FINAL

# Scoped Environmental Impact Study

1766 Wilton Grove Road, London, Ontario

Prepared for:

Dancor Construction Ltd.
15825 Robin's Hill Road, Unit 1
London, Ontario N5V 0A5

Attn: Sean Ford

June 30, 2026

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## 1.0 INTRODUCTION

Dancor Construction Ltd (Client) retained Pinchin Ltd. (Pinchin) to conduct a Scoped Environmental Impact Study (EIS) of the subject property, at 1766 Wilton Grove Road, London, Ontario (Site). The location of the Site with general surrounding area is shown on Figure 1 in **Appendix A**. The Client requested this EIS as part of the City of London's application requirements for approval of the proposed industrial development. Agency consultations, conducted through a scoping exercise with the City of London, established the basis for this Scoped EIS.

The Site, approximately 27.3 hectares in area, is currently occupied by Country Paws Boarding, which is a dog-kennel facility, agricultural areas, and undeveloped land. The Site is bordered by Highway 401 to the north, Wilton Grove Road to the south, Cheese Factory Road and agricultural land to the west, and a mix of single-family residences, agricultural areas, woodlands, and the Westminster Wetland Complex to the east. Natural heritage features on the Site include a woodland, a Provincially Significant Wetland (Westminster Wetland Complex), and watercourses (Dingman Creek Tributary). Both the wetland and watercourse are regulated by the Upper Thames River Conservation Authority (UTRCA). The Client intends to develop the Site into an industrial complex, including a storage building, office, parking lot, and associated amenities. Pinchin identified our Study Area as the Site and its immediately surrounding area extending 120 m farther from the Site boundaries, as depicted on Figure 2 in **Appendix A**.

Pinchin prepared this EIS report was to: identify natural heritage features present on the Site, and immediately adjacent to it, and characterize their ecological functions; evaluate aspects of the development proposal that might reasonably be expected to adversely affect the natural heritage features; and provide recommendations of measures to avoid or otherwise mitigate those potential effects. Our methods were in general accordance with EIS guidelines from the City of London Official Plan, discussed in Section 2.0 below.

## 2.0 POLICY CONTEXT

Pinchin reviewed the following provincial and municipal legislation and policies germane to this EIS:

- Provincial Planning Statement (2024);
- Ontario Regulation 41/24; and
- City of London Official Plan (Consolidated 2024).

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## 2.1 Provincial Planning Statement

The Provincial Policy Statement 2024 (PPS) sets a foundation for regulating development and land use in the Province of Ontario by providing guidelines to enable development while protecting resources of interest to the province, public health and safety, and the quality of the natural environment (Ministry of Municipal Affairs and Housing, 2024). While the PPS supports development and improved land use planning, management, and growth, it does so in ways intended to enhance communities through efficient land use and environmental management and protection.

Chapter 4 of the PPS provides direction for wise use and management of resources by conserving and protecting natural areas and their features to their benefit. Section 4.1.1 stipulates that the natural features and areas are to be protected for the long term. Section 4.1.2 also states that the diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, are to be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features, and ground water features. Section 4.1.3 stipulates that the natural heritage systems are to be identified in Ecoregions 6E and 7E1, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.

The Study Area falls within Ecoregion 7E, an area where Section 4.1.5 prohibits development and site alteration that affect significant wetlands and significant coastal wetlands unless it has been demonstrated that there will be no negative impacts on these natural features or their ecological functions:

a) significant woodlands in Ecoregions 7E (excluding islands in Lake Huron and the St. Mary's River);

b) significant valleylands in Ecoregions 7E (excluding islands in Lake Huron and the St. Mary's River);

c) significant wildlife habitat;

d) significant areas of natural and scientific interest; and

e) Coastal Wetlands in Ecoregion 6E that are not subject to policy 4.1.4 (b)

Section 4.1.7 prohibits development and site alteration in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements. Section 4.1.8 prohibits development and site alteration on land adjacent to natural heritage features and areas unless the ecological function of the adjacent lands has been evaluated and that it has been demonstrated that development of the adjacent lands will have no negative impacts on features or functions of the natural heritage features and areas.

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The PPS provides overall policy direction that should be read in conjunction with other provincial and municipal plans. Where the policies from various plans overlap, the more stringent policy is to be applied unless otherwise stated.

## 2.2 Ontario Regulation 41/24

Pursuant to the *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*, any development in or on areas defined in the regulation area (e.g., river or stream valleys, hazardous land, wetlands) requires permission from the Upper Thames River Conservation Authority under Ontario Regulation 157/06 (GO, 2013). UTRCA may grant permission for development in or on these areas if the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. The Westminster Wetlands Complex, a UTRCA Screening Area, is located within the Site. Therefore, UTRCA approval may be required for the proposed development and site alteration.

It is noteworthy that, since April 1, 2024, Ontario Regulation 41/24 has been in effect that would have revoked previous regulations for Conservation Authorities, including the Ontario Regulation 157/06 for the UTRCA. Ontario Regulation 41/24 applies to this Site, as it contains a wetland and watercourses.

## 2.3 City of London Official Plan

The Study Area is subject to the policies and designations in the City of London Official Plan (CLOP) (Consolidated 2024). The City designates the Site as “Future Industrial Growth,” “Green Space,” and “Farmland.” Map 5 of the Official Plan identifies natural heritage features on the Site, including a Provincially Significant Wetland, Significant Woodland, Significant Valleyland, and Watercourse. According to the CLOP, development is not permitted in significant valleylands, woodlands, or wetlands unless it can be demonstrated that there will be no negative impacts on the natural features or their ecological functions (City of London, 2024).

Map 6 designates the Site as within the Conservation Authority Regulation Limit, Regulatory Flood Line, Significant Groundwater Recharge Area, and Highly Vulnerable Aquifer. For areas identified as significant groundwater recharge areas or highly vulnerable aquifers, a hydrological study may be required to assess the potential impacts of the proposed development on groundwater quality and quantity, as part of the planning or building permit application. Due to the Conservation Authority Regulation Limit on the Site, UTRCA approval may also be required for the proposed development and Site alteration. To proceed with development, an EIS must demonstrate that the ecological function of the natural features is maintained, enhanced, or, where applicable, restored.

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# 3.0 STUDY METHODOLOGY

## 3.1 Background Review and Agency Consultation

Before conducting the site assessment, Pinchin completed a desktop background review of relevant information sources related to the Study Area. This review included an evaluation of natural heritage features on the Site and in the surrounding area, historical species occurrence records from the Natural Heritage Information Centre (NHIC), existing wildlife data, Species of Conservation Concern lists, and other relevant sources. Additionally, Pinchin reviewed Site history, and the Site plan provided by the Client.

This Scoped EIS references key documents, including the MNRF Natural Heritage Reference Manual (2010), the City of London Official Plan (Consolidated 2024), and the City of London Environmental Management Guidelines (2021). The Scoped EIS is also aligned with provincial and regional policies, including the Provincial Planning Statement (2024), the UTRCA Environmental Policy Planning Manual (2017), Ontario Regulation 41/24 under the Conservation Authorities Act (1990), and the *Endangered Species Act* (2007). As mentioned above, based on consultations with the City of London, a Scoped EIS report was requested by the City as part of the approval requirements for the proposed residential development. A scoping exercise with City of London planning staff was also conducted through a Scoping Checklist for the EIS prior to the completion of this report, and including previous discussion comments received from the agencies for establishing the basis of this EIS. A record of the agency consultation is available in **Appendix B** for review.

Pinchin identified natural heritage resources with potential to be present on the Study Area from the following sources:

- Evaluation of habitat through aerial photographs and online mapping:
  - Land Information Ontario (MNRF, 2020a); and
  - Google Earth.
- Review of historical occurrence records for Species of Conservation Concern within or adjacent to the Study Area:
  - Natural Heritage Information Centre (MNRF, 2024b);
  - Atlas of the Breeding Birds of Ontario (BSC, 2024);
  - Atlas of the Mammals of Ontario (Dobbyn, 1994);
  - Department of Fisheries and Oceans Canada Aquatic Species at Risk Map tool (DFO, 2024);
  - Ontario Reptile and Amphibian Atlas (ON, 2024);
  - Ontario Butterfly Atlas (TEA, 2024);

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- Ontario Regulation 230/08 Species at Risk in Ontario List (COSSARO, 2020); and
- Provincial and federal assessments, recovery strategies, and management plans.

## 3.2 Field Assessment

Pinchin conducted field studies to characterize natural heritage features present on the Site and surrounding landscape. A summary of fieldwork methodologies for the is provided below.

### *3.2.1 Vegetation Surveys*

Vegetation communities within the Study Area were assessed and described using the provincial Ecological Land Classification system. The Ecological Land Classification for *Southern Ontario: First Approximation and its Application* (Lee et al., 1998) and the *Ecological Land Classification for Southern Ontario: Second Approximation and its Application* (Lee et al., 2008) were referenced to classify the habitats to Ecosite level of precision. Ecosites classified within the Study Area were then applied to Ecological Land Classification (ELC) polygons mapped using aerial imagery.

The vegetation communities for the summer season were sampled for their structure, species composition, and habitat characteristics. That information was supplemented by floristic surveys at the time of each visit. Species names we use generally follow the nomenclature of Flora Ontario (Newmaster and Ragupathy, 2012) and the NHIC.

### *3.2.2 Woodland Assessment*

The following criteria for woodland assessment have been derived from the recently approved *Environmental Management Guidelines (EMG)* (City of London, 2021). Details of this woodland assessment are provided in **Appendix E**. For a woodland to be designated as significant it must meet a minimum of one “high” or five “medium” criteria scores as determined by the City under the EMG guidelines. The significance of a woodland is to be based on whether the Woodland:

a) Contains natural features and ecological functions that are important to the environmental quality and integrity of the Natural Heritage System.

b) Provides important ecological functions and has an age, size, site quality, diversity of biological communities and associated species that is uncommon for the planning area.

c) Is important for the balanced distribution of open space amenities and passive recreational activities across the urban area.

d) Provides significant habitat for endangered or threatened species.

e) Contains distinctive, unusual or high quality natural communities or landforms.

Each woodland evaluation criterion will be discussed in Section 4.3 below.

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### *3.2.3 Wetland Assessment*

Our wetland assessment of the Study Area followed evaluation criteria set out in the Ontario Wetland Evaluation System (OWES) 3rd Edition (MNRF, 2013), which provided appropriate benchmarks for our work.

Soil classification, the “50% rule”, and the presence of wetland species and wetland indicator species form a useful basis for evaluation of the upland-wetland transition on the Site. According to the OWES, the “50% rule” is defined as being, if 50% or more of the relative vegetation cover in a given area consists of wetland plants (including wetland tolerant species and wetland indicator species), then the area should be considered a “wetland”.

“Wetland indicator species” are plants that cannot live in upland areas, as compared with “wetland species”, which consist of both wetland indicator plants and “wetland tolerant plants” that can also tolerate upland habitats. We also used the Coefficient of Wetness (CW) in our assessment. The CW is an indicator that ranges from minus 5 (obligate wetland) to 5 (obligate upland) and describes tolerances to wetness of an individual plant species. The OWES also has guidelines on feature size and complexing criteria. Though the OWES defines a wetland as being larger than 2 ha, it allows features as small as 0.5 ha to be evaluated, but that allowance is made only if justified by having specialized habitat. In evaluation of wetland complexing criteria, biological and hydrological features, functions, and values are considered, both on and off the feature or Site.

### *3.2.4 Watercourse Assessment*

The watercourse assessment in the Study Area followed criteria set out in the Ontario Stream Assessment Protocol (OSAP) Version 10 (Stanfield, 2017). The Site was identified and documented at the screening level in accordance with the OSAP guidelines. A rapid assessment of watercourses was made on the Site and within the Study Area, considering access and safety factors.

During the Site visit, the physical processes and channel structures were documented. The thermal regime and fish community presence were determined based on publicly available literature from the CRCA, and field observations made during the Site assessment.

### *3.2.5 Valleyland Assessment*

Identification and evaluation of Significant Valleylands was based on recommended criteria from MNRF as the responsible planning authority. Valleylands with features, functions, and conditions that can be assessed using one or more of the following evaluation criteria are to be considered as candidate Significant Valleylands: surface water functions, groundwater functions, landform prominence, distinctive geomorphic landforms, degree of naturalness, community and species diversity, unique communities and species, habitat value, and linkage function (MNRF, 2005).

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### *3.2.6 Species at Risk*

The *Endangered Species Act, 2007* (ESA) provides protection from harm, harassment, or capture to species listed as extirpated, endangered, or threatened on the Species at Risk Ontario List. Additional protection is provided to the habitat of endangered or threatened species on that same list.

Habitat for a species includes anywhere on which members of the species depend for reproduction, rearing, hibernation, migration, or feeding, and also “prescribed habitat”, as defined in Ontario Regulation 242/08 of the General Regulation.

The likelihood of occurrence of Species at Risk (SAR) was assessed qualitatively based on the ability of the habitat to meet one or more life requisites for each SAR identified during the desktop assessment. If habitat suitable for SAR was identified, additional survey effort was applied in that area. If incidental SAR were observed, they were recorded throughout the field assessment within and adjacent to the Site.

### *3.2.7 Incidental Wildlife Observations*

Wildlife was surveyed as part of general surveys during the field assessment. These surveys involved general coverage, recording all species observations and signs, including tracks and trails, scat, burrows, dens, browse, and vocalizations. Wildlife surveys were made during the coincident surveys for vegetation communities and vascular plants. Significant wildlife habitat was be assessed according to the MNRF Natural Heritage Reference Manual (MNRF 2010) and the MNRF Significant Wildlife Habitat Technical Guide (MNRF 2000).

### *3.2.8 Snake Surveys*

VES (Visual Encounter Surveys) for snakes should be carried out under sunny conditions and when air temperature is between 10°C and 25°C, or under overcast conditions and when air temperature is between 15 degrees Celsius (°C) and 30°C (OMNRF, 2016). Surveys can be carried out between 9 am and 5 pm. Surveys for basking snakes should not be carried out on days with wind speeds higher than 24 km/h. Surveys with Artificial cover objects (ACOs) can be used to create suitable microhabitat for snakes that can be easily and systematically searched. ACOs can include a wide range of materials, but flat pieces of metal or wood (typically plywood) are those most commonly used for snakes. ACOs should be deployed in open and semi-open habitats that receive ample sun exposure. ACOs should be in place for a minimum of two weeks prior to beginning surveys but having them in place the previous fall is ideal. ACO surveys can be a very effective method of detecting cryptic, difficult-to-survey-for snake species, especially in environments where natural cover is limited or cannot be easily searched (OMNRF, 2016).

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#### *3.2.9 Breeding Bird Surveys*

Breeding bird surveys were conducted during the breeding season in accordance with the Ontario Breeding Bird Atlas protocol (OBBA; Cadman and Kopysh, 2001). Surveys took place between dawn and five hours after dawn, under appropriate weather conditions, and included both standardized 5-minute point counts at six pre-determined sites on the property and active searches for evidence of breeding birds, following the OBBA breeding evidence guidelines.

Point count sites were chosen to minimize overlap and capture a range of habitat types. During each 5-minute count, the surveyor recorded all birds seen or heard from the stationary position and noted whether individuals were within a 100 m radius. Additionally, any breeding behaviour observed (e.g., nest building and courtship displays) was recorded. Two breeding bird surveys, conducted one week apart, were completed as part of the field assessment program.

#### *3.2.10 Amphibian Breeding Surveys*

Based on the Marsh Monitoring Protocol, amphibians are required to be surveyed three separate times during the breeding season to determine if any species are using the wetland on site as a breeding area. These surveys involved three separate auditory surveys beginning at least half an hour after sunset. The surveys are required to begin in spring and continue into early summer, with each survey occurring at least 15 days apart.

The night-time air temperature must be greater than 5°C for the first survey, 10°C for the second survey, and 17°C for the third survey (Bird Studies Canada, 2000). These separate surveys were conducted to account for different species' breeding windows. Each station was surveyed for a minimum of five minutes per visit.

## 4.0 EXISTING CONDITIONS

### 4.1 Landforms, Physiography and Geology

The Site is boarded by Highway 401 to the north, Wilton Grove Road to the south, Cheese Factory Road and an agricultural area to the west and a single family residence, agricultural areas, woodlands, and the Westminster Wetland Complex to the east. The Ontario Geological Survey classifies the bedrock of the Site as being of Middle Devonian origin (limestone, dolostone, and shale) from the Dundee Formation (Ontario Geological Survey, 1991).

The Site is within Ecodistrict 7E-6 (London Ecodistrict) which extends from Coldstream in the east to St. George in the west. The codistrict is dominated by 80% agricultural land, with 11% deciduous forest, 2% other natural, and 7% other cover types. The substrates within the ecodistrict are 99% Gray Brown Luvisiol and 1% other. The Study Area is relatively flat with an elevation of 270 metres above sea level (masl), with a slight drop in elevation along the watercourse on the Site.

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A detailed review and analysis of the vegetation communities and potential natural heritage features on and surrounding the Site is provided below.

## 4.2 Vegetation Surveys

### *4.2.1 Vascular Plants*

A vegetation survey was conducted on the Site on June 9 and October 5, 2022. On June 9 the weather was sunny with scattered clouds and a high of 16°C, and on October 5 the weather was sunny and the high was 21°C. A total of 52 plant species were identified on the Site from the vegetation surveys. A full inventory of vascular plant species observed on the Site during the field assessment program throughout the Site is catalogued in Table 1 in **Appendix C**.

### *4.2.2 Vegetation Communities*

In total, ten vegetation communities were identified on the Site. These communities present on the Site: Mineral Cultural Meadow (Agriculture), Country Paws Boarding, Mineral Meadow Marsh, Alder Mineral Thicket Swamp, Reed-canary Grass Mineral Meadow Marsh, Mineral Cultural Thicket, Dry – Moist Old Field Meadow Type, Dry – Fresh Deciduous Forest, Gray Dogwood Cultural Thicket, and Light Industry (Construction).These vegetation communities with their ELC polygons surveyed on the Site and the surrounding area are mapped on Figure 3 in **Appendix A**. Selected site photographs of the vegetation communities are included in **Appendix D** for reference.

