Table 2. Results of the Special Concern and Provincially Rare Species Assessment.

Species ¹	S-Rank ²	COSEWIC Designation ³	Status per Schedule 1 of SARA ³	General Description of Habitats and Features which the Species is Known to Occupy or Use within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area ⁴	Likelihood that “Negative Impacts” (i.e., “degradation that threatens the health and integrity...” as defined in the 2024 PPS) to the Species or its Habitat will occur based on the Proposed Development Plan and any related Site Alteration Activities.
Birds						
American Coot (<i>Fulica americana</i>)	S3B,S4N	NAR	--	• Inhabits a wide variety of freshwater wetlands from swamps and marshes to suburban park and sewage ponds to the edges of large lakes. • Requires heavy stands of emergent aquatic vegetation with some water depth. • Nests are almost always built over water on floating platforms and almost always associated with dense stands of living or dead vegetation such as reeds, cattails, bulrushes, sedges, and grasses.	Negligible. Suitable breeding habitat is absent from the Area of Disturbance.	--
Bank Swallow (<i>Riparia riparia</i>)	S4B	THR	THR	• Nests in natural or anthropogenically derived exposed, sandy substrates on vertical or steep surfaces. • Forages in a variety of open areas including agricultural lands, meadows, prairies, woodland clearings, marshes, and above waterbodies.	Negligible. While this species may forage over open areas on the Subject Property for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites are absent from the Area of Disturbance.	--
Barn Swallow (<i>Hirundo rustica</i>)	S4B	SC	THR	• Nests in barns, bridge/culvert undersides, awnings/overhangs on sides of buildings, and (historically) tree cavities. • Forages in a variety of open areas including agricultural lands, meadows, prairies, woodland clearings, marshes, and above waterbodies.	Negligible. Foraging birds were documented during the 2024 fieldwork program. Three (3) occupied nests were observed within the Ramey Road culvert above the Indian Creek Drain.	Negligible. The occupied nests are located 10 m south of the proposed area of road works and are sheltered within the culvert. Nesting Barn Swallows within the Ramey Road culvert would be acclimated to vehicular traffic. No works on the culvert are proposed through this development application.
Blue-winged Teal (<i>Spatula discors</i>)	S3B,S4M	--	--	• Nests amongst grasses or herbaceous vegetation and forages in summer in shallow ponds or pond-marsh mixes.	Negligible. Suitable breeding habitat is absent from the Area of Disturbance.	--
Bobolink (<i>Dolichonyx oryzivorus</i>)	S4B	SC	THR	• Breeds and forages in hayfields, pastures, meadows, grasslands, and prairies which are often (but not always) greater 4 ha. • May be found in more marginal habitats (e.g., shrubby fields, smaller fields, etc.) during migration or following disturbance to breeding habitats (e.g., hay cutting).	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Canada Warbler (<i>Cardellina canadensis</i>)	S5B	SC	THR	• Breeds and forages in a wet thickets, swamps, and mature deciduous forest.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Caspian Tern (<i>Hydroprogne caspia</i>)	S3B,S5M	NAR	--	• Breeds on flat, open areas with little vegetation near lakes and rivers.	Negligible. Species was documented as a flyover during the 2024 fieldwork program; however, suitable nesting habitat is absent from the Area of Disturbance.	--
Chimney Swift (<i>Chaetura pelagica</i>)	S3B	THR	THR	• Nests in large, uncapped chimneys and (historically) tree cavities. • May forage above a wide variety of anthropogenic (e.g., cities, towns) and natural (e.g., fields, forests) areas.	Negligible. While this species may forage over open areas on the Subject Property for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites are absent from the Area of Disturbance. Species was not detected during breeding bird surveys in 2024.	--

Common Gallinule (<i>Gallinula galeata</i>)	S3B	--	--	• Inhabits freshwater marshes, ponds, and lakes that have a mix of submerged, floating, and emergent aquatic vegetation and are open water year-round. They also use sewage lagoons, and urban stormwater retention ponds. • Nests in marshes, lakes, and ponds with emergent vegetation. They tend to build nests on top of thick mats of aquatic plants near the water's edge, but sometimes nest in trees or shrubs.	Negligible. Suitable habitat is absent from the Subject Property. Species was not detected during breeding bird surveys in 2024.	--
Eastern Meadowlark (<i>Sturnella magna</i>)	S4B,S3N	THR	THR	• Breeds and forages in hayfields, savannahs, pastures, meadows, grasslands, prairies, and shrubby fields.	Negligible. Species was not detected within the Area of Disturbance, but occurs on Adjacent Lands south of the Indian Creek Drain.	--
Eastern Whip-poor-will (<i>Antrostomus vociferus</i>)	S4B	SC	THR	• Breeds and forages in semi-open deciduous forests and thickets, and their edges.	Unlikely. Breeding populations of this species are very rare in Niagara beyond Wainfleet Bog.	--
Eastern Wood-pewee (<i>Contopus virens</i>)	S4B	SC	SC	• Breeds and forages in relatively open, deciduous and mixed forests of various sizes (including urban forest fragments) and along forest edges.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Grasshopper Sparrow (<i>Ammodramus savannarum</i>)	S4B	SC	--	• Breeds and forages in hayfields, savannahs, pastures, meadows, grasslands, and prairies.	Negligible. Species was not detected within the Area of Disturbance, but was recorded in an agricultural field on Adjacent Lands to the southeast.	--
Great Egret (<i>Ardea alba</i>)	S2B,S3M	--	--	• Lives and forages in wetlands, aggregating in colonies within trees and shrubs during the breeding season.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Purple Martin (<i>Progne subis</i>)	S3B	--	--	• Nests in man-made structures such as birdhouses, gourds, and occasionally in the eaves of buildings or on porches, often in colonies. • Forages in open areas including fields, parks, and near water bodies, where they catch insects in flight	Negligible. While this species was recorded flying above the Subject Property during the 2024 fieldwork program, suitable breeding sites are absent from the Area of Disturbance.	--
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	S3	END	END	• Breeds and forages in open woodland and woodlands edges. It is also often found in parks, golf courses and cemeteries with many dead trees. Which the bird uses for nesting and perching.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Tufted Titmouse (<i>Baeolophus bicolor</i>)	S3	--	--	• Breeds in deciduous woods or mixed evergreen-deciduous woods, typically in areas with a dense canopy and many tree species. • May also occupy orchards, parks, and suburban areas.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Upland Sandpiper (<i>Bartramia longicauda</i>)	S2B	--	--	• Breeds in grasslands, pastures, both grazed and ungrazed, and in agricultural fields, especially fallow fields, but sometimes hay or other crop fields.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Wood Thrush (<i>Hylocichla mustelina</i>)	S4B	THR	THR	• Breeds and forages in second-growth and mature deciduous and mixed forests with a well-developed understory.	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Yellow-breasted Chat (<i>Icteria virens</i>)	S1B	END	--	• Breeds and forages in prefer dense thickets around wood edges, riparian areas, and in overgrown clearings	Negligible. Species was not detected during breeding bird surveys in 2024.	--
Crustaceans						
Digger Crayfish (<i>Creaserinus fodiens</i>)	S3	--	--	• Occupies seasonally flooded areas in lowlands.	Possible. A species of terrestrial crayfish was documented during the fieldwork program; individuals were not observed directly, but are more likely to represent Great Plains Mudbug based on currently understood distribution.	Negligible. Terrestrial crayfish will be relocated to suitable habitat (e.g., along the Indian Creek Drain) to avoid impacts during reconstruction of the perimeter drainage swales.
Great Plains Mudbug (<i>Lacunicambarus nebrascensis</i>)	S3	--	--	• Inhabits streams, floodplains, wetlands, and roadside ditches	Probable. A species of terrestrial crayfish was documented during the fieldwork program; individuals were not observed directly, but are more likely to represent Great Plains Mudbug based on currently understood distribution.	Negligible. Terrestrial crayfish will be relocated to suitable habitat (e.g., along the Indian Creek Drain) to avoid impacts during reconstruction of the perimeter drainage swales.

Fishes						
Greater Redhorse (<i>Moxostoma valenciennesi</i>)	S3	--	--	• Occupies large streams and riffles with clean gravel, sand, or boulders.	Unlikely. Species is not expected to occur in the Indian Creek Drain.	--
Insects						
American Bumble Bee (<i>Bombus pensylvanicus</i>)	S3	SC	SC	• Occupies a range of open areas with nectaring sites. • Nests above ground in dense mats of long grasses but has also been known to nest in abandoned rodent burrows and bird nests high above the ground.	Possible. Species is a habitat generalist and occupies a wide range of areas.	Negligible. Proposed development and site alterations will not reduce the availability of nectaring and overwintering sites in the local landscape.
Lemon Cuckoo Bumble Bee (<i>Bombus citrinus</i>)	S3S4	--	--	• Parasitizes nests of two-spotted bumble bee, Common Eastern Bumble Bee, and Half-black Bumble Bee. • Occupies a range of open areas with nectaring sites.	Possible. Species is a habitat generalist and occupies a wide range of areas.	Negligible. Proposed development and site alterations will not reduce the availability of nectaring and overwintering sites in the local landscape.
Monarch (<i>Danaus plexippus</i>)	S4B,S2N	END	END	•Oviposits on Milkweeds (<i>Asclepias</i> spp.). • Generalist foraging that nectars in most areas with wildflowers.	Possible. Species is a habitat generalist and occupies a wide range of areas.	Negligible. Proposed development and site alterations will not reduce the availability of nectaring habitat and host plant availability within the broader landscape.
Unicorn Clubtail (<i>Arigomphus villosipes</i>)	S3	--	--	• Occupies ponds and sluggish streams with mucky bottoms and little emergent vegetation.	Possible. Suitable nymph and adult foraging habitat is present along the Indian Creek Drain.	Negligible. No impacts to the Indian Creek Drain are anticipated given the proposed erosion and sediment control measures.
Yellow-banded Bumble Bee (<i>Bombus terricola</i>)	S3S5	SC	SC	• Occupies a range of open areas with nectaring sites. • Nests underground in abandoned rodent burrows or decomposing logs.	Possible. Species is a habitat generalist and occupies a wide range of areas.	Negligible. Proposed development and site alterations will not reduce the availability of nectaring and overwintering sites in the local landscape.
Lichens						
Powdered Ruffle Lichen (<i>Parmotrema arnoldii</i>)	S2S3	--	--	• Inhabits lower branches and trunks of hardwoods in open woods, swamps, thickets and roadsides.	Negligible. Suitable habitat is absent within the Area of Disturbance. Species was not recorded during the 2024 fieldwork program.	--
Reptiles						
Eastern Milksnake (<i>Lampropeltis triangulum</i>)	S4	SC	SC	• Occupies a wide variety of natural and human-modified habitats such as prairies, meadows, pastures, hayfields, rocky outcrops, rocky hillsides, and forests. • Occurs widely across southern and central Ontario.	Possible. Species was not recorded during the 2024 fieldwork program; however, is known from the local landscape.	Negligible. Proposed development and site alteration activities do not overlap with more significant habitat features (e.g., potential overwintering sites), and considerable habitat is present in both the Subject Property and local landscape.
Eastern Ribbonsnake (<i>Thamnophis saurita</i>)	S4	SC	--	• Occupies edges of shallow ponds, streams, marshes, swamps, or bogs bordered by dense vegetation.	Unlikely. Species is very rare in the local landscape.	--
Northern Map Turtle (<i>Graptemys geographica</i>)	S3	SC	SC	• Inhabits large rivers and lakes with slow-moving water and soft bottoms, requiring high-quality water that supports mollusc prey; it prefers areas with abundant basking sites such as rocky shores, fallen trees, and exposed banks, and spends winters hibernating underwater in well-oxygenated, slow-moving sections of these water bodies.	Possible. Suitable (though marginal) habitat is present along the Indian Creek Drain; species is known from the local landscape (i.e., Biederman Drain near the outlet to the Welland Canal).	Negligible. No impacts to the Indian Creek Drain are anticipated given the proposed erosion and sediment control measures.
Snapping Turtle (<i>Chelydra serpentina</i>)	S4	SC	SC	• Found primarily in slow-moving freshwater habitats with soft mud or sand bottoms and abundant vegetation, including ponds, marshes, wetlands, rivers, and lakes; it often utilizes shallow waters for hiding and hibernates in mud or silt near shorelines, with nesting typically occurring in open areas with loose sandy soil such as road embankments and shorelines.	Possible. Suitable habitat is present along the drain east and south of the Subject Property.	Negligible. No impacts to the Indian Creek Drain are anticipated given the proposed erosion and sediment control measures.
Vascular Plants						

Crowned Beggarticks (<i>Bidens trichosperma</i>)	S2	--	--	• Inhabits wetlands.	Negligible. Species was not detected during vascular plant surveys in 2024.	--
Swamp Rose-mallow (<i>Hibiscus moscheutos ssp. moscheutos</i>)	S3	--	--	• Occupies shoreline marshes along the Great Lakes and Lake St. Clair.	Negligible. Species was not detected during vascular plant surveys in 2024.	--

¹Each species listed in this table is considered through this assessment because 1) there are records of this species from the Study Area (or local landscape), and 2) it is Terrastory's professional opinion that the species may be present within the Study Area due to its current distribution and on-site habitat types.