The **Mineral Cultural Meadow (Agriculture) (CUM1)** community is the largest found within the Site and can be found on the west side and in the southeast corner of the Site. These fields are actively being farmed, although they were generally bare during the spring Site assessment, some sprouts of crops were observed. During fall field visits it was confirmed that corn was being grown throughout this community. Several wildlife tracks were observed along the edges of this community.

The **Country Paws Boarding (CVC_1):** This community is found on the southern side of the Site and contains the active dog boarding business. This community is primarily composed of commercial buildings, common landscape trees, shrubs and manicured lawns, with associated parking areas. This community also contains rock piles in the north that could provide suitable snake habitat.

The **Mineral Meadow Marsh (MAM2)** vegetated community is found on the northwest side of the Site and is dominated almost entirely by Common Reed (*Phragmites australis*). It is bounded by Open Agricultural to the south, west and north, and wetland communities to the east. Other species observed along the edges of the community include Peach-leaved Willow (*Salix amygdaloides*) and Reed Canary Grass (*Phalaris arundinacea*).

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The **Alder Mineral Thicket Swamp (SWT2-1)** vegetated community is found east of the Common Reed Marsh described above. It is bounded by Reed-canary Grass Mineral Meadow Marsh to the north and east and Gray Dogwood Cultural Thicket to the south and east. This thicket is almost entirely dominated by Alder-leaved Buckthorn (*Endotropis alnifolia*) and Common Buckthorn (*Rhamnus cathartica*), other species observed are indicative of the surrounding vegetation found in neighboring wetland communities.

The **Reed-canary Grass Mineral Meadow Marsh (MAM2-2)** vegetated community is found centrally on the northern side of the Site. It is entirely composed of Reed Canary Grass and has a high-water table throughout the extent of the community. The moist conditions in this community seep into the watercourse flowing south of this community, towards Wilton Grove Road.

The **Mineral Cultural Thicket (CUT1)** vegetated community is found along the northern edge of the Site. This community is bounded by the Highway 401 to the north and Reed-canary Grass Mineral Meadow Marsh to the south. An old field meadow boarder the Site to the southeast, and an agricultural field boarders the Site to the west. This dense thicket is primarily composed of Ontario Hawthorn (*Crataegus nitidula*), with some mature trees, including Manitoba Maple (*Acer negundo*) and Black Cherry (*Prunus serotina*), observed throughout.

The **Dry – Moist Old Field Meadow Type (CUM1-1)** vegetation community is present in three distinct patches within the Site. A small patch on the northeast side is bordered by the Hawthorn Deciduous Shrub Thicket to the north, the Reed Canary Grass Mineral Meadow Marsh to the west, and the Dry–Fresh Basswood Deciduous Forest to the south and east. The second patch, located on the west side along the watercourse, is surrounded by agricultural areas in all directions. The third and largest patch is on the eastern side, extending on both sides of the watercourse, bordered by the Gray Dogwood Cultural Thicket to the east, the Reed Canary Grass Mineral Meadow Marsh to the north, Country Paws Boarding to the south, and agricultural areas to the south and west. A walking path connecting to the Country Paws Boarding facility fragments this community. It is primarily composed of Canada Goldenrod (*Solidago canadensis*), with other common meadow species such as Wild Carrot (*Daucus carota*), Oxeye Daisy (*Leucanthemum vulgare*), Smooth Brome (*Bromus inermis*), Kentucky Bluegrass (*Poa pratensis*), and Reed Canary Grass. Shrubs, including Red Cedar (*Juniperus virginiana*), Gray Dogwood (*Cornus racemosa*), and Manitoba Maple saplings, are also present. Additionally, brush piles in the eastern and western patches could serve as potential snake habitat.

The **Dry – Fresh Deciduous Forest (FOD4)** forested community is found on the east side of the Site and is bounded by the Reed-canary Grass Mineral Meadow Marsh to the south and west and the Dry – Moist Old Field Meadow described above to the north. This vegetated community is primarily composed of American Basswood (*Tilia americana*), Sugar Maple (*Acer saccharum*) and Trembling Aspen (*Populus tremuloides*) with the groundcover being composed of Common Buckthorn saplings, Canada Goldenrod and Riverbank Grape (*Vitis riparia*).

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The **Gray Dogwood Cultural Thicket (CUT1-4)** vegetated community is found on the north side of the Site. It is bounded by the Reed-canary Grass Mineral Meadow Marsh to the north, east and south and the Alder-leaved Buckthorn Mineral Deciduous Thicket Swamp to the west. This community is primarily composed of Gray Dogwood with other shrubs and common meadow species. Other immature trees and shrubs observed include Manitoba Maple, White Pine (*Pinus strobus*), White Ash (Fraxinus americana), Common Buckthorn and Tartarian Honeysuckle (*Lonicera tatarica*). The groundcover was primarily composed of Canada Goldenrod and Oxeye Daisy.

The **Light Industry (CVC_2)** community is found in the southwest corner of the Site It is bounded by Country Paws Boarding to the east, and Agriculture to the north. The community is currently and active construction Site. All vegetation has been removed from the community.

## 4.3 Woodland Assessment

The following criteria for woodland assessment have been derived from the *Environmental Management Guidelines 2021 (City of London, 2021).* Based on the assessment table provided, at this time the woodland on Site would be considered significant by the City of London. The details of this woodland assessment are available for reference in **Appendix E**.

For a woodland to be designated as significant it must meet a minimum of one “high” or five “medium” criteria scores as determined by the City. As the assessment was completed in the context of the scope of the proposed development project, some questions were not applicable and left unanswered, being outside the scope of the project or not needed to further identify the result of the designation of significant woodland. Results of the assessment included four “high” and two “medium” criteria scores.

Based on the evaluation criteria, the Dry-Fresh Deciduous Forest meets the criteria for a significant woodland, as it contains the presence of a hydrologic feature within or contiguous with the patch, diversity and critical habitat components for amphibians, species at risk habitat, and significant wildlife habitat. A 10 m buffer from any significant woodlands would be recommended prior to any future construction on the Site. A Site staking of the woodlands with the relevant agencies may be required in order to establish the boundaries of these woodland communities to determine development limits and setbacks. If encroachment into the woodland and its buffer is required to accommodate the proposed development, restoration planting of native trees and shrubs would be recommended on the Site.

Recommendations and mitigation measures to protect the woodland on the Site are provided in Section 7.0 below.

## 4.4 Wetland Assessment

The wetland communities on the Site include a Mineral Meadow Marsh (MAM2), Alder Mineral Thicket Swamp (SWT2-1), and Reed-canary Grass Mineral Meadow Marsh (MAM2-2).

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These communities are dominated by over 50% wetland indicator plant species and make up part of the Westminster Wetland Complex. A tributary of the Dingman Creek flows through this Provincially Significant Wetland Complex on the Site.

Furthermore, soil core samples under ELC methodology were taken from each vegetation community following OWES protocol, with the results matching the vegetation survey. Soil sampling was conducted throughout the Site, with sampling locations being chosen at random for representative results, and with at least one soil core sample taken from each vegetated community. These soil samples were used to support our analysis of wetland presence. The soil cores taken within the wetland communities identified mottles and gleiing within 20 cm for all samples.

Recommendations and mitigation measures to protect the wetland on the Site are provided in section 7.0 below.

## 4.5 Watercourse Assessment

Two watercourses flow across the Site. They are an intermittent unnamed tributary aligned east-west flowing through the upper-central portion of the Site, and the Dingman Creek Tributary, a permanent watercourse aligned north-south, as shown on Figure 2 in Appendix B. Portions of both watercourses pass through the Westminster Wetland Complex Provincially Significant Wetland, as discussed in Section 4.4. Both watercourses flow generally southward into Dingman Creek within the Dingman Creek watershed, which is regulated by the Upper Thames River Conservation Authority (UTRCA).

Field surveyors assessed the permanent watercourse to have a wetted width ranging from about 1 m to 2.5 m, a top-of-bank width of about 5 m to 11 m, and a depth of about 0.3 m to 0.5 m. The intermittent tributary had a wetted width ranging from about 0.2 m to 0.5 m, a top-of-bank width of about 1 m to 3 m, and a depth of about 0.3 m to 0.5 m. During the fall field assessment, water was flowing in the Dingman Creek Tributary, while the intermittent tributary was dry. Both watercourses exhibited defined channels with cobble substrates, and supported instream vegetation.

### *4.5.1 Fish Habitat*

No fish were observed within either watercourse during the field investigations. Both tributaries are hydrologically connected to Dingman Creek, however, a stream that provides habitat for at least 46 fish species, including Brown Trout (*Salmo trutta*), Smallmouth Bass (*Micropterus dolomieu*), Black Crappie (*Pomoxis nigromaculatus*), and Northern Pike (*Esox lucius*). No barriers to fish movement were observed within the Site. A review of Fisheries and Oceans Canada mapping identified no aquatic Species at Risk or aquatic Species at Risk habitat within 1 km of the Site. The most recent Upper Thames River Conservation Authority Watershed Report Card assigned a surface water quality grade of “D – Steady” for the Dingman Creek watershed, reflecting elevated phosphorus concentrations, the presence of *Escherichia coli* (*E. coli*) bacteria, and low benthic macroinvertebrate scores.

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#### *4.5.2 Thermal Regime*

Thermal regime is an important characteristic of fish habitat and a factor that Pinchin considered as part of the watercourse assessment. Though continuous water temperature monitoring was not part of this Scoped EIS, the City of London confirmed that thermal regime data collected and reported by Montrose Environmental Solutions Canada Inc. (2025) for the adjacent property at 1710 Wilton Grove Road could be used to characterize the thermal conditions of the Dingman Creek Tributary within the Study Area.

The adjacent Subject Lands Status Report included continuous water temperature monitoring between May 2025 and September 2025. Maximum daily water and air temperatures were evaluated using the thermal classification methodology described by Chu et al. (2009), which determined that the monitored reach functions predominantly as a cool-warmwater system (Montrose Environmental Solutions Canada Inc., 2025). The assessment also noted that, although portions of the tributary exhibit intermittent flow characteristics, localized groundwater inputs contribute to the thermal regime of the watercourse (Montrose Environmental Solutions Canada Inc., 2025).

The monitored reach is located immediately adjacent to the Site and forms part of the same Dingman Creek Tributary. Field investigations conducted by Pinchin identified similar channel morphology, hydrologic characteristics, riparian conditions, and surrounding land uses within the Study Area. No significant changes in watershed characteristics or channel form were identified between the monitored reach and the Site that would reasonably be expected to alter the thermal regime. Accordingly, the adjacent thermal monitoring data are considered representative of the Dingman Creek Tributary within the Study Area.

Based on the adjacent thermal monitoring results (Montrose Environmental Solutions Canada Inc., 2025) and the comparable physical and hydrologic characteristics observed during the Site investigations, Pinchin has characterized the portion of the Dingman Creek Tributary within the Site as a cool-warmwater watercourse.

Recommendations and mitigation measures to protect the watercourses on the Site are provided in section 7.0 below.

## 4.6 Valleyland Assessment

The valleyland assessment criteria below were developed by the MNRF. Valleylands meeting one or more of the criteria should be considered as candidate significant valleylands.

| Criterion | Assessment |
|---|---|
| Surface Water Function | No, there are no areas of water conveyance from catchment areas greater than 50 ha, attenuation, storage, and release or shifting patterns of erosion. |

| | |
|---|---|
| Groundwater Function | No, there are no areas of groundwater infiltration. |
| Landform Prominence | No, there are no well-defined morphology having an average width of 25 m or more. |
| Distinctive Geomorphic Landforms | No, distinctive landforms within the landscape are not present. |
| Degree of Naturalness | Yes, the valleyland contains more than 25% of natural vegetation cover |
| Community and Species Diversity | No diverse community and species are present. |
| Unique Communities and Species | No seasonally important habitats, regionally and locally significant species, and rare communities were observed. |
| Habitat Value | Yes, the valleyland provides habitat for native urban species in the region. |
| Linkage Function | No, the valley land is not continuous with natural vegetation corridors, does not contain ecological connections to other natural areas or is not an important wildlife corridor. |

Based on the significant valleyland assessment criteria, the valleyland within the Site and Study Area would be considered significant as per the MNRF criteria. The CLOP identifies valleylands on the Site, designating the central watercourse as a valleyland and the eastern portion of the Site as a significant valleyland.

The UTRCA has, however, developed criteria to identify well-defined valleys. These criteria include that the valley must be at least 100 metres wide and 2 kilometres long, that the valley banks should be 3 metres or more in height, and that a slope of 3:1 (horizontal to vertical) be used to define the valley limits. The valleys on the site do not exhibit any of these characteristics. Pinchin anticipates that the buffer applied from the watercourse will be sufficient for protecting these features from development.

Recommendations and mitigation measures to protect the valleyland on the Site are provided in section 7.0 below.

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## 4.7 Species at Risk Screening

Upon a comprehensive Species at Risk (SAR) screening, 32 SAR were identified as having potential to inhabit the Site, resulting from the background review of the NHIC records and other available data sources for the Study Area surrounding the Site. The details on these 32 species screened for this Site, including the listing status, last observed date and sources used to identify their presence in the Study Area, and their habitat requirements are provided in the Species at Risk Screening Table in **Appendix F**.

Based on the background review and field assessment, 16 of the 32 SAR were found to have suitable habitat within the Study Area.

Four SAR reptiles have potential suitable habitat within the Study Area. The Blanding's Turtle (*Emydoidea blandingii*) and Common Snapping Turtle have potential suitable habitat in the in shallow water marshes and swamps on the Site. Common Snapping Turtle was observed in the permanent watercourse on the Site during spring surveys, but no Blandings Turtles were observed. Two SAR snakes have potential suitable habits on the Site: the Northern Ribbonsnake (*Thamnophis sauritus*) and Queensnake (*Regina septemvittata*). Queensnake may be found along the margins of the watercourse on the Site and Northern Ribbonsnake may be found in the meadow and marsh communities on the Site. Neither has been seen within the proximity of the Site, however, since 1882 and 1933 respectively, making it unlikely that they are present on the Site. Rockpiles were found along the banks of the watercourses, which could provide suitable habitat for reptile hibernaculum. None of the reptile SAR were observed on the Site during vegetation surveys or snake surveys.

One SAR amphibian, Western Chorus Frog (*Pseudacris triseriata*), has potential suitable habitat within the swamp, marsh, and meadow communities on the Site, but none were observed during vegetation survey on amphibian breeding surveys. Amphibian breeding surveys are discussed in section 4.12.

Seven species of avian SAR were found to have suitable habitat within the Study Area, the forest communities, the meadows, and the agricultural fields, the marshes, and the manmade structures. Species that utilize manmade structures include the Barn Swallow (*Hirundo rustica*) and Chimney Swift (*Chaetura pelagica*). Although the Barn Swallow was seen soaring and foraging through the Site, these birds are known to forage at a distance from their nest. Further, the Barn Swallow was not a possible or probably breeder on the Site. Disturbances of Barn Swallows on the Site can be mitigated through timing restrictions and artificial structures. Birds that utilize canopy layers in forests include the Eastern Wood-pewee (*Contopus virens*) and Red-headed Woodpecker (*Melanerper erythrocephalus*). Birds which utilize agricultural fields include the Common Nighthawk (*Chordeiles minor*) and Eastern Meadowlark (*Sturnella magna).* The King Rail (*Rallus elegans*) could utilise the marsh communities on the Site. Although the Eastern Wood-pewee was heard calling and possibly breeding, this species was likely located along the woodlands which will remain intact, and no negative effects are anticipated.

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Further, it is not confirmed that the Eastern Wood-pewee was breeding at the Site. None of the other species were observed on the Site, and breeding bird surveys are discussed in section 4.11.

Another SAR that was found to have suitable habitat within the forest community was the Woodland Vole (*Microtus pinetorum*). This species utilizes leaf litter in deciduous forests to burrow for habitat. None were observed during the vegetation survey or amphibian breeding surveys.

Three bat species were considered to have suitable habitat on the Site. These species are the Little Brown Bat (*Myotis lucifuga*), Eastern Small-footed Myotis (*Myotis leibii)*, and Northern Myotis (*Myotis septentrionalis*). The classification of three other bats, the Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*), and Silver-haired Bat (*Lasioncyteris noctivagans*) assessed by COSSARO, will be listed as Endangered in January 2025 on the ESA 2007. All species can form summer colonies within attics, abandoned building and barns, as well as within established deciduous forests with loose bark and tree cavities. Based on the results of the completed fieldwork, the woodland area has the potential to provide habitat for these bat species, and it should be noted that the woodland on the Site will be preserved from development. Structures on the Site could provide potential suitable habitat for bats.

Recommendations and mitigation measures to protect the SAR on the Site are provided in section 7.0 below.

## 4.8 Significant Wildlife Habitat Screening

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015) was consulted to screen the wildlife habitat for significance in the Study Area. Field assessments were also undertaken to assess the quality of the habitat in relation to Significant Wildlife Habitat. Based on observations during the vegetation surveys, candidate Significant Wildlife Habitat is present within the Study Area. Details of each Significant Wildlife Habitat that can be found within the Study Area is provided in **Table 2** in **Appendix F**.

According to the Significant Wildlife Habitat Criteria reviewed for this EIS, candidate SWH was identified on the Site for Waterfowl Stopover and Staging Areas (Aquatic and Terrestrial), Marsh Breeding Bird, Bald Eagle and Osprey Nesting, Foraging, and Perching, Special Concern and Rare Wildlife Species, and Waterfowl Nesting Area. Therefore, Pinchin conducted breeding bird surveys of the Site (Section 4.10). None of the species listed for five out of six of these SWH were observed on the Site and therefore SWH is not confirmed as present, with the exception being SWH for Special Concern and Rare Wildlife Species. A Snapping Turtle, Eastern Wood-pewee and Barn Swallow were heard calling and observed on the Site, and therefore confirmed SWH is present for those species. The woodland and the wetlands on the Site will be protected from development. Therefor the habitat will be maintained to support the individuals present on the Site.