²Subnational Ranks (*S-Ranks*) are interpreted as follows:
S1: Critically Imperiled - Extremely rare in Ontario; usually 5 or fewer occurrences in the province, or very few remaining hectares.
S2: Imperiled - Very rare in Ontario; usually between 5 and 20 occurrences in the province, or very few remaining hectares.
S3: Vulnerable - Rare to uncommon in Ontario; usually between 20 and 100 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.
S4: Apparently Secure – Apparently secure in the province, with many occurrences.
S5: Secure – Demonstrably secure in Ontario.
SH: Possibly Extirpated – Known from only historical records but still some hope of discovery.
SX: Extirpated – A species or vegetation community that is extirpated from Ontario.
SNA: Not Applicable – A conservation status risk is not applicable because the species or vegetation community is not a suitable target for conservation activities.
SNR: Unranked – Conservation status not yet assessed.
SU: Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

³END = Endangered; THR = Threatened; SC = Special Concern; NAR = Not at Risk.

⁴Likelihood categories should be interpreted as follows:
Negligible: so limited that the assessed species can be assumed absent.
Unlikely: while theoretically conceivable, species presence very improbable or temporary based on available information (e.g., habitat conditions, range, abundance in local landscape).
Possible: species presence plausible based on available information; no convincing evidence suggesting species could not occur on-site.
Probable: while not confirmed, available information suggests species has a high likelihood of being present.
Confirmed: species observed and/or evidence of occupation (e.g., tracks, etc.) documented.

Appendix 6. Protected Species of Ontario Assessment

Status per O. Reg. 60/26 of the SCA	Species	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area ¹	Likelihood that Negative Effects to the Species or its "Habitat" (i.e., “Damage” or “Destruction” as defined in the SCA) will occur based on the Proposed Development Plan and any related Site Alteration Activities
Amphibians				
END	Fowler’s Toad (<i>Anaxyrus fowleri</i>)	•Forages in a variety of shoreline environments including sand dunes, beaches (sand, gravel, or cobble), and limestone pavement along Lake Erie. •Hibernates in relatively open sand dunes and areas with sufficiently deep sand where individuals can dig below the frost line. •Breeds along stream mouths, bedrock pools, and shallow bays in areas that may be temporarily or semi-permanently flooded by Lake Erie. •Dispersal may occur in a variety of shoreline environments.	Negligible. Suitable habitat is absent from the Subject Property. Record from the local landscape is historical and dates back to1948.	---
Birds				
END	Black Tern (<i>Chlidonias niger</i>)	• Forages and nests in freshwater marshes with floating vegetation mats.	Negligible. Species was not documented during breeding bird surveys.	---
Insects				
END	Nine-spotted Lady Beetle (<i>Coccinella novemnotata</i>)	•Lives in diverse habitats such as agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows, riparian areas, and isolated natural areas.	Negligible. Nine-Spotted Lady Beetle has not been documented in Ontario since 1987. Additionally, the prevalence of non-suitable plants on the site suggests that aphid densities necessary to support the species may not be present.	---
END	Rusty-patched Bumble Bee (<i>Bombus affinis</i>)	•Occupies a range of open areas with nectaring sites. •Nests underground in abandoned rodent burrows or decomposing logs.	Negligible. Most records in Ontario are historical (before 1970). The species was last observed from Pinery Provincial Park in 2009 (Colla and Taylor-Pindar, 2011).	---

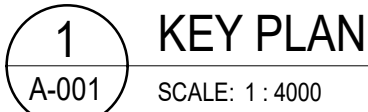
Status per O. Reg. 60/26 of the SCA	Species	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area ¹	Likelihood that Negative Effects to the Species or its "Habitat" (i.e., “Damage” or “Destruction” as defined in the SCA) will occur based on the Proposed Development Plan and any related Site Alteration Activities
END	Transverse Lady Beetle <i>(Coccinella transversoguttata)</i>	•Habitat generalist, meaning it is able to live in a wide range of habitats, including agricultural areas, suburban gardens, parks, coniferous forests, deciduous forests, prairie grasslands, meadows and riparian areas.	<u>Negligible</u> . In Ontario, all records are historical, from 1990 and earlier (Linton, J., and D. McCorquodale. 2019). There has been one recent record from northern Ontario 2021 (https://inaturalist.ca/observations/85247515).	---
Mammals				
END	Eastern Red Bat <i>(Lasiurus borealis)</i>	• Roosting sites are typically within deciduous or coniferous forests of all age classes, with a preference for roosting in tall, large diameter trees. • Occurrences of roosting in anthropogenic structures are rare. • A migratory species primarily found in Ontario during the summer months, with summer habitat consisting of foraging, drinking, and roosting sites.	<u>Possible</u> . Deciduous woodlands and large diameter deciduous trees are present within the Subject Property.	<u>Negligible</u> . A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.
END	Little Brown Myotis <i>(Myotis lucifugus)</i>	•Maternity roosts sites most often include buildings and large diameter trees with cracks, crevices, and/or exfoliating bark. •Overwinters in caves and mines that maintain temperatures above 0°C.	<u>Possible</u> . Large diameter trees with cracks and crevices and/or exfoliating bark are present within the Subject Property.	<u>Negligible</u> . A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.
END	Northern Hoary Bat <i>(Lasiurus cinereus)</i>	• Roost sites are typically within deciduous or coniferous forests of all age classes, with a preference for roosting in tall, large diameter trees. • Occurrences of roosting in anthropogenic structures are rare. • A migratory species primarily found in Ontario during the summer months, with summer habitat consisting of foraging, drinking, and roosting sites.	<u>Possible</u> . Deciduous woodlands and large diameter deciduous trees are present within the Subject Property.	<u>Negligible</u> . A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.

Status per O. Reg. 60/26 of the SCA	Species	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area ¹	Likelihood that Negative Effects to the Species or its "Habitat" (i.e., “Damage” or “Destruction” as defined in the SCA) will occur based on the Proposed Development Plan and any related Site Alteration Activities
END	Northern Myotis (<i>Myotis septentrionalis</i>)	•Maternity roosts most often include large diameter trees with cracks, crevices, and/or exfoliating bark (buildings rarely used). •Overwinters in caves and mines that maintain temperatures above 0°C.	<u>Possible.</u> Large diameter trees with cracks and crevices and/or exfoliating bark are present within the Subject Property.	<u>Negligible.</u> A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.
END	Silver-haired Bat (<i>Lasionycteris noctivagans</i>)	• Maternity roost sites are typically within decaying, large diameter deciduous or coniferous trees with heart-rot or exfoliating bark. • Known to occasionally roost on or in buildings. • A migratory species primarily found in Ontario during the summer months, with summer habitat consisting of foraging, drinking, and roosting sites.	<u>Possible.</u> Large diameter deciduous trees with cracks and crevices and/or exfoliating bark are present within the Subject Property.	<u>Negligible.</u> A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.
END	Tri-colored Bat (<i>Perimyotis subflavus</i>)	•Roosting sites include maple (<i>Acer</i> spp.) and oak (<i>Quercus</i> spp.) with dead/dying leaf clusters. •Overwinters in caves and mines that maintain temperatures above 0°C.	<u>Possible.</u> Maple and Oak with dead/dying leaf clusters are present within the Subject Property.	<u>Negligible.</u> A timing window restriction will be applied to woody vegetation removal activities to avoid impacting roosting bats (individuals or maternity colonies). Additional mitigation measures for construction and detailed design are also provided. See report for greater details.
Reptiles				
THR	Blanding’s Turtle (<i>Emydoidea blandingii</i>)	•Occupies freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes, and swamps. •Nests in exposed, usually coarse, friable substrate. •Known to make long-distance overland movements (i.e., several kilometers) between habitats.	<u>Negligible.</u> Suitable feeding and basking habitat (e.g., wetlands, large woodland ponds, etc.) is absent from the Study Area. Subject Property is not expected to act as a movement corridor. Welland Canal within the Study Area is not expected to support this species.	---
THR	Eastern Hog-nosed Snake (<i>Heterodon platirhinos</i>)	•Occupies a wide range of habitats generally occurring on sandy, well-drained soil with open vegetative cover.	<u>Negligible.</u> Species is considered historical in the local landscape.	---

Status per O. Reg. 60/26 of the SCA	Species	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area ¹	Likelihood that Negative Effects to the Species or its "Habitat" (i.e., “Damage” or “Destruction” as defined in the SCA) will occur based on the Proposed Development Plan and any related Site Alteration Activities
END	Gray Ratsnake (Carolinian population) (<i>Pantherophis spiloides</i>)	• Found in a mix of agricultural land and deciduous forest, preferring habitat where forest meets more open environments.	Negligible. Species is considered historical in the local landscape.	---
END	Massasauga (Carolinian population) (<i>Sistrurus catenatus</i>)	•Occupies generally open habitats including tallgrass prairies, peatlands, and shorelines. •Two (2) extant populations in Ecoregion 7 (Ojibway Prairie and Wainfleet Bog).	Negligible. Species is associated with Wainfleet Bog.	---
END	Spotted Turtle (<i>Clemmys guttata</i>)	•Occupies ponds, marshes, bogs and ditches with slow-moving water. •Nests in exposed, usually coarse, friable substrate.	Negligible. Species is associated with Wainfleet Bog.	---
Plants				
THR	American Ginseng (<i>Panax quinquefolius</i>)	•Occupies rich, relatively undisturbed deciduous forests.	Negligible. Suitable habitat is absent from the Subject Property. Species not documented during vascular plant surveys.	---
END	Black Ash (<i>Fraxinus nigra</i>)	•Occupies deciduous swamps (often peaty), floodplains, and wet woods.	Negligible. Species not documented during vascular plant surveys.	---
END	Butternut (<i>Juglans cinerea</i>)	•Occupies a variety of treed habitats including mature forests, early- successional forests, and hedgerows.	Negligible. Species not documented during vascular plant surveys.	---
END	Spoon-leaved Moss (<i>Bryoandersonia illecebra</i>)	• Occupies moist or low-lying areas that are seasonally flooded under trees or shrub thickets. • May be found in a variety of vegetation communities including disturbed open woodlands, cultural thicket, savannah, and meadow.	Negligible. Species not documented during vascular plant surveys.	---

¹ Likelihood categories are to be interpreted as follows:
Negligible: so limited that the assessed species can be assumed absent.
Unlikely: while theoretically conceivable, species presence very improbable or temporary based on available information (e.g., habitat conditions, range, abundance in local landscape, etc.).
Possible: species presence plausible based on available information; no convincing evidence suggesting species could not occur on-site.
Probable: while not confirmed, available information suggests species has a high likelihood of being present.
Confirmed: species observed and/or evidence of occupation (e.g., tracks, etc.) documented.

Appendix 7. Proposed Development Plans.

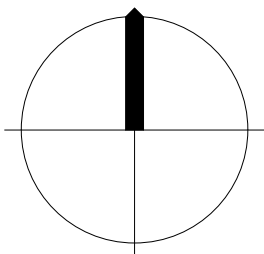


ZONING	ID- 47-H - (BY-LAW # 6575/30/18 & 5989/95-2013)		
LEGAL DESCRIPTION	PIN 64546-0099(LT) PART OF LOTS 23, 24 AND 25 PLAN 59R - 12468	TOTAL LOT AREA	319,420.15 SM 31.94 HA 78.92±3 ACRE
LOT FRONTAGE	200.28 M	LOT DEPTH	1,986.34 M
DESCRIPTION	EXISTING	PROPOSED	REQUIRED
MIN.LOT FRONTAGE	200.28 M	NO CHANGE	30.00 M
MIN. LOT WIDTH	EXISTING	NO CHANGE	N/A
MIN. LOT AREA	319,420.15 SM	NO CHANGE	
MAX.BUILDING HEIGHT		8.00 M	MAX. 11.00 M
NO. OF STORIES		2	
DRIVEWAY WIDTH	2.00 M	6.00 M	
BUILDING AREA		93.00 SM (1,000.00 SF)	

AREAS	EXISTING	PROPOSED		REQUIRED	SECTION
PROPOSED DEVELOPED AREA		100 %	20,425.50 SM		
PROPOSED BUILDING AREA		0.5 %	93.00 SM		
DRIVEWAY & PARKING SPACES		6.0 %	1,217.02 SM		
EXISTING CONCRETE PAD		1.8 %	360.00 SM		
LANDSCAPED AREA		91.8 %	18,755.48 SM		
PARKING	EXISTING	PROPOSED		REQUIRED	SECTION
TOTAL PARKING		4 SPACES		1 SPACE PER 100 SM GFA	3.1.2
INCLUDING ACCESSIBLE PARKING		1 SPACES		1 SPACES	3.3
LOADING	EXISTING	PROPOSED		REQUIRED	SECTION
NUMBER OF LOADING SPACES				3.5M X 9 M	3.10

 PROPOSED BUILDING
 ROAD / STREET
 SITE BOUNDARY

KEY MAP
N.T.S.