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Candidate SWH was also identified on the Site for Bat Maternity Colonies, Reptile Hibernaculum, Turtle Nesting Areas, and Amphibian Breeding Habitat (Wetlands). Therefore, acoustic amphibian surveys, and snake surveys were conducted on the Site to further confirm their potentials for candidate SWHs. The woodland, watercourses, and the wetlands on the Site will be protected from development. The specialized field surveys did not identify any evidence to confirm the presence of significant wildlife habitat.

Mitigation measures are found in section 7.0 below.

## 4.9 Incidental Wildlife Observations

The following wildlife were incidentally observed based on their sound, sight and/or scat during the surveys for vegetation on the Site within the Study Area: Coyote (*Canis latrans*), White-tailed Deer (*Odocoileus virginianus*), American Robin (*Turdus migratorius*), Swamp Sparrow (*Melospiza georgiana*), Yellow Warbler (*Dendroica petechia*), Blue Jay (*Cyanocitta cristata*), House Sparrow (*Passer domesticus*), European Starling (*Sturnus vulgaris*), Downy Woodpecker (*Picoides pubescens*), Turkey Vulture (*Cathartes aura*), Gray Catbird (*Cathartes aura*), Red-eyed Vireo (*Vireo olivaceus*), Common Snapping Turtle (*Chelydra serpentina*), and American Toad (*Anaxyrus americanus*). Most of these wildlife species are common and adapted to the rural area in this region, though the Common Snapping Turtle is listed as a species of *Special Concern* under the Species at Risk in Ontario list. Habitat requirements and mitigation measures for this species are discussed in section 7.0.

## 4.10 Snake Surveys

A total of ten rounds of focussed Visual Encounter Surveys (VES) and Artificial Cover Object (ACO) surveys were conducted at the Site, from October 2022 to September 7, 2023, resulting in four sightings of non-at-risk snakes. Six ACOs were strategically placed in suitable habitats throughout the Site, with their locations shown in Figure 5 in **Appendix A**.

The surveys commenced in Fall 2022 on October 24 and were paused on November 10 due to colder weather conditions. During this period, six rounds of VES and ACO surveys were completed.

- On October 24, 2022, the first survey took place from 10:07 to 10:59 am, under sunny weather conditions ranging from 13°C to 16°C.
- On November 4, 2022, surveys were made from 2:32 to 4:17 pm with sunny weather conditions ranging from 17°C to 20°C.
- On November 7, 2022, surveys were made between 11:54 am and 12:30 pm, with sunny weather conditions of 10°C to 12°C.
- On November 8, 2022, surveys were made from 11:13 am to 12:47 pm, under sunny weather conditions ranging from 12°C to 14°C.

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- On November 9, 2022, surveys took place from 1:24 to 3:42 pm with weather conditions of 10°C to 11°C and partial cloud cover.
- On November 10, 2022, surveys were made from 12:39 to 2:10 pm, with sunny weather conditions of 13°C to 17°C.

No snakes were observed during these six surveys.

In Spring 2023, the remaining four surveys were conducted between April 27 and May 23.

- On April 27, 2023, surveys took place between 12:00 and 12:57 pm, with sunny conditions of 13°C to 13.8°C. A Northern Red-Bellied Snake (*Storeria occipitomaculata occipitomaculata*) was observed under ACO 5.
- On May 5, 2023, surveys were made from 10:23 to 11:15 am, under partly cloudy conditions of 10°C. No snakes were observed.
- On May 12, 2023, surveys were made from 9:03 to 9:45 am, under sunny conditions of 10°C to 11°C. Northern Red-Bellied Snakes were observed slithering under ACO 2 and ACO 5.
- On May 23, 2023, surveys took place between 9:00 and 9:30 am, with partially cloudy conditions of 11°C. No snakes were observed.

It is important to note that during the surveys, ACO 6 was removed from the Site, likely due to agricultural activities. The full results of the snake surveys can be found in **Appendix G**.

### 4.11 Breeding Bird Surveys

A total of 25 avian species were seen or heard within the breeding season within or in the vicinity of the Site as observed during site visits on June 2 and June 25, 2022. The survey route and point count locations are shown on Figure 6 **in Appendix A**. Breeding bird survey results are included in **Appendix G** for reference.

Of the 25 species observed, one species had confirmed breeders, no species were probable breeders, 19 species were possible breeders, and five species were observed but not breeding on the Site, as shown in **Appendix G**. Barn Swallow (*Hirundo rustica)* is listed as a *Special Concern* species in Ontario and was strictly observed flying and foraging above the site. There was no indication that this species was using the site for nesting or roosting. The Eastern Wood-pewee (*Contopus virens)*, listed as *Special Concern* in Ontario, was observed on the Site and recorded as a possible breeder. As a woodland bird species, the Eastern Wood-pewee was heard within the woodland areas on Site and were therefore assumed to be utilizing this habitat on the Site. All the other species observed are ranked as S5 (secure), S4 (apparently secure) or SNA (non-native).

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Measures to mitigate potential effects on breeding birds and SAR within and around the Site are discussed in section 7.0 below.

### 4.12 Amphibian Breeding Surveys

Three amphibian breeding surveys were completed at the Site as per the Marsh Monitoring Protocol. These surveys were made on May 17, 2022, June 1, 2022, and June 14, 2022. The weather at the time of the amphibian breeding surveys was as follows:

- May 17, 2022: 9°C, with a beaufort wind scale of 1, and 0% cloud cover;
- June 1, 2022: 18°C, with a beaufort wind scale of 0, and 0% cloud cover; and
- June 14, 2022: 24°C, with a beaufort wind scale of 1, and 20% cloud cover.

Four survey locations were selected to cover all potential habitats, including the unevaluated wetland areas, as shown in Figure 4 of Appendix A. The results of the breeding amphibian surveys can be found in Appendix H. The survey locations were as follows: Station A in the Mineral Meadow Marsh, Station B in the Mineral Cultural Thicket, Station C in the Reed-canary Grass Mineral Meadow Marsh, and Station D in the Dry – Moist Old Field Meadow.

The first survey took place on May 17, 2022, from 21:32 to 23:46, with a temperature of 9°C, Beaufort wind scale of 1, and clear skies. At Station A, one Grey Treefrog (*Dryophytes chrysoscelis*) and two indistinguishable frogs were heard, all at call level 1. At Station B, two American Toads (*Anaxyrus americanus*) were heard at call levels 2, and one indistinguishable frog was heard at call levels 1 and 2. At Station C, one indistinguishable frog was heard at call level 1. At Station D, two Spring Peepers (*Pseudacris crucifer*) were heard at call level 2. Calls were likely indistinguishable due to high background noise (2–4) from the nearby highway.

The second survey took place on June 1, 2022, from 21:18 to 22:07, with a temperature of 18°C, Beaufort wind scale of 0, and no cloud cover. No frogs were heard at Station A or Station B. At Station C, a Green Frog (*Lithobates clamitans*) was heard at call level 1.

The third survey was made on June 14, 2022, from 21:32 to 22:09, with a temperature of 24°C, Beaufort wind scale of 1, and 20% cloud cover. At Station A, an American Toad was heard at call level 1. No frogs were heard at Station B or Station C. At Station D, one Cope's Grey Treefrog was heard at call level 1.

In conclusion, no SAR amphibians were identified as breeding on the Site or within the Study Area.

### 4.13 Natural Heritage System and Ecological Connectivity

The Site within the Study Area is surrounded by residential area, commercial areas, and agricultural areas. The Site is bounded by Highway 401 to the north and Wilton Grove Road to the South. These major roads create barriers for wildlife movement. The Site consists of Mineral Cultural Meadow

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(Agriculture), Country Paws Boarding, Mineral Meadow Marsh, Alder Mineral Thicket Swamp, Reed-canary Grass Mineral Meadow Marsh, Mineral Cultural Thicket, Dry – Moist Old Field Meadow Type, Dry – Fresh Deciduous Forest, Gray Dogwood Cultural Thicket, and Light Industry (Construction).

The Site contains a PSW from the Westminster Wetland Complex in the northeastern portion of the Site. Additionally, tributaries of Dingman Creek flow throughout the Site. These communities can provide important habitat for wildlife that inhabit the area. The creek acts as a movement corridor for wildlife and an important source of fresh water. Mitigation measures to protect the PSW on the Site are found in section 7.0 below.

## 5.0 PROPOSED DEVELOPMENT

The Site, about 27.30 hectares in area, is currently occupied by a dog park and kennel service with driveways. Natural heritage features on the Site include a woodland, a Provincially Significant Wetland (Westminster Wetland Complex), and two watercourses, both of which are regulated by the Upper Thames River Conservation Authority (UTRCA). The Client proposes to develop the Site into three light industrial buildings with associated access routes and parking lots. The Concept Site Plan showing the proposed industrial development is provided in **Appendix J**.

## 6.0 IMPACT ASSESSEMENT

Based on the Concept Site Plan, Pinchin has identified potential for both potential direct and indirect impacts of the proposed development on natural heritage features within and adjacent to the Site.

### 6.1 Direct Impacts

Direct impacts of the proposed development on natural heritage features on the Site would include those from the following construction aspects:

- Stripping topsoil on the Site;
- Selective removal of trees, shrubs, and other vegetation on the Site; and
- Displacement of wildlife on the Site

To accommodate the proposed development, stripping of vegetation and topsoil will be restricted to the thicket, woodland, and meadow on the Site. The Site may provide seasonal habitat to birds and other wildlife using the natural heritage features for foraging and feeding. Potential effects on wildlife can be avoided by prudent timing of vegetation and topsoil removal. The proposed development will be entirely contained within the development envelope of the Site. Potential direct impacts on the Site from the proposed development are mainly from selective removal of trees and shrubs on the Site. The wildlife utilizing the Site will be displaced permanently post-construction.

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It is anticipated that some trees may be disturbed to accommodate the proposed development. It is suggested that a Tree Inventory and Protection Plan with tree removal or retention recommendations be submitted prior to development in order to determine the species and number of trees that will be removed, as well as the restoration and enhancement measures to mitigate impacts

## 6.2 Indirect Impacts

The potential indirect impacts on the natural heritage features (i.e. woodlands, wetlands, watercourses, valleylands, and thickets) based on the development proposals may include the following:

- Effects on wildlife and habitat adjacent to the Site from construction noise, dust and vibration;
- Sedimentation of the natural heritage features from construction activities; and
- Alteration of water quality and flow regime in the adjacent drainage feature.

Indirect impacts on the wetland and woodland communities will likely be limited to associated plants and wildlife inhabiting areas close to the Site. It is likely that, during the construction periods, birds, mammals, reptiles, and other wildlife that seasonally use these natural heritage features for foraging and breeding may be disturbed temporarily, while over time the wildlife will likely return to the watercourse, meadow, and wooded areas on the Site.

Currently, stormwater from the Site drains into roadside ditches, a tributary of Dingman Creek to the east, the wetland, and surrounding agricultural fields (Greck, 2024). A Stormwater Management Report has been prepared by Greck (2024) and addresses stormwater concerns, including water quality and quantity controls. To prevent negative impacts on the receiving drainage system, stormwater quality control measures will be implemented, lowering concentrations of Total Suspended Solids (TSS) through a combination of debris and sediment traps in catch basins and oil-grit separator units. Additionally, water quantity will be controlled through an orifice and a weir, underground pop storage and ponding storage for the at-grade areas, and roof storage and flow control roof drains (Greck, 2024).

Under existing conditions, a portion of the development area drains toward the adjacent wetland. To mitigate potential impacts on runoff quantity, Greck (2024) proposes directing clean roof runoff to the wetland. Under the proposed Site plan, the wetland is expected to receive an additional 9,375 m² of runoff volume per year, compensating for reductions in infiltration volumes. Given that the water balance volumes pre-development and post-development are expected to differ significantly, it is essential to implement mitigation measures to ensure the continued functionality of the natural heritage feature.

Greck (2024) has developed an Erosion and Sediment Control (ESC) Plan to reduce sedimentation of the natural heritage features on the Site. The ESC Plan will be implemented for all construction activities, including topsoil stripping, material stockpiling, pavement construction, and grading operations. The ESC

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Plan incorporates several sedimentation control measures, including sediment control fence, mud mat, straw bale, and siltsacks (Greck, 2024). Further, all exposed soil after grading will be seeded to promote vegetation growth and act as a erosion and sediment control measure.

### 6.3 Residual and Cumulative Effects Assessment

Residual environmental effects are any permanent, immitigable changes in an identified valued ecosystem component. As residual environmental effects on the natural environment cannot, by definition, be addressed through mitigation, they are likely to persist following project completion.

Residual effects may result in cumulative effects through the interaction among residual effects of the project and those associated with other identified past, present, and reasonably anticipated projects and activities. Due to the short-term, local construction of the proposed development within the Site surrounded by roadways, agricultural and natural heritage land uses, residual effects from the Site development are projected to be low significance in magnitude, geographic extent, duration, and frequency. Residual adverse effects are not expected from the future residential development on the Site, as all of the direct and indirect impacts identified above can be addressed through appropriate mitigation.

With sufficient and effective mitigation measures implemented prior to and during construction activities, no cumulative impacts are anticipated as a result of the proposed development. This conclusion supports the Provincial Planning Statement rule regarding no negative impacts on natural heritage features present on the Site. Recommendations and mitigation measures to address the potential impacts are presented in Section 7.0 below.

## 7.0 RECOMMENDED AVOIDANCE AND MITIGATION MEASURES

Based on the impact assessment presented above, and in consideration of the UTRCA Environmental Impact Study Guidelines and consultation comments provided by the City of London, Pinchin has identified direct and indirect impacts on the natural environment present on the Site and within the Study Area, including the woodlands, wetland, and watercourses. Proposed mitigation measures to address all potential, identified negative impacts, including recommended timing windows and other specifications for implementation, are included in this EIS. Furthermore, mitigation measures relating to protection of setbacks and buffers during onsite works (such as exclusion fencing) must be implemented prior to commencement of construction work to protect sensitive natural features.

To mitigate environmental impacts, the proposed development has been designed to avoid direct effects on the retained natural heritage features on the Site, as avoidance is the preferred mitigation strategy. Based on the findings of this EIS, Pinchin proposes a 30 m buffer from the Provincially Significant Wetland, a 15 m buffer from the Dingman Creek Tributary and associated valleyland, and a 10 m buffer from the woodland, as shown on Figure 4 of Appendix A. The proposed minimum 15 m watercourse buffer is supported by the characterization of the Dingman Creek Tributary as a cool-warmwater system,

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the retention of existing riparian vegetation, avoidance of direct alterations to the channel, and implementation of stormwater quantity and quality controls identified in the Stormwater Management Report (Greck, 2024). Collectively, Pinchin anticipates that those measures will maintain the key ecological functions of the watercourse, including channel shading, thermal conditions, water quality, hydrologic function, and fish habitat, while the proposed wetland and woodland buffers will maintain the ecological integrity, connectivity, and ecological functions of the broader Natural Heritage System. Based on the findings of this EIS, Pinchin considers the proposed buffers sufficient to avoid negative impacts on the retained natural heritage features and their ecological functions, consistent with the City of London Official Plan.

The woodlands, valleylands, wetlands, and watercourses on the Site provide significant ecological value for plant and wildlife and protecting those features during development will help maintain their ecological function and long-term integrity. Protection of those features is also warranted to prevent soil erosion and sediment-laden water from entering these valuable natural heritage features during site construction.

Based on the Servicing Plan prepared by Greck (2025), a sanitary sewer crossing is proposed beneath the unnamed tributary. To minimize potential impacts on the watercourse, including its channel, flow regime, water quality, fish habitat, and thermal conditions, Pinchin recommends trenchless installation by directional drilling as the preferred construction method.

Prior to the commencement of development, a permit from the UTRCA and a Request for Review from Fisheries and Oceans Canada (DFO) may be required. A drilling plan should be prepared and submitted to these agencies to ensure regulatory compliance and prevent potential problems such as frac-out, which could lead to excessive sedimentation of the watercourse. Natural heritage mitigation measures to be included in the plan should consist of:

- Proper ESC measures to minimize sediment release; and
- Continuous monitoring of drilling activities while crossing directly beneath the watercourse to promptly address any problems.

***Removal of Trees and Other Vegetation:***

- Restrict the extent of potential tree and vegetation removal within the Site to the construction footprint as far as practicable.
- To minimize or avoid impacts on breeding birds and roosting bats, remove vegetation within the Site outside of the associated breeding periods for bird and bat species, between April 1 and September 30.
- If trees need to be removed within this timing constraint window, deploy a qualified Biologist to conduct bird nest and bat roost surveys prior to any tree removal and to conduct ongoing monitoring.

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- Develop a Tree Inventory and Preservation Plan for the Site that will need to be approved by the reviewing agencies prior to construction and Site alteration.
- Protective fencing and tree barriers should be established so that no development activities including Site grading and construction will take place within protected areas.

***Erosion and Sediment Control:***

- Implement the Erosion and Sediment Control Plan (Greck, 2024) that includes protection measures applicable to the surrounding natural features.
- Use catch basin sediment control devices, mud mats, and sediment control fencing along the perimeter of the proposed development, to provide erosion control during construction
- Once ESC measures are in place upgradient from the natural heritage features, keep them in place until the disturbed area is restored upon construction completion.
- Conduct repairs and maintenance of the installed ESC measures regularly and as required until construction completion.
- Immediately stabilize disturbed areas post construction to prevent site erosion and sedimentation.

***Wildlife and Species at Risk Encounter Protocol:***

- If wildlife is encountered during construction, cease work immediately and allow the animal to naturally move out of the construction zone. If the animal does not leave the area for a prolonged period, please consult with a qualified Biologist for possible response or mitigation measures.
- If an animal is injured or deceased, or if a Species at Risk is found on the Site, contact the Ministry of Environment, Conservation and Parks for guidance and handling.

***Species at Risk and Significant Wildlife Habitat:***

- If structures on the Site are proposed for demolition, a Qualified Environmental Professional shall conduct a Species at Risk bat exit survey prior to demolition.
- If the exit survey confirms the presence of SAR bats, consult with the MECP.
- Due to the presence of identified Special Concern turtles on the Site, install “Animex” wildlife exclusion fencing around the perimeter of the wetland buffer throughout demolition and construction to ensure that these animals are not able to enter the Site and be harmed, in accordance with the Reptile and Amphibian Exclusion Fencing Best Practices (MECP, 2020).

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Significant wildlife habitat has been confirmed for Species of Special Concern. As noted in the SWH Mitigation Support Tool (2014), if mitigation is effective, the retained habitat should be capable of maintaining a viable population. The agricultural field in the surrounding area provides suitable habitat for Barn Swallows and will not be affected by development.

## 8.0 CONCLUSION

There are environmental opportunities and constraints identified on the Site as described in this EIS report. The assessment concludes that the potential direct and indirect impacts associated with the proposed development can be avoided or otherwise effectively mitigated through implementation of the recommendations outlined in this EIS.

With the implementation of the environmental plans sought out in this EIS and recommended Stormwater Management Plan, and Landscape Plan, the proposed development would preserve the ecological functions of the adjacent natural features and enhance natural landscape on the Site through the potential installation of restoration and enhancement measures on the Site post construction.

With the above recommendations considered and diligently implemented on the Site, no adverse negative impacts on the ecological integrity of the adjacent natural heritage features will result from the proposed development.

## 9.0 CLOSURE

The enclosed Environmental Impact Study report has been prepared to assess the natural heritage features including the terrestrial conditions on the Site within the Study Area. The information contained herein as a result of the EIS regarding the proposed severance is solely provided to the Client and approval agencies as a reference only.

In the event that clarifications or further information is required by the Client and approval agencies, please do not hesitate to contact the primary Pinchin contact indicated in the contact page of this document.

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## 10.0 REFERENCES


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## 11.0 LIMITATIONS

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308646 FINAL Scoped EIS 1766 Wilton Grove Rd, London ON, Dancor, Feb 21 2025 (AODA)

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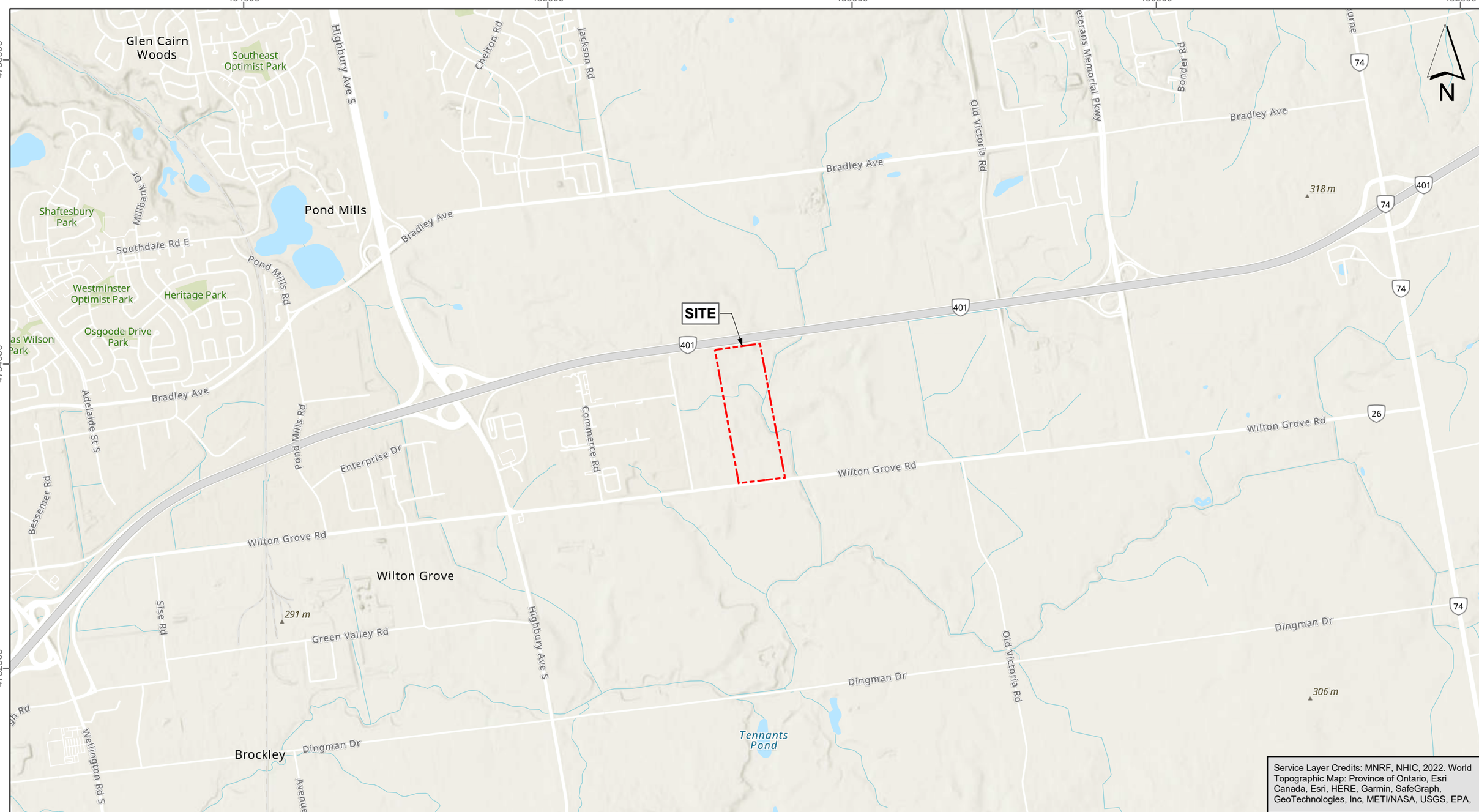
# APPENDIX A
# FIGURES




Service Layer Credits: MNRF, NHIC, 2022. World Topographic Map: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

PINCHIN

| | | | |
|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | May 2022 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:24,000 |
| **FIGURE NAME:** | Site Location | **FIGURE NO.** | 1 |

**LEGEND**

Site Boundary

**NOTES**

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 200 400 800 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: SR REVISION: 0

PINCHIN

| | | | |
|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | May 2022 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:5,500 |
| **FIGURE NAME:** | Study Area | **FIGURE NO.** | 2 |

**LEGEND**

- Site Boundary
- Study Area (120 m)
- Wetland (Evaluated)
- Roadway
- Watercourse
- Topography Contours (5 m)

**NOTES**

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 50 100 200 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: SR REVISION: 0

PINCHIN

| | | | |
|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | January 2023 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:4,500 |
| **FIGURE NAME:** | Ecological Land Classification | **FIGURE NO.** | 3 |

**LEGEND**

- Site Boundary
- Roadway
- Watercourse

**NOTES**

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 40 80 160 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: EO REVISION: 6

PINCHIN

| | |
|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study |
| **CLIENT NAME:** | Dancor Construction Ltd. |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario |
| **FIGURE NAME:** | Snake Coverboard Locations |
| **PROJECT NO.** | 308646.000 |
| **DATE:** | Nov. 2022 |
| **SCALE:** | 1:4,500 |
| **FIGURE NO.** | 5 |

**LEGEND**

- Site Boundary
- Roadway
- Watercourse

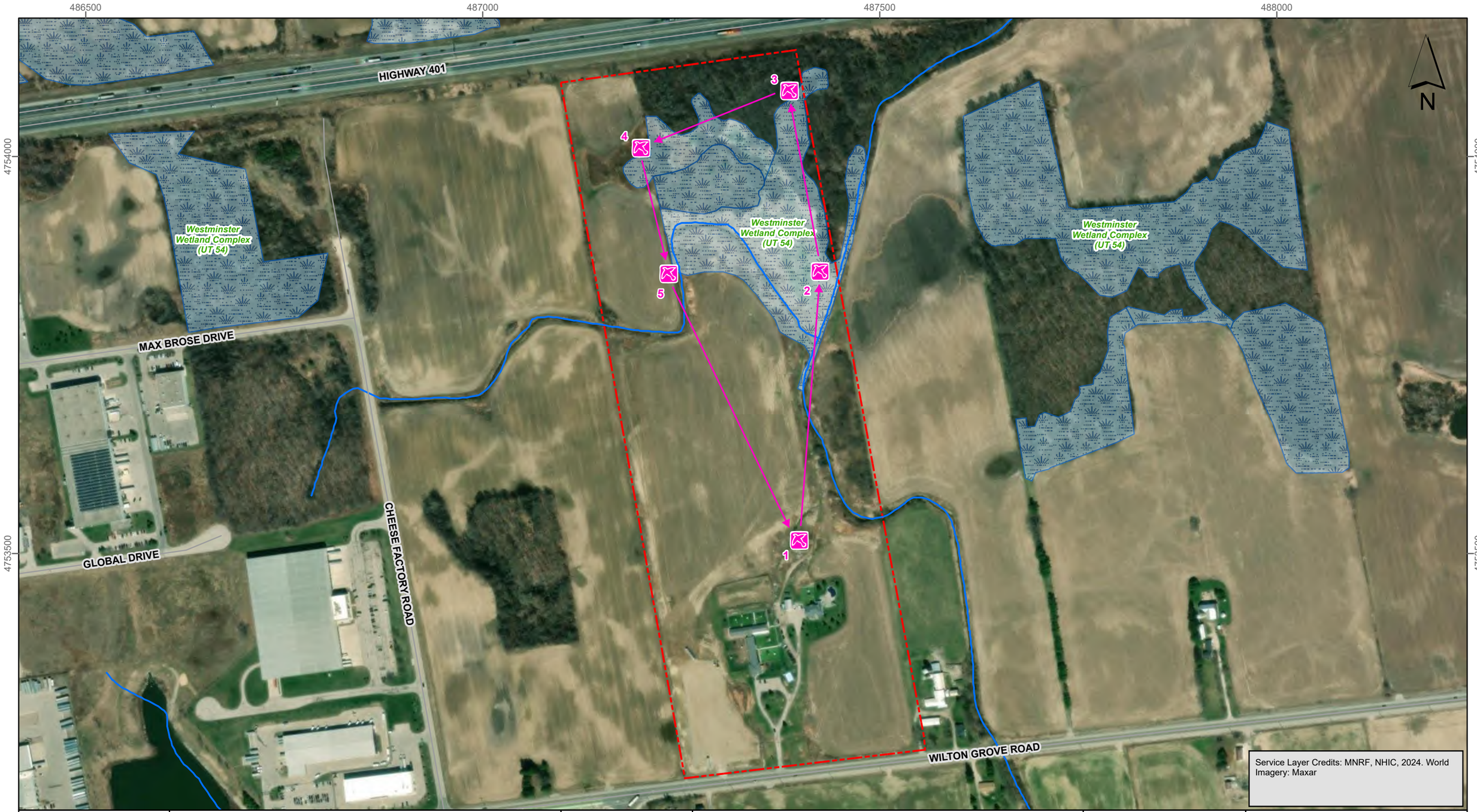
**NOTES**

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 40 80 160 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: EO REVISION: 0




Service Layer Credits: MNRF, NHIC, 2024. World Imagery: Maxar

PINCHIN

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|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | January 2024 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:4,500 |
| **FIGURE NAME:** | Breeding Bird Survey Locations | **FIGURE NO.** | 6 |

**LEGEND**

- Site Boundary
- Wetland (Evaluated)
- Roadway
- Watercourse
- Breeding Bird Survey Locations
- Survey Route

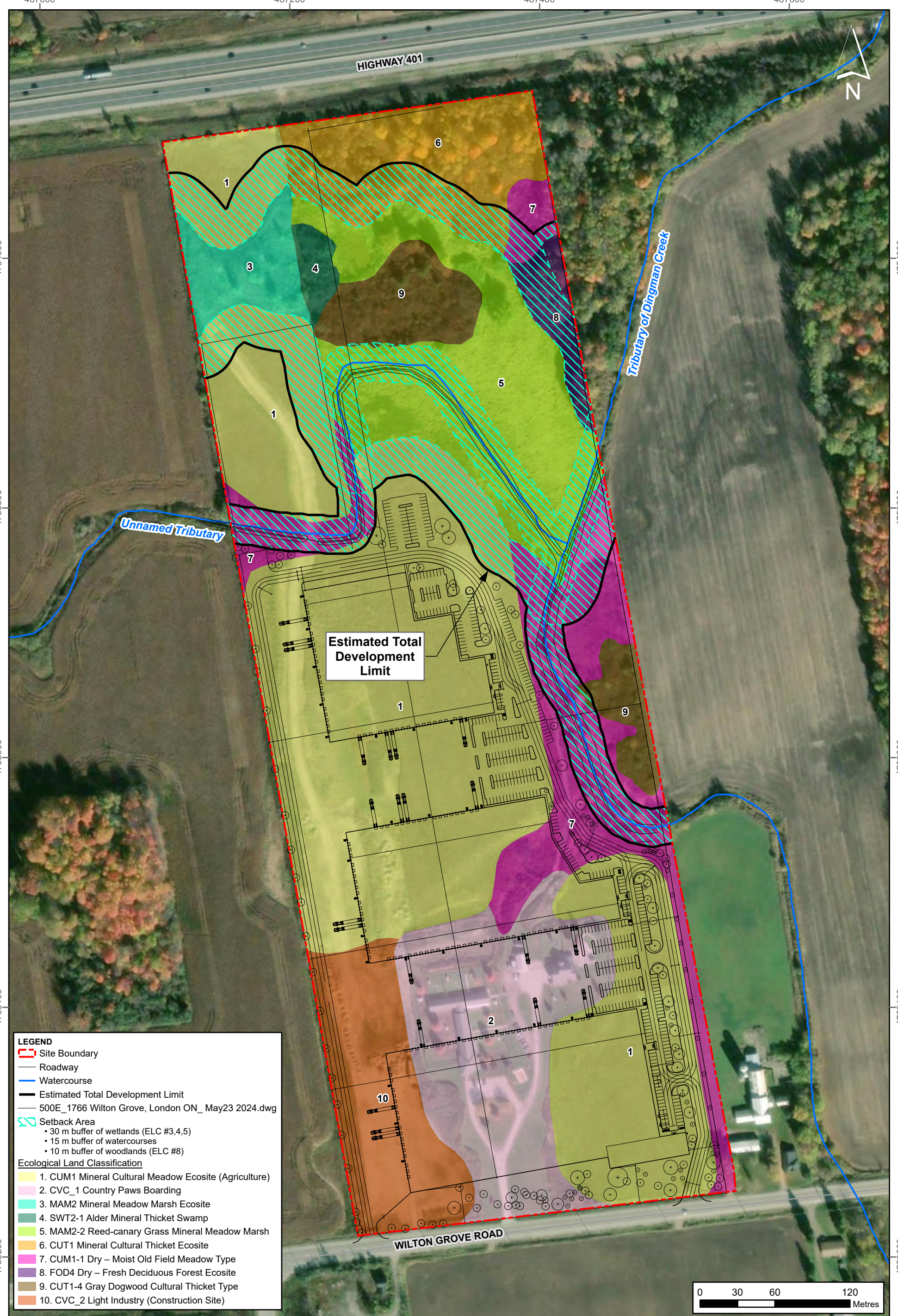
**NOTES**

1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 40 80 160 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: KH REVISION: 0

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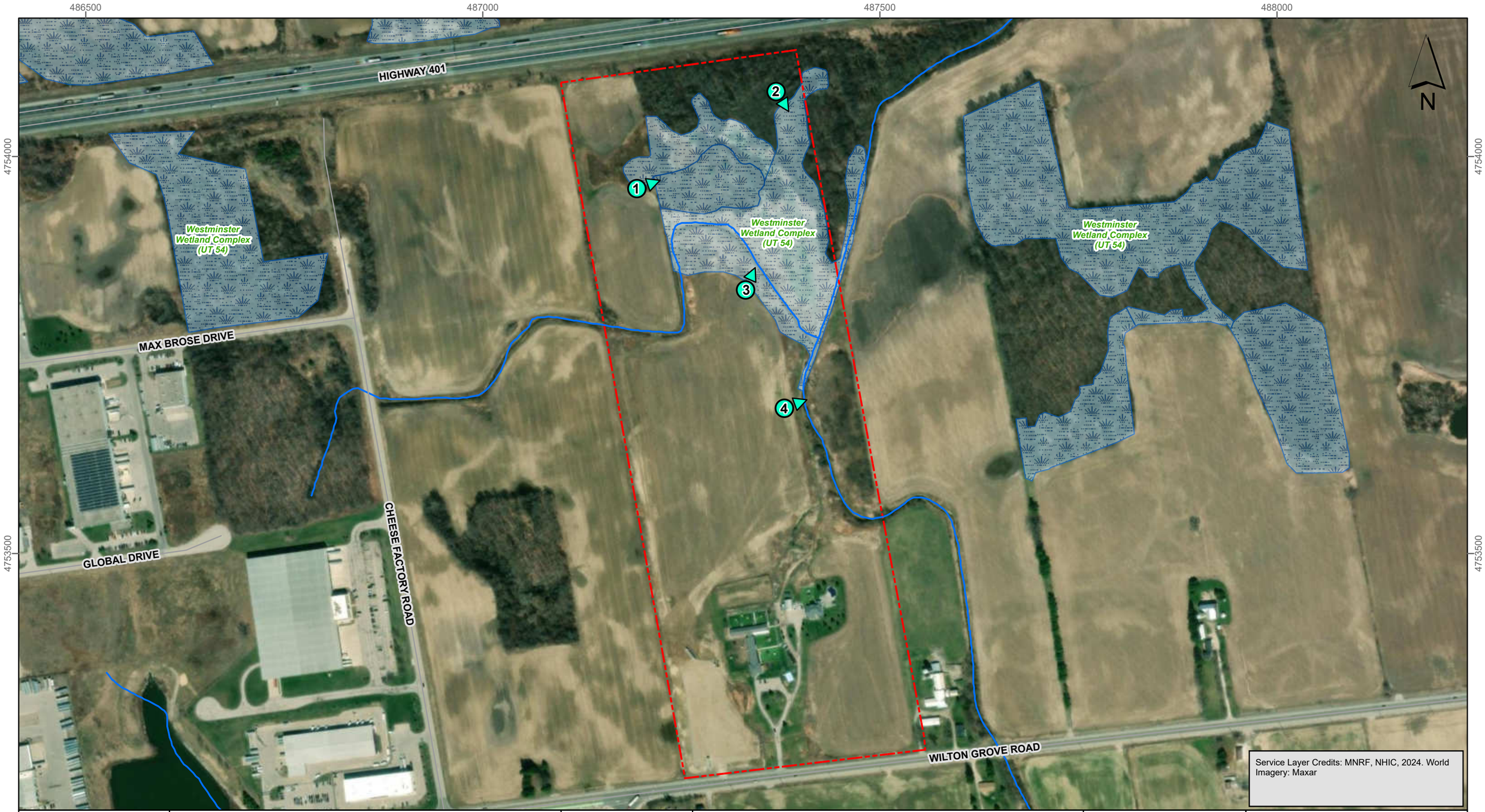
|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | June 2026 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:2,800 |
| **FIGURE NAME:** | Environmental Opportunities and Constraints | **FIGURE NO.** | 4 |