98 SCARSDALE ROAD,
TORONTO, ONTARIO, M3B 2R7
T: 416 800 3284
F: 416 800 3485

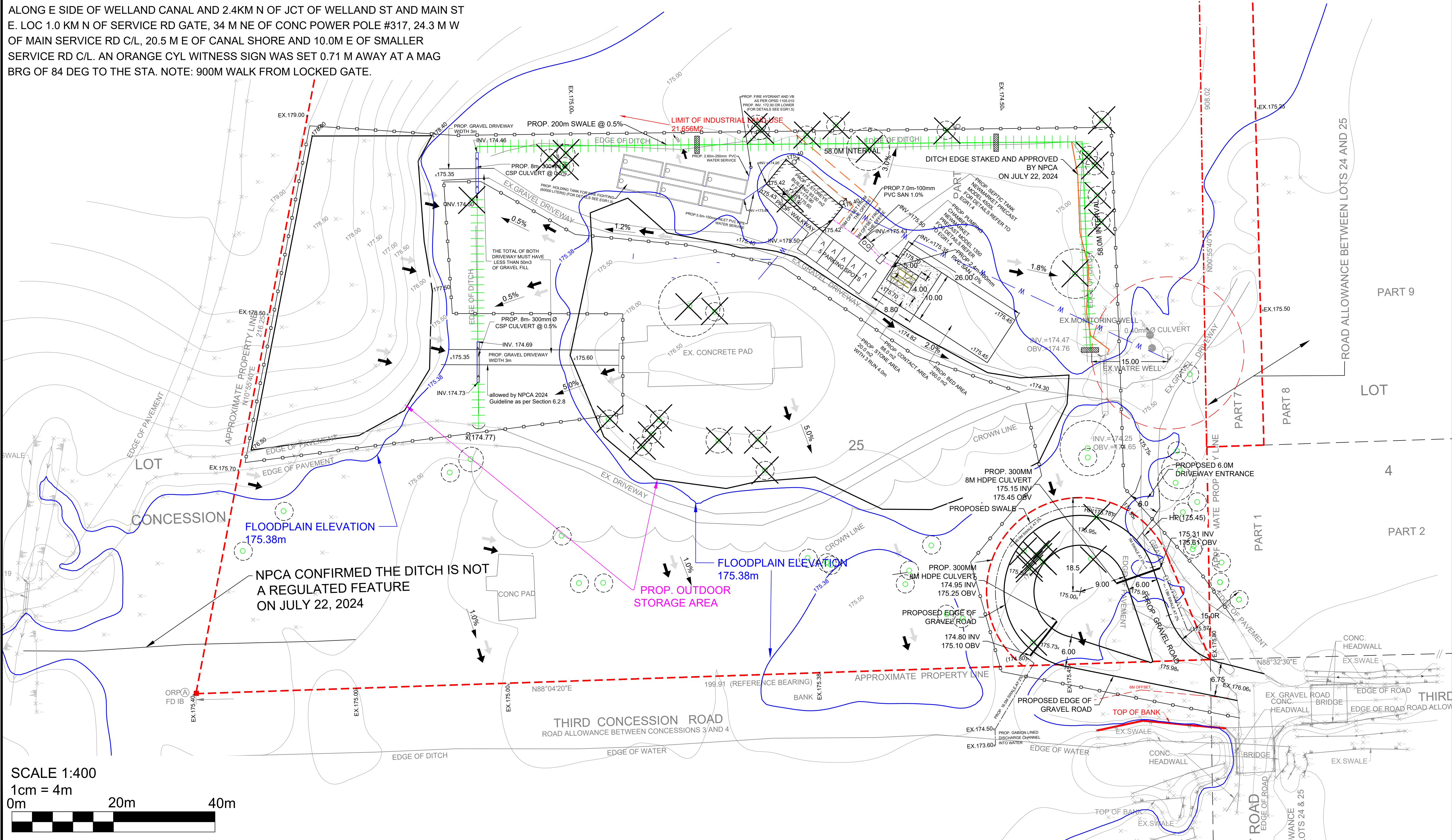
0TH FORK ROAD, LOTS 23 TO 25
PORT COLBORNE

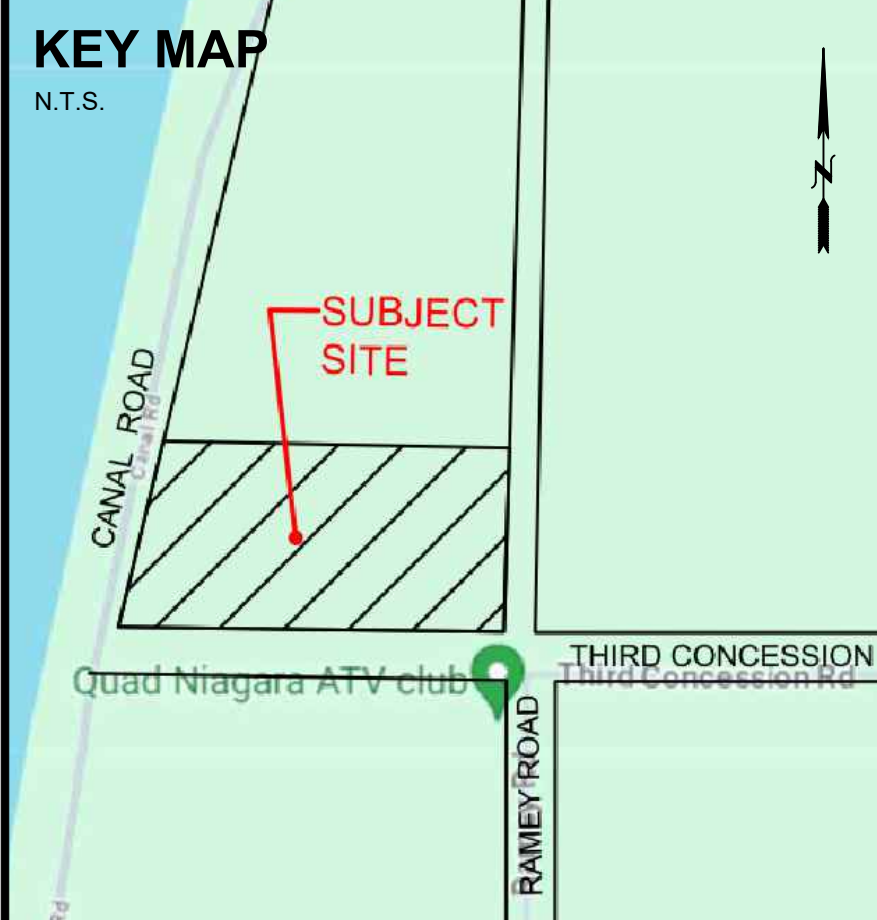
Drawing No.