**NOTES**
1. All features and measurements are approximate and subject to field verification.This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: KH REVISION: 10

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|---|---|---|---|
| **PROJECT NAME:** | Scoped Environmental Impact Study | **PROJECT NO.** | 308646.000 |
| **CLIENT NAME:** | Dancor Construction Ltd. | **DATE:** | January 2024 |
| **PROJECT LOCATION:** | 1766 Wilton Grove Road, London, Ontario | **SCALE:** | 1:4,500 |
| **FIGURE NAME:** | Amphibian Breeding Survey Locations | **FIGURE NO.** | 7 |

**LEGEND**

- Site Boundary
- Wetland (Evaluated)
- Roadway
- Watercourse
- # Amphibian Breeding Survey Locations (with direction shown)

**NOTES**

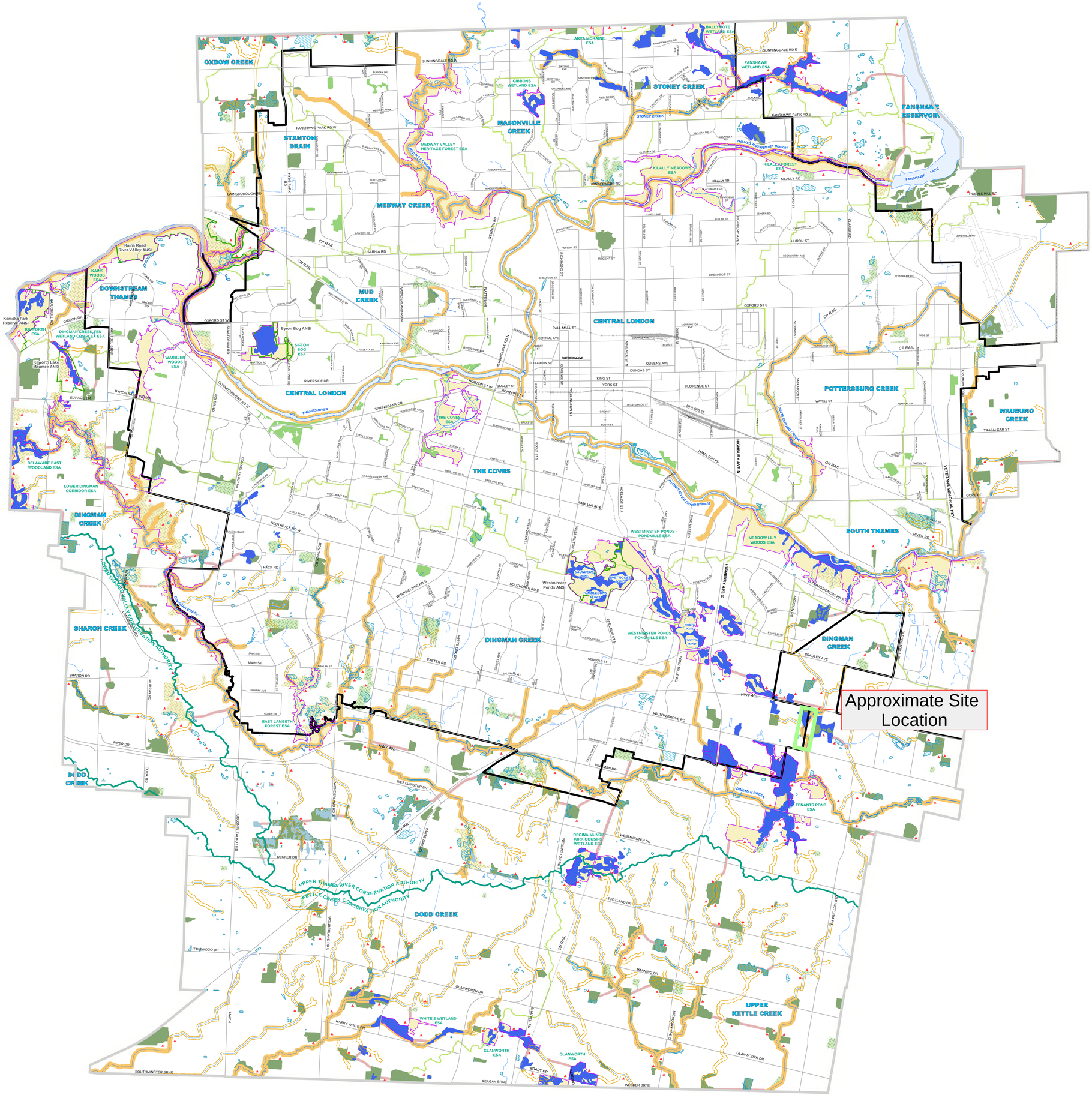
1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 40 80 160 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: KH REVISION: 0

# MAP 5 - NATURAL HERITAGE




## LEGEND

### NATURAL HERITAGE SYSTEM

- Provincially Significant Wetlands
- Wetlands
- Unevaluated Wetlands
- Significant Woodlands
- Woodlands
- Significant Valleylands
- Valleylands
- Areas of Natural and Scientific Interest
- NAME Environmentally Significant Areas (ESA)
- Potential ESAs
- Upland Corridors
- Potential Naturalization Areas
- Unevaluated Vegetation Patches

### BASE MAP FEATURES

- Streets (See Map 3)
- Railways
- Urban Growth Boundary
- Water Courses/Ponds
- Water Bodies
- Conservation Authority Boundary
- Subwatershed Boundary
- STONEY CREEK Subwatershed Name

0 1 2 3 4 Kilometers

1:30,000

***ADOPTED BY COUNCIL ON JUNE 23, 2016***

***APPROVED BY THE MINISTRY OF MUNICIPAL AFFAIRS ON DECEMBER 28, 2016***

***LONDON PLAN CONSOLIDATED MAY 24, 2024***

***THIS MAP MUST BE READ IN CONJUNCTION WITH THE TEXT OF THE LONDON PLAN***

***While every effort has been made to ensure that the mapping is accurate, a reader should verify all information contained in this map before acting upon it by contacting the City Clerk's Office, Suite 308, 300 Dufferin Avenue, London, Ontario, N6B 1Z2 or by calling (519) 661-2500 extension 4939***

Document Path: E:\Planning\Projects\p_officialplan\Office_Consolidation2_Summer2024_London_Plan\E_Size_Maps\Map5_NaturalFeatures_CONSOLIDATED_June2024_esize.mxd

# APPENDIX B
# SUPPLEMENTARY INFORMATION

London
CANADA

RECORD OF PRE-APPLICATION CONSULTATION

The following form is to be completed and signed off at/following the Pre-application Consultation Meeting (PACM).

Date: August 9, 2022

TO: Harry Froussios, Zelinka Priamo

FROM: Nancy Pasato, City of London

RE: 1766 Wilton Grove Road

ATTENDEES: Harry Froussios, Zelinka Priamo
Taylor Brydges, Zelinka Priamo
Sean Ford, Dancor

PLANNING APPLICATION TEAM: Nancy Pasato, Senior Planner (npasato@london.ca), Amanda Lockwood (alockwood@london.ca), Paul DiLosa, Senior Engineering Technologist (pdilosa@london.ca), Meg Sundercock, Site Development Planner (msunderc@london.ca), Laura Dent, Heritage Planner (ldent@london.ca), Craig Smith, Planner, Parks Planning & Design (crsmith@london.ca), Lisa McNiven, Landscape Architect (lmcniven@london.ca), Shane Butnari, Ecologist Planner (sbutnari@london.ca)

City staff reviewed your Proposal Summary dated July 15, 2022 at an Internal Review Meeting on August 4, 2022. The following form summarizes a preliminary list of issues to be considered during the processing of your application. We have also identified the initial material submissions (Studies, Reports, Background or Information) that must be submitted along with the completed application form, required fees and this Record of Pre-Application Consultation Form before your application will be accepted as complete for opening and processing.

Proposed Development:

- London Plan Place Type: Future Industrial Growth, Open Space and Environmental Review
- Current Zone: AG2, OS4, OS5
- Proposed Zone: General Industrial Special Provision (GI1(_)) Zone, which permits warehouse establishments and transport terminals.
- An Official Plan amendment is also required - to the Light Industrial or Heavy Industrial Place Type.
- Proposal: The subject lands are proposed to be redeveloped for industrial purposes, such as a warehouse and/or trucking terminal with a total combined area of approximately 18,580sq.m (200,000sq.ft) of ground floor. While the ultimate use of the subject lands has not been finalized, it is anticipated to be in the range of Light to Heavy Industrial

Major issues identified

- Servicing constraints and Prematurity - As per London Plan Policy 173_ and 460_ *Planning and development approvals that will not have access to the necessary civic infrastructure within a five-year period will be considered premature.;* Site not identified in 2021 GMIS; stormwater solution unknown
- In staff's opinion, development is premature at this time
- Secondary Plan – required for Future Industrial Place Type as per Policy 1154_ and 1156_

    - Future application to address typical considerations of a secondary plan with lands to the west i.e. ultimate range of uses, Place Type, servicing, regional stormwater, environmental, development limits based on features, road pattern
    - Subdivision to also establish streets/blocks is preferred
- Environmental – significant features require setbacks and studies/scoped with appropriate staff and agencies; Dingman Creek Screening Area/Hazards; water balance/hydrogeological studies – all required to determine limit of development
- Transportation – Transportation Impact Study required, to be scoped with City and MTO staff – within the permit area for 401/MTO involvement
- Impact on adjacent land uses - MOE D-Series Guidelines adjacent to agricultural uses/sensitive land uses, separation distances and potential impact

Urban Design

- Locate the building adjacent to Wilton Grove with direct primary entrances on the street. Emphasize the entrances with enhanced architectural details such as windows, glazing, and weather protection (awning or canopies). Provide enhanced windows/glazing for all elevations that are visible from Wilton Grove or the 401.
- Provide direct pedestrian connections from the primary entrances to Wilton Grove.
- Buffer the surface parking from Wilton Grove by locating it behind the building. A maximum one row of parking will be acceptable between the front of the building and Wilton Grove to allow for parking adjacent to the primary entrance.
- Ensure all building facades that are visible from the 401 do not appear as 'back-of-house' by providing enhanced elevations (windows, glazing, and interesting architectural details), and providing enhanced screening for any back of house elements such as wing walls for loading zones. Provide enhanced screening including low landscape walls and vegetation for any surface parking or drive aisles that will be visible from the 401. Screen all mechanical equipment within the overall design of the building.

Site Plan

- Site plan consultation will be required prior to a zoning application and must include a labelled site plan with site data table.
- A response to all SPC comments and how they have been addressed will be required as a complete application requirement.
- There should be a maximum of one double-loaded drive aisle between the front building and the street line.
- Identify loading areas and truck turning movements to ensure the site design is functional.
- Further site design comments will be provided when a more detailed plan is provided at SPC.

Ecology

This e-mail is to confirm that there are currently ecological planning issues related to this property and/or associated study requirements.

Major issues identified

- Natural Heritage Features on, or adjacent to the site have been identified on Map 5 of the London Plan or based on current aerial photo interpretation, including, but not limited to, Provincially Significant Wetlands, Significant Woodlands, Significant Valleylands, Valleylands, Fish Habitat, and Unevaluated Wetlands.
- The site falls within the Upper Thames Conservation Authority Regulation Limit and is subject to the *Conservation Authorities Act.* The proponent is encouraged to reach out to UTRCA to determine if permits are required.

Ecology – complete application requirements

- **Scoped EIS/SLSR – entire property**
    - The proponent shall retain a consultant ecologist to carry out an assessment on the entire property at 1766 Wilton Grove Rd. The proponent shall follow through on recommendations to mitigate adverse

impacts to any significant environmental features and functions that are found.
    - The SLSR/EIS must be completed in accordance with provincial guidelines and standards, including the Provincial Policy Statement, Natural Heritage Reference Manual, the London Plan and the Environmental Management Guidelines (2021).
- Water balance to ensure that proposed works will not impact the adjacent wetland.
- Minimum ecological buffers are expected to be applied to designated Natural Heritage Features and rezoned to OS5 (likely 30m for Provincially Significant Wetlands, Significant Woodlands and Significant Valleylands; 15m for Valleylands)
- Unevaluated Wetland will require assessment as part of EIS. Depending on significance could potentially be relocated to north portion of Subject Lands in larger restoration area closer to the features if desired.

Notes

- A scoping meeting shall be held between the proponent and a City Ecologist to review and confirm the study scope. A site visit may be requested in support of application review.
- The proponent and/or their consultant is required to complete the Environmental Impact Study Issues Scoping Checklist as a draft for submission to the City in advance of the scoping meeting. Once all comments regarding the draft Checklist have been received and finalized the City of London will send written approval (e-mail or letter).
- No disturbance arising from demolition, construction, or any other activity shall take place on the property prior to Development Services receiving and approving the EIS to ensure that all technical requirements have been satisfied.
- It is an offence under Section 10(1) of the *Endangered Species Act* to damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an Endangered or Threatened species.
- An Environmental Management Plan should be developed prior to issuance of contract drawings where the mitigation measures are tailored to site
- The Clean Equipment Protocol for Industry, a Spill Response Plan, an Invasive Species Management Plan and a Species at Risk and Wildlife Handling Protocol should be included as part of the Environmental Management Plan.
- An Erosion and Sediment Control Plan shall be included as part of the complete package.
- The adjacent lands may not be used as construction staging areas throughout the duration of the project.
- Avoid tree removal within the active bat roosting period (April 30 – September 1) to reduce potential interactions with Endangered bat species, to avoid contravention of the *Endangered Species Act.*
- Avoid vegetation removal within the active breeding bird period (April 1 – August 30) to avoid disturbing nesting birds and contravening the *Migratory Bird Convention Act.*

Tree Preservation

- As part of scoped EIS submission, identification of endangered trees on site.

Parkland

- Proposed OPA/ZBA is to permit industrial uses. Parkland dedication is waived for industrial uses as per CP-9 By-law.

Heritage/Archaeology

Major issues identified

1766 Wilton Grove Road is adjacent to a LISTED property on the City's Register of Cultural Heritage Resources at 1741 Wilton Grove Road (1865 – vernacular). 1766 Wilton Grove Road is also identified on the City's Archaeological Mapping. The proposed scope of work will also result in soil disturbance due to construction on the property.

Related policy

Per Policy 565 of The London Plan, a heritage impact assessment is required for new development on, and adjacent to, heritage designated properties and properties listed on the Register to assess potential impacts and explore alternative development approaches and mitigation measures to address any impact to the cultural heritage resource and its heritage attributes. Note that adjacent means sites that are contiguous; sites that are directly opposite a cultural heritage resource separated by a street (Glossary, The London Plan).

Further, per Policy 616 of The London Plan, "[a]n archaeological assessment is required where a proposal involves development or site alteration, and if it is determined through the application of the Archaeological Management Plan model that any part of a subject area possesses archaeological resource potential or known archaeological resources."

Complete application requirements – heritage planning

- A Heritage Impact Assessment (HIA); scoped memo format [see attached example]
- Archaeological Assessment Stage 1-2 – entire property
    - The following should be submitted for review by City heritage planning staff:
    - both a hard copy and digital format of archaeological reports
    - Ministry of Heritage, Sport, Tourism, and Culture Industries compliance letter

If an archaeological assessment has already been completed and received a compliance letter from the Ministry, the compliance letter along with the assessment report may be submitted for review to ensure they meet municipal requirements

Notes:
Heritage Impact Assessment

- This assessment should respond to information requirements in the Ministry's InfoSheet #5.
- The Heritage Impact Assessment should be prepared by heritage planner, heritage consultant and or a member of the Canadian Association of Heritage Professionals (CAHP).

Archaeological Assessment

- The proponent shall retain a consultant archaeologist, licensed by the Ministry of Heritage, Sport, Tourism, and Culture Industries under the provisions of the Ontario Heritage Act (R.S.O. 1990 as amended) to carry out a minimum of a Stage 1-2 archaeological assessment and follow through on recommendations to mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found (Stages 3-4).
- The archaeological assessment must be completed in accordance with the most current Standards and Guidelines for Consulting Archaeologists, Ministry of Tourism, Culture and Sport.
- All archaeological assessment reports will to be submitted to the City of London once the Ministry of Heritage, Sport, Tourism and Culture Industries has accepted them into the Public Registry.
- No soil disturbance arising from demolition, construction, or any other activity shall take place on the properties prior to Current Development receiving the Ministry of Heritage, Sport, Tourism, and Culture Industries compliance letter indicating that all archaeological licensing and technical review requirements have been satisfied.
- It is an offence under Section 48 and 69 of the Ontario Heritage Act for any party other than a consultant archaeologist to make alterations to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from an archaeological site.
- Should previously undocumented (i.e. unknown or deeply buried) archaeological resources be discovered, they may be a new archaeological site and therefore be subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site

immediately and engage a consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the Ontario Heritage Act. Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.
- If human remains/or a grave site is discovered, the proponent or person discovering the human remains and/or grave site must cease alteration of the site immediately. The Funerals, Burials and Cremation Services Act requires that any person discovering human remains must immediately notify the police or coroner and the Registrar of Burial Sites, War Graves, Abandoned Cemeteries and Cemetery Closures, Ontario Ministry of Government and Consumer Services.