A-001

- TOPO SURVEY WAS CONDUCTED ON MARCH 7, 2024 AND OCTOBER 1, 2025 BY KING EPCM. NATURAL HERITAGE FEATURE STAKING SURVEY WAS CONDUCTED ON JULY 22, 2024

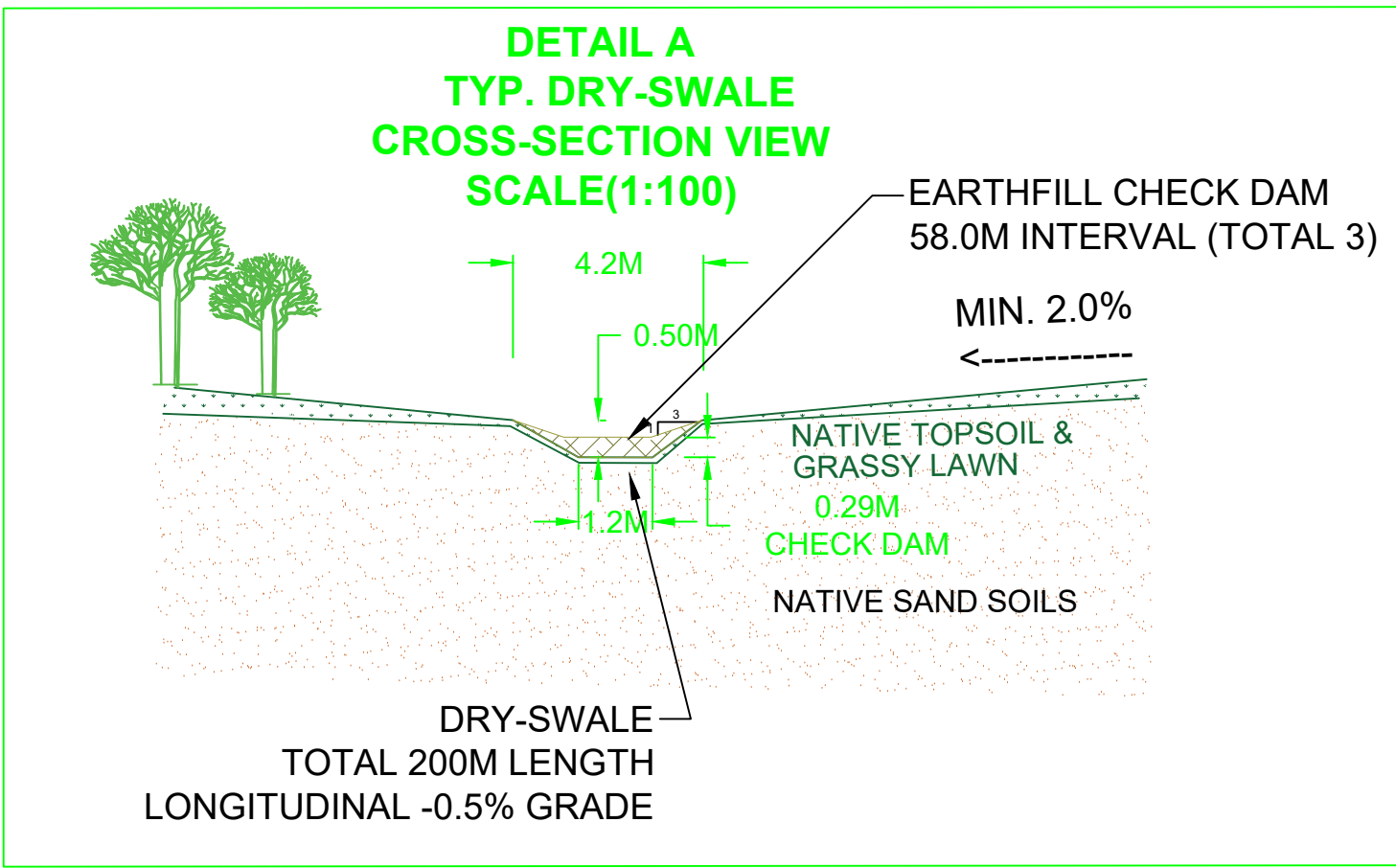
- TOPO SURVEY WAS CONDUCTED ON MARCH 7, 2024 AND OCTOBER 1, 2025 BY KING EPCM. NATURAL HERITAGE FEATURE STAKING SURVEY WAS CONDUCTED ON JULY 22, 2024
- ALL MEASUREMENTS STATED IN METRES.
 - PROPERTY BOUNDARY WAS REFERENCED BY RASCH + HYDE LTD., DATED MARCH 18, 2015.
 - THIS IS NOT A PLAN OF SURVEY. DO NOT USE FOR BOUNDARY.
 - ELEVATIONS ARE GEODETIC, OBTAINED FROM GNSS AND USING CAN-NET DERIVED FROM RTK SOLUTION AND GEOID MODEL HTv.2.0 SOLUTION, REFERRED TO CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28:78) AND BENCHMARK No. 0011980U014, HAVING AN ELEVATION OF 173.81M. THE BENCHMARK IS IN MANHOLE ALONG E SIDE OF WELLAND CANAL AND 2.4KM N OF JCT OF WELLAND ST AND MAIN ST E. LOC 1.0 KM N OF SERVICE RD GATE, 34 M NE OF CONC POWER POLE #317, 24.3 M W OF MAIN SERVICE RD C/L, 20.5 M E OF CANAL SHORE AND 10.0M E OF SMALLER SERVICE RD C/L. AN ORANGE CYL WITNESS SIGN WAS SET 0.71 M AWAY AT A MAG BRG OF 84 DEG TO THE STA. NOTE: 900M WALK FROM LOCKED GATE.



Municipality Notes				
DRAWN		STAMP		
TW				
DATE				
MAY 04, 2026				
				
KING		E P C M		
		3780 14th Ave, Unit 211 Markham, ON, L3R 9Y5 www.KingEPCM.com 647-459-5647		
CLIENT				
XUE JU (JACK) ZHENG 2789475 ONTARIO INC.				
PROJECT NAME				
0TH FORKS ROAD				
PROJECT LOCATION				
0TH FORKS ROAD COLBORNE				
PRINT TITLE				
SITE PLAN				
FILE No.				
EGR - 1.2				
No.	ISSUED FOR:	DATE	DRAW BY	CHECK
V1	ISSURED FOR PERMITS	APR 29, 2024	SL	TW
V4	ISSURED FOR PERMITS	JUN 26 2025	SP	AA
V5	ISSURED FOR PERMITS	JUL 22 2025	SP	TW
V8B	ISSURED FOR PERMITS	MAR 18, 2026	SP	TW
V9	ISSURED FOR PERMITS	MAY 04, 2026	SP	TW