<u>Engineering</u>

The following are required as part of a complete application:

*Transportation:*
- A Transportation Impact Assessment (TIA) will be required, the TIA will evaluate the impact the development will have on the transportation infrastructure in the area and provide recommendations for any mitigation measures.
- The TIA will need to be scoped with City staff prior to undertaking and be undertaken in general conformance with the City's TIA guidelines. The applicant should contact MTO with respect to the TOR prior to the TIS for the future development at 1766 Wilton Grove Rd.

*Wastewater:*
- There is no sanitary outlet fronting Wilton Grove Rd. As per City Plan No. 18033 & 30559, the subject lands could be tributary to the 375mm on Max Brose Dr.
- As part of a complete application, the applicant will be required to have their consulting engineer submit a sanitary servicing report, which will include how servicing would be provided, intended population build out and peak flow.
- The subject lands are currently zoned AG2, OS4 and OS5 and the applicant is requesting GI1-() zoning. A holding provision is recommended to ensure adequate servicing for this site.

*Stormwater:*
- This site falls within the Dingman Subwatershed. As per section 6.3.2 of the Design Specifications & Requirements manual, a water balance assessment is required to examine the site's water balance conditions and propose opportunities to mitigate water balance deficits. As an objective of the Dingman EA, this new development is to achieve the water balance conditions identified from the predevelopment study. The approach for stormwater control hierarchy, and LID design, is included in the Section 6 Stormwater Management of the Design Specifications & Requirements manual. The water balance analysis may be completed as part of a Hydrogeological Assessment, a stormwater management report, or as a standalone document
- The consultant is expected to reserve space within the site plan for an LID strategy(ies) in efforts to achieve this requirement.

The following items are to be considered during a future development application stage:

*Transportation:*
- Currently, the road widening at the above address is 13.106m from centreline as per CM285.Therefore, an additional widening of 4.894m is required to attain a widening of 18m from centreline.
- Detailed comments regarding access design and location will be made through the site plan process

*Water:*

- Currently, there is no municipal watermain fronting the subject site. The closest municipal watermain would be the 900 mm diameter CONC watermain on Wilton Grove Road at Cheese Factory Road.
- Water servicing shall be configured in a way to avoid the creation of a regulated drinking water system.

*Wastewater:*

- There is no sanitary outlet fronting Wilton Grove Rd. As per City Plan No. 18033 & 30559, the subject lands could be tributary to the 375mm on Max Brose Dr.
- As part of a complete application, the applicant will be required to have their consulting engineer submit a sanitary servicing report, which will include how servicing would be provided, intended population build out and peak flow.
- The subject lands are currently zoned AG2, OS4 and OS5 and the applicant is requesting GI1-() zoning. A holding provision is recommended to ensure adequate servicing for this site.

*Stormwater:*

Specific comments for this site:

- The site is within the Dingman Creek Screening Area of UTRCA and therefore the applicant is to engage as early as possible with UTRCA to confirm any requirements/approvals for this site.
- There are no storm sewers currently established for the proposed site on Wilton Grove Rd . As per the Drainage By-Law, section 5.2, where no storm sewer is accessible the applicant shall provide a dry well or storm water retention system which is certified by a Professional Engineer to the satisfaction of the City Engineer.
- The proposed land use of an Industrial land will trigger(s) the application of design requirements of Permanent Private Storm System (PPS) as approved by Council resolution on January 18, 2010. A standalone Operation and Maintenance manual document for the proposed SWM system is to be included as part of the system design and submitted to the City for review
- This site falls within the Dingman Subwatershed. As per section 6.3.2 of the Design Specifications & Requirements manual, a water balance assessment is required to examine the site's water balance conditions and propose opportunities to mitigate water balance deficits. As an objective of the Dingman EA, this new development is to achieve the water balance conditions identified from the predevelopment study. The approach for stormwater control hierarchy, and LID design, is included in the Section 6 Stormwater Management of the Design Specifications & Requirements manual. The water balance analysis may be completed as part of a Hydrogeological Assessment, a stormwater management report, or as a standalone document
- The consultant is expected to reserve space within the site plan for an LID strategy(ies) in efforts to achieve this requirement.
- The Consultant may note that implementation of infiltration or filtration measures for a volume that meets or exceeds the 25mm event as part of the water balance target would be accepted to meet Total Suspended Solids (TSS) reduction target.
- Any proposed LID solutions should be supported by a Geotechnical Report and/or hydrogeological investigations prepared with focus on the type of soil, it's infiltration rate, hydraulic conductivity (under field saturated conditions), and seasonal high ground water elevation. The report(s) should include geotechnical and hydrogeological recommendations of any preferred/suitable LID solution. All LID proposals are to be in accordance with Section 6 Stormwater Management of the Design Specifications & Requirements manual.
- Applicant /Consulting engineer is to contact the City for scoped Hydrogeological Study, water balance and Geotechnical.
- As per 9.4.1 of The Design Specifications & Requirements Manual (DSRM), all multi-family, commercial and institutional block drainage is to be self-contained. The owner is required to provide a lot grading plan for stormwater flows and major overland flows on site and ensure that stormwater flows are self-contained on site, up to the 100 year event and safely convey the 250 year storm event.

- The Owner shall allow for conveyance of overland flows from external drainage areas that naturally drain by topography through the subject lands
- Stormwater run-off from the subject lands shall not cause any adverse effects to adjacent or downstream lands.

General comments for sites within Dingman Creek Subwatershed:

- The subject lands are located in the Dingman Subwatershed. The Owner shall provide a Storm/Drainage Servicing Report demonstrating compliance with the SWM criteria and environmental targets identified in the Dingman Subwatershed Study that may include but not be limited to, runoff volume control, quantity/quality control (80% TSS), erosion, stream morphology, etc.
- The Owner agrees to promote the implementation of SWM Best Management Practices (BMP's) within the plan, including Low Impact Development (LID) where possible, to the satisfaction of the City Engineer.
- The owner is required to provide a lot grading plan for stormwater flows and major overland flows on site and ensure that stormwater flows are self-contained on site, up to the 100 year event and safely conveys up to the 250 year storm event, all to be designed by a Professional Engineer for review.
- The Owner shall allow for conveyance of overland flows from external drainage areas that naturally drain by topography through the subject lands.
- Stormwater run-off from the subject lands shall not cause any adverse effects to adjacent or downstream lands.
- An erosion/sediment control plan that will identify all erosion and sediment control measures for the subject site shall be prepared to the specification and satisfaction of the City Engineer and shall be in accordance with City of London and MECP (formerly MOECC) standards and requirements. This plan is to include measures to be used during all phases of construction. These measures shall be identified in the Storm/Drainage Servicing Report.

<u>Upper Thames River Conservation Authority (UTRCA)</u>

- *Geotechnical Study
- *Hydrogeological Assessment, scoped with UTRCA and City staff
- *Water Balance Assessment – scoped with UTRCA and City staff
- Process to challenge wetland boundary rests with MNRF
- Process for current drains – contact UTRCA for additional discussion

*Verbal requirement - to be confirmed by UTRCA staff

<u>Studies, Reports, Background or Information to be completed and submitted with the application form</u>

- The London Plan/ZBA application and fees
- Planning and Design Report – with scoped Secondary Plan considerations, to be scoped with appropriate staff; consideration of MOE D-Series Guidelines/sensitive lands uses/mitigation etc.
- Site Plan pre-consultation, with response to all SPC comments and how they have been addressed (can form part of P&D report)
- Transportation Impact Assessment, scoped with MTO and City
- Sanitary Servicing Report
- Stormwater Management Assessment
- Scoped EIS/SLSR, and identification of endangered trees, scoped with appropriate City and UTRCA staff
- Geotechnical Report
- Water Balance Assessment, scoped with UTRCA, SWM and Ecology staff
- Hydrogeological Report, scoped with UTRCA and SWM staff
- Heritage Impact Assessment (HIA); scoped memo format
- Archaeological Assessment Stage 1-2 – entire property
- Images for on-site signs (see Schedule APP-3 of the application form for image requirements)
- Zoning Review Data Sheet (attached for completion by applicant)

- All background reports and drawings are required to meet the Accessibility for Ontarians with Disabilities Web Content Accessibility Guidelines (AODA WCAG 2.0 AA) regulations. See application form for more detail.
- Electronic copies of all supporting background information

PRE-APPLICATION CONSULTATION HAS OCCURRED

☑ YES ☐ NO

PLANNER: Nancy Pasato

PROPONENT: Harry Froussios

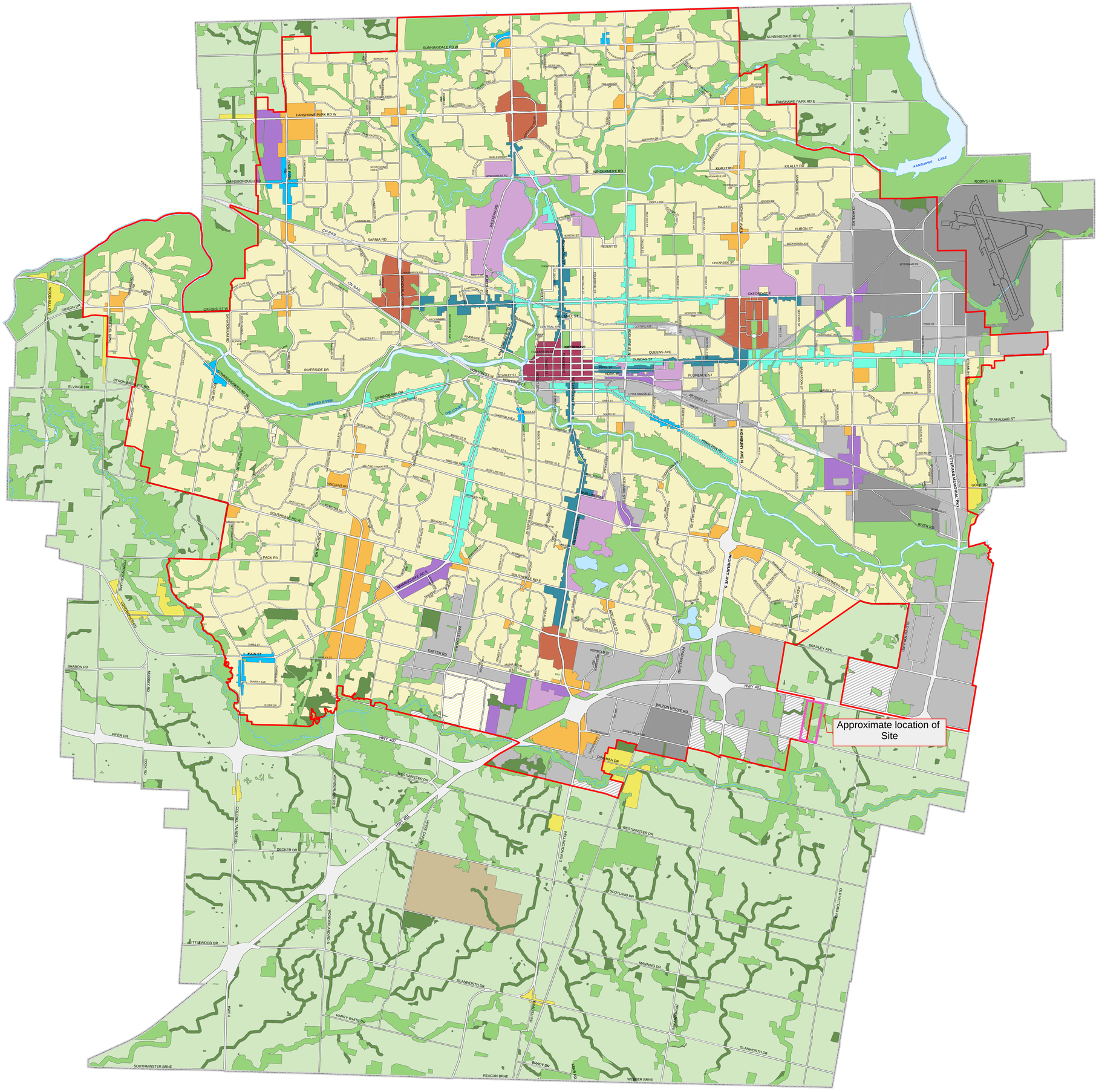
DATE: August 9, 2022

**Disclaimer**

The pre-application consultation process is intended to identify issues early in the process and to identify the reports, studies and information required to be submitted as part of a complete application. A complete application enables Council to make informed decisions within a reasonable period of time and ensures that the public and other stakeholders have access to the relevant information early in the process. While every effort has been made to identify information needs at this stage, additional issues and/or information needs may be identified through the application review process and may be requested at that time. Should a formal submission of an application not materialize within 12 months, a subsequent Pre-Application Consultation Meeting (PACM) may be required.

Please be advised the City is currently not meeting the statutory processing times set out in the Planning Act. You can expect Official Plan and/or Zoning By-law amendments to be heard at a Public Participation Meeting of the Planning & Environment Committee approximately 6 – 8 months after your submission of a complete application. Complex files with unresolved issues may require increased processing times.

# MAP 1 - PLACE TYPES




London
CANADA

## LEGEND

### PLACE TYPES

- Green Space
- Environmental Review
- Downtown
- Transit Village
- Rapid Transit Corridors
- Urban Corridors
- Shopping Area
- Main Street
- Neighbourhoods
- Institutional
- Heavy Industrial
- Light Industrial
- Commercial Industrial
- Future Community Growth
- Future Industrial Growth
- Farmland
- Rural Neighbourhoods
- Waste Management Resource Recovery Area
- Urban Growth Boundary

### BASE MAP FEATURES

- Streets (See Map 3)
- Railways
- Water Courses/Ponds

0 1 2 3 4 Kilometers

1:30,000

***ADOPTED BY COUNCIL ON JUNE 23, 2016***

***APPROVED BY THE MINISTRY OF MUNICIPAL AFFAIRS ON DECEMBER 28, 2016***

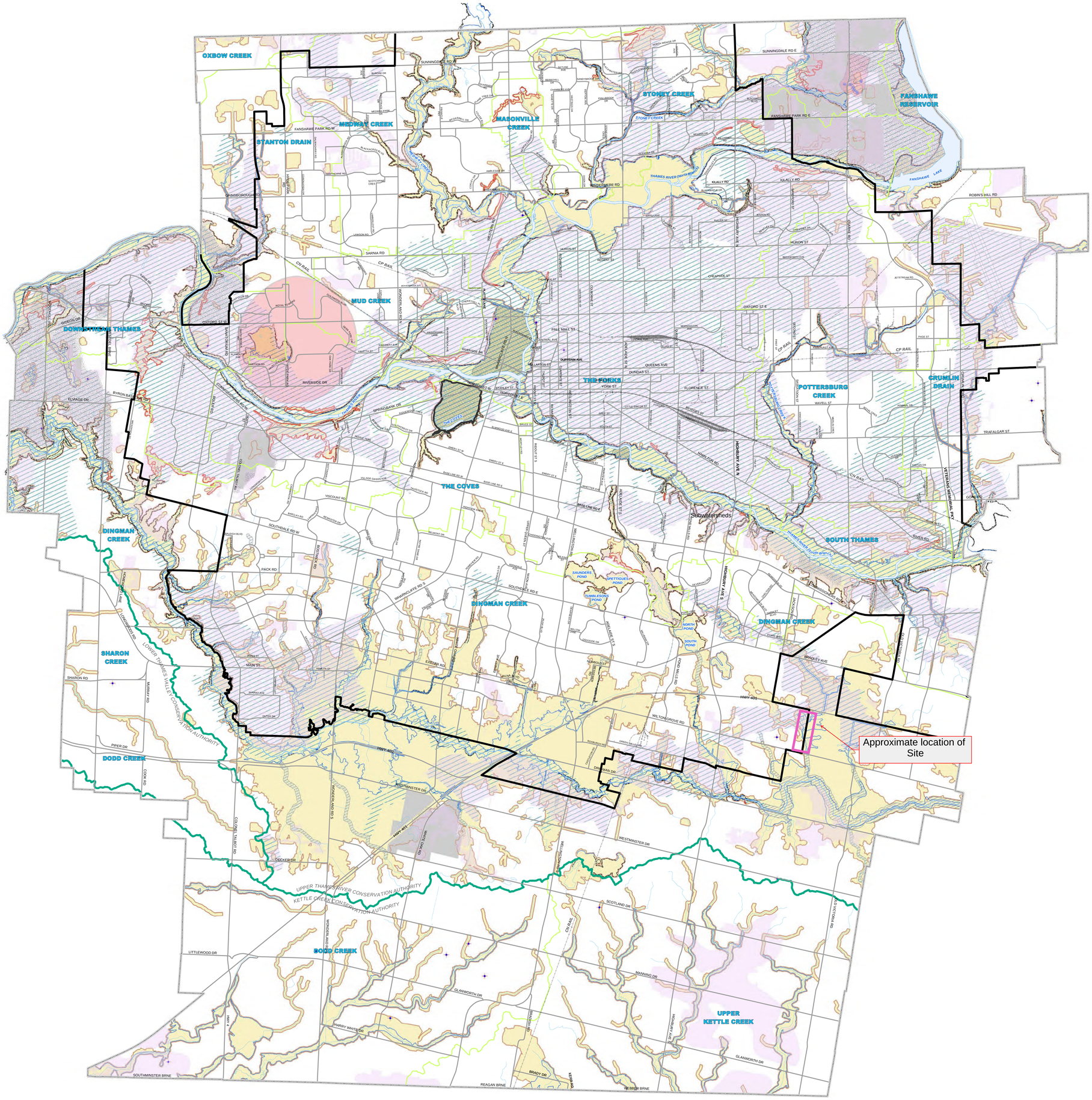
***LONDON PLAN CONSOLIDATED MAY 24, 2024***

***THIS MAP MUST BE READ IN CONJUNCTION WITH THE TEXT OF THE LONDON PLAN***

***While every effort has been made to ensure that the mapping is accurate, a reader should verify all information contained in this map before acting upon it by contacting the City Clerk's Office, Suite 308, 300 Dufferin Avenue, London, Ontario, N6B 1Z2 or by calling (519) 661-2500 extension 4939***