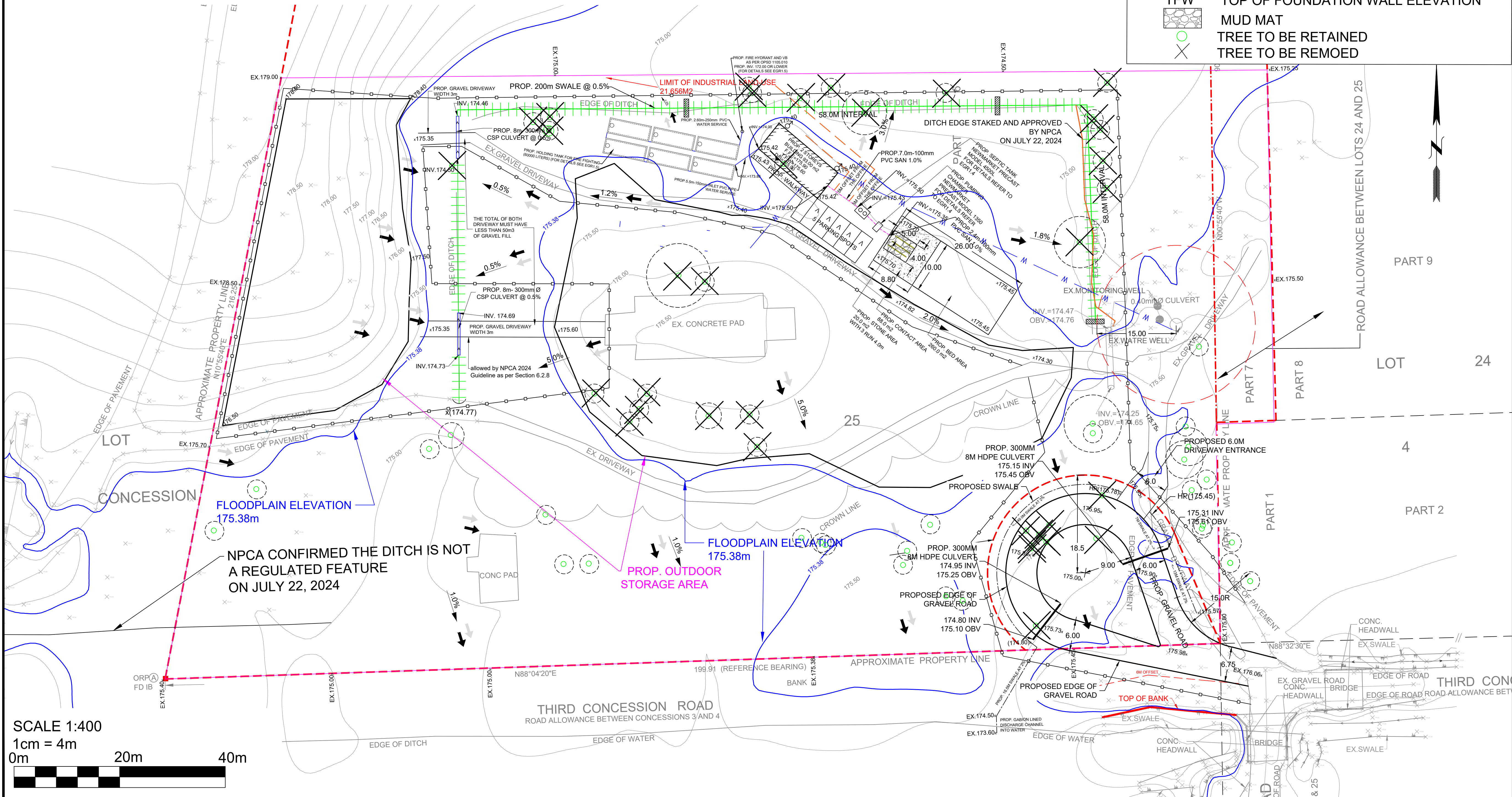
GENERAL NOTES:

1. CONTRACTOR TO BE RESPONSIBLE TO ENSURE THAT THIS LOT AND ADJOINING AREAS OF SITE ARE KEPT CLEAN AND FREE OF CONSTRUCTION DEBRIS, AND THAT ROADWAYS ARE KEPT CLEAN OF MUD AND DEBRIS
2. ALL MEASUREMENTS STATED IN METERS, PIPE SIZES IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED EQUIVALENTS
3. GRASS SWALES SHALL BE CONSTRUCTED WITH 3:1 SIDE SLOPES, WITH AN AVERAGE DEPTH OF 150MM BELOW GRADE. SWALES SHALL HAVE A MINIMUM OF 50MM OF TOPSOIL, THEN SEEDED WITH LAWN GRASS DURING MAY - SEPTEMBER, WATERED WEEKLY UNTIL FULLY ROOTED
4. LANDSCAPING SHRUBS OR OTHER SMALL-FORM VEGETATION MAY BE PLANTED WITHIN THE GRASS SWALES. ROOT-BALL AND RAISED SOIL AROUND EACH SHRUB MAY FORM A DAM UP TO 600MM IN HEIGHT WITHIN THE SWALE, BUT NOT FULLY OBSTRUCT THE SWALE
5. EXTERIOR FOUNDATION WALLS SHALL ABOVE FINISHED GRADE ELEVATION BY AT MINIMUM 150mm
6. CONTRACTOR SHALL CHECK AND VERIFY ALL GIVEN GRADE ELEVATIONS AND DRAINAGE PRIOR TO CONSTRUCTION
7. RUNOFF SHALL BE DIRECTED IN SUCH WAY THAT IT DOES NOT ADVERSELY IMPACT ADJACENT PROPERTIES.
8. ELEVATIONS ARE GEODETIC, OBTAINED FROM GNSS AND USING CAN-NET DERIVED FROM RTK SOLUTION AND GEOID MODEL HTv.2.0 SOLUTION, REFERRED TO CANADIAN GEODETIC VERTICAL DATUM OF 1928 (CGVD28:78) AND BENCHMARK No. 0011980U014, HAVING AN ELEVATION OF 173.81M. THE BENCHMARK IS IN MANHOLE ALONG E SIDE OF WELLAND CANAL AND 2.4KM N OF JCT OF WELLAND ST AND MAIN ST E. LOC 1.0 KM N OF SERVICE RD GATE, 34 M NE OF CONC POWER POLE #317, 24.3 M W OF MAIN SERVICE RD C/L, 20.5 M E OF CANAL SHORE AND 10.0M E OF SMALLER SERVICE RD C/L. AN ORANGE CYL WITNESS SIGN WAS SET 0.71 M AWAY AT A MAG BRG OF 84 DEG TO THE STA. NOTE: 900M WALK FROM LOCKED GATE.