Document Path: E:\Planning\Projects\p_officialplan\Office_Consolidation2_Summer2024_London_Plan\E_Size_Maps\Map1_PlaceTypes_CONSOLIDATED_June2024_esize.mxd

# MAP 6 - HAZARDS AND NATURAL RESOURCES




London CANADA

## LEGEND

### HAZARDS

- Regulatory Flood Line
  *NOTE 1: Flood Lines shown on this map are approximate.The precise delineation of flood plain mapping is available from the Conservation Authority having jurisdiction.*
  *NOTE 2: Flood Fringe mapping for certain areas of the City is available from the Upper Thames Conservation Authority.*
- Special Policy Areas
- Potential Special Policy Areas
- Riverine Erosion Hazard Limit for Confined Systems
  *NOTE: Steep Slopes Outside the Riverine Erosion Hazard Limit on the map are approximate. Precise delineation is available from the Conservation Authority having jurisdiction.*
- Riverine Erosion Hazard Limit for Unconfined Systems
- Maximum Hazard Line
- Conservation Authority Regulation Limit
- Abandoned Oil/Gas Wells

### NATURAL RESOURCES

- Aggregate Resource Areas
- Extractive Industrial Areas
- Wellhead Protection Areas
- Emergency Municipal Water Wells
- Significant Groundwater Recharge Areas
- Highly Vulnerable Aquifers

### BASE MAP FEATURES

- Streets (See Map 3)
- Railways
- Urban Growth Boundary
- Water Courses/Ponds
- Water Bodies
- Conservation Authority Boundary
- Subwatershed Boundary
- STONEY CREEK Subwatershed Name

0 1 2 3 4 Kilometers

1:30,000

***ADOPTED BY COUNCIL ON JUNE 23, 2016***

***APPROVED BY THE MINISTRY OF MUNICIPAL AFFAIRS ON DECEMBER 28, 2016***

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# APPENDIX C
# VEGETATION INVENTORY

**Table 1: Vegetation Inventory for Study Area**

| Scientific Name | Common Name | Srank | CC | CW |
|---|---|---|---|---|
| *Endotropis alnifolia* | Alder-leaved Buckthorn | S5 | 7 | -5 |
| *Tilia americana* | American Basswood | S5 | 4 | 3 |
| *Populus balsamifera* | Balsam Poplar | S5 | 4 | -3 |
| *Prunus serotina* | Black Cherry | S5 | 3 | 3 |
| *Solidago canadensis* | Canada Goldenrod | S5 | 1 | 3 |
| *Rhamnus cathartica* | Common Buckthorn | SNA | | 0 |
| *Asclepias syriaca* | Common Milkweed | S5 | 0 | 5 |
| *Verbascum thapsus* | Common Mullein | SNA | | 5 |
| *Zanthoxylum americanum* | Common Prickly-ash | S5 | 3 | 3 |
| *Phragmites australis* | Common Reed | S4 | 0 | -3 |
| *Pinus strobus* | Eastern White Pine | S5 | 4 | 3 |
| *Cornus racemosa* | Gray Dogwood | S5 | 2 | 0 |
| *Poa pratensis* | Kentucky Bluegrass | S5 | 0 | 3 |
| *Populus grandidentata* | Large-toothed Aspen | S5 | 5 | 5 |
| *Tilia cordata* | Little-leaf Linden | SNA | | 5 |
| *Acer negundo* | Manitoba Maple | S5 | 0 | 0 |
| *Crataegus nitidula* | Ontario Hawthorn | SH | 4 | 5 |
| *Leucanthemum vulgare* | Oxeye Daisy | SNA | | 5 |
| *Salix discolor* | Pussy Willow | S5 | 3 | -3 |
| *Acer rubrum* | Red Maple | S5 | 4 | 0 |
| *Cornus sericea* | Red-osier Dogwood | S5 | 2 | -3 |
| *Phalaris arundinacea* | Reed Canary Grass | S5 | 0 | -3 |
| *Vitis riparia* | Riverbank Grape | S5 | 0 | 0 |
| *Salix interior* | Sandbar Willow | S5 | 1 | -3 |
| *Acer saccharinum* | Silver Maple | S5 | 5 | -3 |
| *Bromus inermis* | Smooth Brome | SNA | | 5 |
| *Acer saccharum* | Sugar Maple | S5 | 4 | 3 |
| *Populus tremuloides* | Trembling Aspen | S5 | 2 | 0 |
| *Rubus idaeus ssp. strigosus* | Wild Red Raspberry | S5 | 2 | 3 |
| *Symphyotrichum ericoides* | White Heath Aster | S5 | 4 | 3 |
| *Anemone virginiana* | Tall Anemone | S5 | 4 | 3 |
| *Daucus carota* | Wild Carrot | SNA | | 5 |
| *Taraxacum officinale* | Common Dandelion | SNA | | 3 |
| *Populus deltoides* | Eastern Cottonwood | S5 | 4 | 0 |
| *Toxicodendron radicans* | Poison Ivy | S5 | 2 | 0 |
| *Cirsium arvense* | Canada Thistle | SNA | | 3 |
| *Typha angustifolia* | Narrow-leaved Cattail | SNA | | -5 |
| *Cichorium intybus* | Chicory | SNA | | 5 |
| *Ulmus americana* | American Elm | S5 | 3 | -3 |
| *Phleum pratense* | Common Timothy | SNA | | 3 |
| *Trifolium pratense* | Red Clover | SNA | | 3 |
| *Malus pumila* | Common Apple | SNA | | 5 |
| *Bidens cernua* | Nodding Beggarticks | S5 | 2 | -5 |
| *Persicaria maculosa* | Spotted Lady's-thumb | SNA | | -3 |

**Table 1: Vegetation Inventory for Study Area**

| Scientific Name | Common Name | Srank | CC | CW |
|---|---|---|---|---|
| *Pilosella caespitosa* | Meadow Hawkweed | SNA | | 5 |
| *Solanum dulcamara* | Bittersweet Nightshade | SNA | | 0 |
| *Apocynum cannabinum* | Hemp Dogbane | S5 | 3 | 0 |
| *Urtica dioica* | Stinging Nettle | S5 | 2 | 0 |
| *Arctium minus* | Common Burdock | SNA | | 3 |
| *Parthenocissus quinquefolia* | Virginia Creeper | S4 | 6 | 3 |
| *Fraxinus pennsylvanica* | Green Ash | S4 | 3 | -3 |
| *Viburnum lentago* | Nannyberry | S5 | 4 | 0 |

**NHIC Srank (Subnational) Legend**

| | |
|---|---|
| S1 | Critically imperiled, at very high risk of extirpation. |
| S2 | Imperiled, at high risk of extirpation. |
| S3 | Vulnerable, at moderate risk of extirpation. |
| S4 | Apparently secure, at fairly low risk of extirpation. |
| S5 | Secure, at low or no risk of extirpation. |
| B | Conservation status refers to breeding population. |
| N | Conservation status refers to non-breeding population. |

CC: Coefficient of Conservatism

CW: Coefficient of Wetness

# APPENDIX D
# SELECTED SITE PHOTOGRAPHS

**SELECTED SITE PHOTOGRAPHS**

**(All photos were taken on April 27 and June 9, 2023)**

Photo 1 – View of the Dry – Moist Old Field Meadow Type with the permanent creek flowing between the banks.

Photo 2 – View of the rock piles located along the banks of the permanent watercourse.

Photo 3 – View of the Dry – Fresh Deciduous Forest on the Site.

Photo 4 – View of the Alder Mineral Thicket Swamp on the Site.

Photo 5 – View of the Snapping Turtle observed within the permanent watercourse on the Site.

Photo 6 – View of the Mineral Cultural Meadow on the Site.

# APPENDIX E
# WOODLAND ASSESSMENT TABLES

# Appendix D: Woodland Evaluation Criteria

***The London Plan*** – **Criterion 1341_1.**

*The woodland contains natural features and ecological functions that are important to the environmental quality and integrity of the NHS. These include site protection (hydrology and erosion/ slope) and landscape integrity (richness, connectivity and distribution).*

***The London Plan – Criterion 1341_2.***

*The woodland provides important ecological functions and has an age, size, site quality, and diversity of biological communities and associated species that is uncommon for the planning area.*

***The London Plan – Criterion 1341_4.***

*The Woodland provides significant habitat for endangered or threatened species.*

***The London Plan – Criterion 1341_5.***

*The Woodland contains distinctive, unusual or high-quality natural communities or landforms.*

Consistent with ***The London Plan*** a woodland will be considered significant if it meets either of the following evaluation scores:

- If one or more criteria meet the standard for High; or
- If five or more criteria meet the standard for Medium.

Reset

| **London Plan Criterion** | | | | | **SCORE** |
|---|---|---|---|---|---|
| Criterion 1.1. – Site Protection | **A) Presence of hydrological features within or contiguous with the patch.** | **HIGH –** one (1) or more hydrological features (as described above) located within or contiguous with the patch. | **MEDIUM –** within 50 m of a hydrological feature. | **LOW –** no hydrological features present within 50 m of the patch. | HIGH |
| | **B) Erosion and Slope Protection** | **HIGH –** patch present on steep slopes >25% of any soil type, OR on a remnant slope associated with other features such as moraines or remnant valley slopes no longer continuous with the river system OR | **MEDIUM –** patch present on moderate to steep slopes > 10% - 25% with less erodible soils (heavy clay and clay, silty clay) | **LOW –** Patch present on gentle slopes < 10% with any soil type. | LOW |

| | | | | | |
|---|---|---|---|---|---|
| | | on moderate to steep slopes >10% - 25% with erodible soils (silty loam, sandy loam and loam, fine to coarse sands). | | | |
| | Score for **Criterion 1.1** is based on the highest standard achieved between the two measures. | | | | HIGH |
| **Criterion 1.2 – Landscape Integrity (Richness, Connectivity and Distribution)** | **A) Landscape Richness** | **HIGH –** > 10% local vegetation cover | **MEDIUM –** 10% local vegetation cover | **LOW –** < 7% local vegetation cover. | LOW |
| | **B) Landscape Connectivity (linkage and distance between patches not separated by permanent cultural barriers).** | **HIGH –** patches directly connected by:<br>i. waterways or riparian habitat (generally primary or secondary aquatic corridors and streams with bridges and/or underpasses: for example, Thames, Dingman, Medway, Stoney, Pottersburg, Kettle, Dodd, Sharon, Oxbow, Kelly, Stanton, Mud, Crumlin);<br>ii. Contiguous or semi-contiguous habitat. | **MEDIUM –** patches indirectly connected by:<br>i. habitat gaps < 40 m;<br>ii. areas identified as Anti-fragmentation, Terrestrial Corridor, Big Picture Corridor (https://caroliniancanada.ca/legacy/ConservationPrograms_BigPictureMaps.html) to enhance the viability of isolated woodlands by re-connection, buffering, expanding OR to infill disturbed areas or replace abandoned fields (Riley & Mohr, 1994);<br>a. abandoned rails, utility rights-of-way (hydro corridors, water/gas pipeline);<br>b. Open space greenways and golf courses;<br>c. Active agriculture or pasture;<br>d. Watercourses connected by culverts; and,<br>**e.** First or second order streams that exhibit | **LOW –** patches not connected due to the presence of permanent cultural barriers:<br>i. major roads and highways with no culverts;<br>ii. urban or industrial development, large parking lots;<br>iii. infrastructure;<br>iv. dams, buried watercourses, channelized or greater third order watercourses; and,<br>v. active recreational land-uses (campground, parks with major facilities – community centres, arenas). | MEDIUM |

| | | | | | |
|---|---|---|---|---|---|
| | | | channelized morphology. | | |
| | **C) Patch Distribution (isolation & arrangement of patches / patch clusters).** | **HIGH –** patch clusters with total area > 40 ha OR identified as a Big Picture Meta Core (Carolinian Canada, 2000). | **MEDIUM –** patch clusters with total area 20 – 40 ha. | **LOW –** patch clusters with total area < 20 ha. | LOW |
| | Score **Criterion 1.2** based on the highest standard achieved for any one of the three standards. | | | | MEDIUM |
| **Criterion 2.1 – Age and Site Quality** | **A) Community Successional Stage / Seral Age** | **HIGH –** patch contains one (1) or more mature or older growth communities | **MEDIUM –** patch contains one (1) or more mid-aged communities | **LOW –** patch contains only pioneer to young communities | LOW |
| | **B) Mean Coefficient of Conservatism (MCC) of communities or whole patch** | **HIGH –** one (1) or more vegetation community with an MCC ≥ 4.6; OR MCC of patch > 4.5 | **MEDIUM –** one (1) or more vegetation community with an MCC 4.2 – 4.5; OR MCC of patch ≥ 4.0 – 4.5 | **LOW –** all vegetation communities with an MCC < 4.2; OR MCC of patch < 4.0. | LOW |
| | Score **Criterion 2.1** based on the highest standard achieved between the two measures. | | | | LOW |
| **Criterion 2.2 – Size and Shape** | **A) Patch Size** | **HIGH** Patch > 9.0 ha in size OR patch contains a woodland >4 ha. | **MEDIUM** Patch 2.0 – 9.0 ha in size OR patch contains a woodland 2-4 ha. | **LOW** Patch < 2.0 ha in size. | LOW |
| | **B) Patch Shape and Presence of Interior** | **HIGH** Patch contains interior habitat that is more than 100 m from the edge OR has a Perimeter: Area ratio <1.5 m/m². | **MEDIUM** Patch contains no interior habitat but has a Perimeter:Area ratio 1.5 – 3.0 m/m². | **LOW** Patch contains no interior and has a Perimeter:Area ratio > 3.0 m/m² | LOW |
| | **C) Bird Species** | **HIGH** Patch provides breeding habitat for any three (3) or more bird species of conservation concern, including provincially rare bird species (MNRF, 2015a) or species of regional concern (Partners in Flight, 2020). | **MEDIUM** Patch provides breeding habitat for one (1) or two (2) bird species of conservation concern, including provincially rare bird species (MNRF, 2015a) or species of regional concern (Partners in Flight, 2020). | **LOW** Patch does not provide breeding habitat any bird species of conservation concern, including provincially rare bird species (MNRF, 2015a) or species of regional concern (Partners in Flight, 2020). | MEDIUM |
| | Score **Criterion 2.2** based on the highest standard achieved for any one of the three standards. | | | | MEDIUM |

| | | | | | |
|---|---|---|---|---|---|
| **Criterion 2.3 Diversity of Communities, Landforms and Associated Species** | **A) ELC Community Diversity** | **HIGH** – Patch contains 6 or more ELC Community Series | **MEDIUM** – Patch contains 3-5 ELC Community Series | **LOW** – Patch contains 1-2 ELC Community Series | LOW |
| | **B) Community and Topographic Diversity (variation and heterogeneity)** | **HIGH** – Patch contains three (3) or more Ecosites in one (1) Community Series OR four (4) or more Vegetation Types OR three (3) or more topographic features (e.g. tableland, rolling upland, valley slope, terrace, bottomland). | **MEDIUM** – Patch contains two (2) or more Ecosites in one Community Series OR by three (3) Vegetation Types OR two (2) topographic features, or one (1) Vegetation Type with inclusions or complexes. | **LOW** – Patch relatively homogenous; one (1) Ecosite OR one (1) to two (2) Vegetation Types on one (1) topographic feature. | LOW |
| | **C) Diversity (species and individuals) and Critical Habitat Components for Amphibians** | **HIGH** – three (3) or more species of amphibians present in the patch, OR one (1) species of amphibian that is abundant in one (1) or more communities; OR two (2) or more critical habitat components present in the patch. | **MEDIUM** – 1-2 species of amphibians present in the patch; OR one (1) species of amphibian that is occasional* in one (1) or more communities; OR one (1) critical habitat components present in the patch. | **LOW** – No species of amphibian present in the patch, OR no critical habitat components present in the patch. | HIGH |
| | **D) Presence of Conifer Cover** | **HIGH** – Patch contains one or more conifer communities that are > 4.0 ha in size. | **MEDIUM** – Patch contains one or more conifer communities that are between 2.0 and 4.0 ha in size. | **LOW** – Patch contains conifer communities < 2.0 ha in size. | LOW |
| | **E) Fish Habitat Quality** | **HIGH** – Dissolved oxygen > 8.0 mg/L OR abundant instream woody debris and rocks and watercourse with a natural channel located within or contiguous with the patch. | **MEDIUM –** Dissolved oxygen 5.0 – 8.0 mg/L OR moderate amount of instream woody debris and rocks and portions of channelized watercourses within or contiguous with the patch. | **LOW** – Dissolved oxygen < 5.0 mg/L OR no instream woody debris and sparse structure and entire watercourse channelized within or contiguous with the patch. | <Select> |
| | Score for **Criterion 2.3** based on the highest standard achieved for any one of the five standards. | | | | HIGH |
| **Criterion 4.1 – Significant habitat for endangered or threatened species.** | **A) Species At Risk Habitat** | SAR habitat present or previously identified: **YES** or **NO** | | | YES |
| | The presence of SAR habitat will add one **HIGH** score to the overall assessment | | | | HIGH |
| | **A) ELC Community SRANK** | **HIGH** – One (1) or more communities with an SRANK of S3 | **MEDIUM** – No communities with an | **LOW** – No communities with an | LOW |

| | | | | | |
|---|---|---|---|---|---|
| **Criterion 5.1 – Distinctive, unusual or high-quality communities.** | | or lower. | SRANK lower than S4. | SRANK lower than S5. | |
| | **B) Significant Wildlife Habitat** | SWH habitat present or previously identified: **YES** or **NO** | | | YES |
| | The presence of SWH habitat will add one HIGH score to the overall assessmen | | | | HIGH |
| | **C) Rare Plant Species Presence / Absence** | **HIGH** –. 1 Rare Plant (S1-S3) or 4 Regionally Rare plants | **MEDIUM** – 1-3 Regionally Rare plants | **LOW** – 1 Regionally Uncommon Plant | LOW |
| | **D) Size and distribution of trees** | **HIGH** – trees > 50 cm dbh abundant in one or more communities within the patch. | **MEDIUM** – trees > 50 cm dbh rare or occasional in one or more communities within the patch. | **LOW** – trees > 50 cm dbh not present in any communities within the patch. | LOW |
| | **E) Basal Area** | **HIGH** – Average basal area of trees for any community in the patch ≥ 16m ²/ha for trees >25 cm DBH; OR > 24 m²/ha for trees > 10 cm DBH; OR all diameter class sizes are represented in the stand (saplings < 10 cm; polewood 10-24 cm; small sawlog 26-36; medium sawlog 38-48 cm; large sawlogs 50-60 cm; x-large or veteran trees > 62 cm. | **MEDIUM** – Average basal area for any community in the patch 12 – 24 m²/ha of trees >10 cm DBH; OR missing one of polewood, small, medium, or large size classes. | **LOW –** Average basal area for all communities in the patch < 12 m²/ha for trees > 10 cm DBH; OR missing two or more of polewood, small, medium, or large size classes. | LOW |
| | Score for **Criterion 5.1** based on the highest standard achieved for any one of the five standards | | | | HIGH |
| **Criterion 5.2 – Distinctive, Unusual or High-Quality Landforms** | **A) Distinctive landform types** | **HIGH** – Patch located on an Earth Science ANSI OR on the Beach Ridge or Sand Plain physiographic landform units. | **MEDIUM** – Patch located on the Till Plain or Till Moraine physiographic landform unit. | **LOW** – Patch is located on the Spillway physiographic landform unit. | LOW |
| | Score for **Criterion 5.2** based on the highest standard achieved. | | | | LOW |
| | | | | **Woodland Evaluation Score** | 4 High, 2 Medium |
| | | | | **Significant Woodlan** | YES |