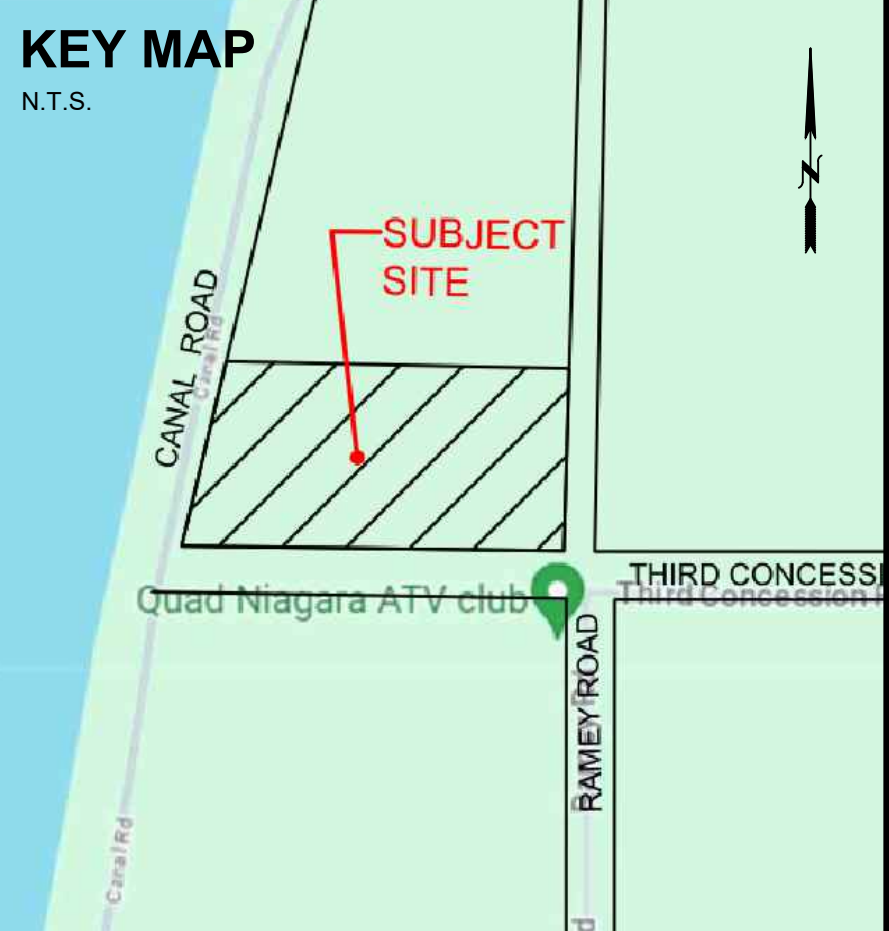


LEGEND:

- x 223.01 EXISTING ELEVATION
- x 223.03 PROPOSED SURFACE ELEVATION
- (223.03) PROPERTY LINE
- PROPOSED SWALE INVERT ELEVATION
- EXISTING SURFACE FLOW ROUTE
- PROPOSED SURFACE FLOW ROUTE
- TREE PROTECTION ZONE
- ROOF WATER DOWNSPOUT
- SILT FENCE CONTROL
- W — PROP. WATERMAIN
- FFE FINISHED FLOOR ELEVATION
- USF UNDERSIDE FOOTING ELEVATION
- DS DOOR SILL ELEVATION
- TFW TOP OF FOUNDATION WALL ELEVATION
- MUD MAT
- TREE TO BE RETAINED
- TREE TO BE REMOVED



Municipality Notes	
DRAWN	STAMP
S.L/S.P	LICENSED PROFESSIONAL ENGINEER A. SAMADI 100569767 2026.05.04 PROVINCE OF ONTARIO
DATE	MAY 04, 2026



KING 3780 14th Ave, Unit 211
Markham, ON, L3R 9Y5
www.KingEPCM.com
647-459-5647

CLIENT
XUE JU (JACK) ZHENG
2789475 ONTARIO INC.

PROJECT NAME
0TH FORKS ROAD

PROJECT LOCATION
0TH FORKS ROAD
COLBORNE

PRINT TITLE
SITE GRADING AND
SERVICING

FILE No.
EGR - 1.3

No.	ISSUED FOR:	DATE	DRAW BY	CHECK
V1	ISSURED FOR PERMITS	APR 29, 2024	SL	TW
V4	ISSURED FOR PERMITS	JUN 26 2025	SP	AA
V5	ISSURED FOR PERMITS	JUL 22 2025	SP	TW
V7	ISSURED FOR PERMITS	JAN 07 2026	SP	TW
V9	ISSURED FOR PERMITS	MAY 04 2026	SP	TW

Appendix 8. Summary of Technical Recommendations

Natural Feature	Technical Recommendations (per Section 5 of report)
Significant Wildlife Habitat	● A Wildlife Scientific Collector's authorization will be secured from MNR pursuant to the <i>Fish and Wildlife Conservation Act</i> to relocate the terrestrial crayfish, and is to include a formal Terrestrial Crayfish Relocation Plan. ● Terrestrial crayfish will be relocated to the edge of the Indian Creek Drain (or other ecologically similar location as deemed by MNR) prior to any grading or other modifications within 30 m of any documented crayfish chimneys (see Figure 3).
Protected Species of Ontario / Provincially Endangered and Threatened Species	● All necessary woody vegetation removals will be completed outside the primary bat activity period (i.e., to be completed between December 1 and March 31). If limited tree removal is required during the restricted timing window, consult a qualified ecologist or MECP for further direction. ● Any lighting incorporated into the final building designs should be directed downward (i.e., towards the ground) to the extent practicable.
Fish Habitat	● All works will be undertaken consistent with an Erosion and Sediment Control Plan. ● Should any fill placement below the high-water mark of Indian Creek Drain be required (i.e., to install drainage swale outlets), the project works may require circulation to Fisheries and Oceans Canada as part of a Request for Review under the <i>Fisheries Act</i>.
Other Natural Environment Considerations	● The removal of trees will be restricted to areas in direct conflict with the footprints of the proposed development features (e.g., residence, septic system, driveway, etc.) and grading, along with any hazardous trees in the immediate vicinity that pose an unacceptable risk to human life or property. ● All necessary vegetation removal (e.g., trees, meadow vegetation) will be completed outside the primary bird nesting period (i.e., to be completed between September 1 and March 31). Should minor vegetation removal be proposed during the restricted timing window within readily searchable habitat types, a bird nesting survey will be undertaken to confirm the presence or absence of nesting birds or bird nests within or adjacent to the areas subject to vegetation clearance. The bird nesting survey is to take place within 48 hours of vegetation removal. ● All vehicles and machinery (i.e., construction equipment) entering the Subject Property during construction shall follow relevant best practices for reducing the spread of invasive species outlined in the Clean Equipment Protocol for Industry (Halloran et al. 2013). ● Incorporation of Bird-Friendly Guidelines for the proposed buildings/structures such as those published in City of Toronto's "Best Practices for Bird-Friendly Glass" (City of Toronto 2016) and "Best Practices for Effective Lighting" (City of Toronto 2017) should be considered as part of the building design, including: ● The use of masonry or non-reflecting surfaces (buildings with high components of glass in their exteriors are more prone to bird strikes). ● Where glass is proposed, the application of glass treatments such as applied coverings, frit patterns, internal blinds, shades, tinting, and/or landscape design. ● Where tinted glass is proposed, warm spectrum colours (yellow/red) are discouraged (they may cause more disorientation than cold spectrum colours such as blue/green). ● Incorporation of Best Management Practices for the use of road salt such as those published in the Transportation Association of Canada's "Syntheses of Best Practices Road Salt Management" should be considered at detailed design. ● Any Landscape Plans prepared as part of the development approval should incorporate native tree replacements (minimum 1:1 ratio) and application of native seed mixes to any areas of disturbance.