# APPENDIX F
# SPECIES AT RISK AND SIGNIFICANT WILDLIFE HABITAT SCREENING TABLES

**Table 1. Species at Risk Screening for the Study Area**

| Type | Common Name | Scientific Name | Srank | SARO Status | COSEWIC Status | Last Obs Date | Background Information Source | | | | | | Notes on Preferred Habitat [1] | Suitable Habitat on Site | Confirmed observation on Site |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NHIC Grid 17MH8753/17MH8754 | Atlas of Ontario Mammals (Dobbyn 1994) | Atlas of the Breeding Bird of Ontario (Cadman 2009) | Ontario Reptile and Amphibian Atlas (ON 2024) | Ontario Butterfly Atlas (Macnaighton 2018) | Rare Vascular Plants of Ontario (Oldham & Brinker 2009) | | | |
| REPTILES | Blanding's turtle | *Emydoidea blandingii* | S3 | THR | THR | 1977 | | | | ● | | | shallow water marshes, bogs, ponds or swamps, or coves in larger lakes with soft muddy bottoms and aquatic vegetation; basks on logs, stumps, or banks; surrounding natural habitat is important in summer as they frequently move from aquatic habitat to terrestrial habitats; hibernates in bogs; not readily observed | Yes, suitable habitat is found in the marshes and swamps on the Site. However, none were observed. | No |
| | Northern Ribbonsnake | *Thamnophis sauritus* | S3 | SC | SC | 1933 | | | | ● | | | sunny grassy areas with low dense vegetation near bodies of shallow permanent quiet water; wet meadows, grassy marshes or sphagnum bogs; borders of ponds, lakes or streams; hibernates in groups | Yes, suitable habitat is found in the meadow and marsh communities on the Site. However, none were observed. | No |
| | Midland Painted Turtle | *Chrysemys picta marginata* | S5 | | SC | 2019 | | | | ● | | | quiet, warm, shallow water with abundant aquatic vegetation such as ponds, large pools, streams, ditches, swamps, marshy meadows; eggs are laid in sandy places, usually in a bank or hillside, or in fields | No, suitable habitat is not found on the Site. | No |
| | Northern Map Turtle | *Sternotherus odoratus* | S3 | SC | SC | 1990 | | | | ● | | | Inhabits rivers and lakeshores, basking on emergent rocks and felled trees in the spring and summer. They will hibernate in the winter months on the bottom of slow-moving sections of river. High quality water is preferred as they prey on molluscs. | No, suitable habitat is not found on the Site. | No |
| | Queensnake | *Regina septemvittata* | S2 | THR | END | 1882 | | | | ● | | | margins of streams with slow currents and gravel bottoms; shorelines with rocks and debris; old quarries; canals; aquatic habitat with overhanging trees, particularly willows | Yes, suitable habitat is found on the Site along the water course. However, none were observed and the last observed date is 1882. | No |
| | Snapping turtle | *Chelydra serpentina* | S4 | SC | SC | 2019 | | | | ● | | | permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites; may nest at some distance from water | Yes, suitable habitat is found in the marshes and swamps on the Site. One was observed during field surveys | Yes |
| AMPHIBIANS | Western Chorus Frog* (Great Lakes-St.Lawrence Population | *Pseudacris triseriata* | S3 | THR | | 2006 | | | | ● | | | Inhabits forest openings around woodland ponds but can also be found in or near damp meadows, marshes, bottomland swamps and temporary ponds in open rural or urban areas. | Yes, suitable habitat is found in the swamps, marshes and meadows on the Site. However, none were observed. | No |
| INSECT | Monarch | *Danaus plexippus* | S2N,S4B | SC | SC | 2021 | | | | | ● | | Caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adults forage on a variety of wildflowers and milkweed. | No, suitable habitat is not found on the Site. | No |
| | West Virginia White | Pieris virginiensis | S3 | SC | | 2014 | | | | | ● | | Moist mature deciduous forest with riparian features. | No, suitable habitat is not found on the Site. | No |
| BIRDS | Acadian Flycatcher | Empidonax virescens | S2BS3B | END | END | 2001-2005 | | | | | | | mature, shady, deciduous forests; heavily wooded ravines; creek bottoms or river swamps; availability of good quality habitat is limiting factor; needs at least 30 ha of forest | No, suitable habitat is not found on the Site. | No |
| | Bank Swallow | *Riparia riparia* | S4B | THR | THR | 2001-2005 | | | ● | | | | Can be found in burrows throughout natural or man-made vertical faces of mineral deposits. Such as bluffs, cliffs or banks of rivers. | No, suitable habitat is not found on the Site. | No |
| | Barn Swallow | *Hirundo rustica* | S4B | SC | SC | 2001-2005 | | | ● | | | | Nest along human-made structures such as open barns, under bridges and in culverts. Attracted to open structures to build their nests, including ledges. They prefer rough-cut wood structures as the mud nests adheres better. | Yes, suitable habitat can be found on the structures in the Site. However, none were observed. | No |
| | Black Tern* | *Chlidonias niger* | S3B | SC | SC | 2001-2005 | | | ● | | | | wetlands, coastal or inland marshes; large cattail marshes, marshy edges of rivers, lakes or ponds, wet open fens, wet meadows; returns to same area to nest each year in loose colonies; must have shallow (0.5 to 1 m deep) water and areas of open water near nests; requires marshes >20 ha in size | No, suitable habitat is not found on the Site. | No |
| | Bobolink | *Dolichonyx oryzivorus* | S4B | THR | THR | 2001-2005 | | | ● | | | | large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha. | No, suitable habitat is not found on the Site. | No |
| | Chimney Swift | *Chaetura pelagica* | S4B, S4N | THR | THR | 2001-2005 | | | ● | | | | Historically have nested on cave walls and in hollow trees, but are more likely to be found in urban settlements nesting in chimneys and manmade structures. They tend to stay close to water where flying insects congregate for foraging. | Yes, suitable habitat can be found in the structures on the Site and in hollow trees in the forests. However, none were observed | No |
| | Common Nighthawk | *Chordeiles minor* | S4B | SC | SC | 2001-2005 | | | ● | | | | open ground; clearings in dense forests; ploughed fields; gravel beaches or barren areas with rocky soils; open woodlands; flat gravel roofs | Yes, suitable habitat can be foun in the agricultural field on the Site. However, none were observed. | No |
| | Eastern Meadowlark | *Sturnella magna* | S4B | THR | THR | 2001-2005 | | | ● | | | | open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches; cultivated land and weedy areas with trees; old orchards with adjacent, open grassy areas >10 ha in size | Yes, suitable habitat is found in the meadows and farmland on the Site. However, none were observed. | No |
| | Eastern Wood-pewee | *Contopus virens* | S4B | SC | SC | 2001-2005 | | | ● | | | | Live in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundandtly found in intermediate-age mature forest stands with little understory vegetation. | Yes, suitable habitat is found in the forest communities on the Site. However, none were observed. | No |

**Table 1. Species at Risk Screening for the Study Area**

| Type | Common Name | Scientific Name | Srank | SARO Status | COSEWIC Status | Last Obs Date | Background Information Source | | | | | | Notes on Preferred Habitat [1] | Suitable Habitat on Site | Confirmed observation on Site |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NHIC Grid 17MH8753/17MH8754 | Atlas of Ontario Mammals (Dobbyn 1994) | Atlas of the Breeding Bird of Ontario (Cadman 2009) | Ontario Reptile and Amphibian Atlas (ON 2024) | Ontario Butterfly Atlas (Macnaighton 2018) | Rare Vascular Plants of Ontario (Oldham & Brinker 2009) | | | |
| BIRDS | Hooded Warbler* | *Wilsonia citrina* | S3B | SC | THR | 2001-2005 | | | ● | | | | favours mature, deciduous forest (Carolinian), particularly along stream bottoms, ravine edges and where saplings and shrubbery grow; nests above ground in small shrubs; feeds on or near ground | No, suitable habitat is not found on the Site. | No |
| | King Rail | *Rallus elegans* | S2B | END | END | 2001-2005 | | | ● | | | | large, shallow, fresh water marshes, shrubby swamps, marshy borders of lakes and ponds with abundant vegetation; an 'edge' species; territories are 0.3 to 0.5 ha | Yes, suitable habitat is found in the marsh communities on the Site. However, none were observed. | No |
| | Least Bittern | *Ixobrychus exilis* | S4B | THR | THR | 2001-2005 | | | ● | | | | deep marshes, swamps, bogs; marshy borders of lakes, ponds, streams, ditches; dense emergent vegetation of cattail, bulrush, sedge; nests in cattails; intolerant of loss of habitat and human disturbance | No, suitable habitat is not found on the Site. | No |
| | Northern Bobwhite | *Colinus virginianus* | S1S2 | END | END | 2001-2005 | | | ● | | | | Live in savannahs, grasslands, abandoned farm fields and along bushy fencerows. In severe weather conditions they move into small forest areas to find snow-free areas for foraging. | No, suitable habitat is not found on the Site. | No |
| | Peregrine Falcon* | *Falco peregrinus* | S2S3B, ZN | SC | SC | 2001-2005 | | | ● | | | | Live on tall ledges, usually close to a body of water. Can be found in urban or rural environments. | No, suitable habitat is not found on the Site. | No |
| | Prothonotary Warbler | *Protonotaria citrea* | S1B | END | END | 2001-2005 | | | ● | | | | Nest in small shallow holes in the trunks of dead and decaying trees standing in flooded or wet woodlands and swamps. Silver Maple, Ash and Yellow Birch are common trees in these habitats | No, suitable habitat is not found on the Site. | No |
| | Red-headed Woodpecker* | *Melanerpes erythrocephalus* | S4B | THR | SC | 2001-2005 | | | ● | | | | open, deciduous forest with little understory; fields or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees; requires cavity trees with at least 40 cm dbh; require about 4 ha for a territory | Yes, suitable habitat is found in the woodlands and meadows on the Site. However, none were observed. | No |
| | Short-eared Owl* | *Asio flammeus* | S2N, S4B | SC | SC | 2001-2005 | | | ● | | | | grasslands, open areas or meadows that are grassy or bushy; marshes, bogs or tundra;requires 75-100 ha of contiguous open habitat | No, suitable habitat is not found on the Site. | No |
| | Whip-poor-will | *Caprimulgus vociferus* | S4B | THR | THR | 2001-2005 | | | ● | | | | dry, open, deciduous woodlands of small to medium trees; oak or beech with lots of clearings and shaded leaflitter; wooded edges, forest clearings with little herbaceous growth; pine plantations; associated with >100 ha forests | No, suitable habitat is not found on the Site. | No |
| | Wood Thrush | *Hylocichla mustelina* | S4B | SC | THR | 2001-2005 | | | ● | | | | Carolinian and Great Lakes-St. Lawrence forest zones; undisturbed moist mature deciduous or mixed forest with deciduous sapling growth; near pond or swamp; hardwood forest edges; must have some trees higher than 12 m | No, suitable habitat is not found on the Site. | No |
| MAMMALS | Badger | *Taxidea taxus* | S2 | END | END | 1970-1993 | | ● | | | | | open grasslands and oak savannahs; dens in new hole or enlarged existing hole; sometimes makes food caches | No, suitable habitat is not found on the Site. | No |
| | Woodland Vole | *Microtus pinetorum* | S3 | SC | SC | 1990-1969 | | ● | | | | | mature deciduous forest in the Carolinian forest zone, with loose sandy soil and deep humus; grasslands, meadows and orchards with groundcover of duff or grass | Yes, suitable habitat is found in the meadows on the site. However, none were observed | No |
| | Northern Myotis | *Mytois septentrionalis* | S3 | END | END | 1970-1993 | | ● | | | | | Can be found in boreal forests, often under loose bark strips and in tree cavities. | Yes, suitable habitat may be present within tree crevices and structures present on Site. However, none were observed. | No |
| | Eastern Small-footed Myotis | *Myotis leibii* | S2S3 | END | END | 1970-1993 | | ● | | | | | Roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines or hollow trees | Yes, suitable habitat may be present within tree crevices and structures present on Site. However, none were observed. | No |
| | Little brown bat | *Myotis lucifuga* | S4 | END | END | 1970-1993 | | ● | | | | | Roosts in trees and buildings. Often found in attics, abandoned barns and crevices in trees. | Yes, suitable habitat may be present within tree crevices and structures present on Site. However, none were observed. | No |

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|---|---|
| SARO | Species at Risk Ontario (O. Reg. 230/08) |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |

**COSEWIC Definitions**

The federal review process is implemented by COSEWIC. They are an independent advisor panel to the MECP that meets twice a year to assess the status of wildlife species at risk of extinction

| | |
|---|---|
| Endangered (END) | Species facing imminent extirpation or extinction |
| Threatened (THR) | Species likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction |
| Special Concern (SC) | Species that may become threatened or endangered because of a combination of biolodical characteristics and identified threats |
| Extirpated (EXR) | Species which no longer exist in the wild in Ontario, but exist elsewhere in the world |
| DD | Data defficient |
| Not at Risk (NAR) | Not at risk |

**SARO Definitions**

Provincial status from MECP

| | |
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| Endangered (END) | Species facing imminent extirpation or extinction |
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| DD | Data defficient |
| Not at Risk (NAR) | Not at risk |
| Not at Risk (NAR) | Not at risk |

| | |
|---|---|
| **NHIC Srank (Subnational) Legend** | Critically imperiled, at very high risk of extirpation. |
| S1 | Imperiled, at high risk of extirpation. |
| S2 | Vulnerable, at moderate risk of extirpation. |
| S3 | Apparently secure, at fairly low risk of extirpation. |
| S4 | Secure, at low or no risk of extirpation. |
| S5 | Conservation status refers to breeding population. |
| B | Conservation status refers to non-breeding population. |
| N | Possibly Extirpated |
| SH | |

Subnational ranks are used by the NHIC to set protection priorties for rare and natural communities. Those ranksa re not legal designations and are only within the political boundaries of Ontario.

**References**


1 Ministry of Natural Resources (MNR). 2000. Significant Wildlife Habitat Technical Guide. Peterborough: Queen's Printer for Ontario.

2 Government of Canada. 2018. Species at Risk Act: COSEWIC Assessments and Status Reports. Accessed February 2019. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports.html.

3 Government of Canada. 2011. Species at Risk Public Registry: A to Z Species Index. Ottawa: Government of Canada. Accessed February 2019. http://sararegistry.gc.ca/sar/index/default_e.cfm.

4 Ministry of the Environment, Conservation and Parks. 2018. Species at Risk in Ontario. Accessed February 2019. https://www.ontario.ca/page/species-risk-ontario#section-3.

5 Butterflies of Ontario. 2019. Red-disked Alpine. Accessed February 2019. http://www.ontariobutterflies.ca/families/nymphalidae/red-disked-alpine.

6 Butterflies and Moths of North America. 2018. Red-disked Alpine. Accessed February 2019. https://www.butterfliesandmoths.org/sighting_details/1053970.

**Table 1. Species at Risk Screening for the Study Area**

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7 Oldham, M. J. and S. R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Natural Heritage Information Centre, Ontario Ministry of Natural Resources. Peterborough, Ontario. 188 pp.

| Table 2. Significant Wildlife Habitat Assessment for the Study Area | |
|---|---|
| **Significant Habitat Type** | **Site Assessment** |
| **Seasonal Wildlife Concentration Areas** | |
| Waterfowl Stopover and Staging Areas (Terrestrial) | Meadows and fields are found within the Site. However, none of the bird species were observed during field surveys. **Candidate SWH** |
| Waterfowl Stopover and Staging Areas (Aquatic) | Marshes are found on the Site, that could provide suitable habitat. **Candidate SWH** |
| Shorebird Migratory Stopover Area | No shorelines of lakes rives or welands are found on the Site. **Not SWH** |
| Raptor Wintering Area | Forests are found within the Site, however they are >20 ha. **Not SWH** |
| Bat Hibernacula | No caves or crevices are found within the Site. **Not SWH** |
| Bat Maternity Colonies | A forested community is found within the Study Area, snags were observed within this community. **Candidate SWH** |
| Turtle Wintering Areas | No large, permanent water bodies are found within the Site. **Not SWH** |
| Reptile Hibernaculum | Areas of broken rock and non natural rock piles were observed within Study Area. **Candidate SWH** |
| Colonially - Nesting Bird Breeding Habitat (Bank and Cliff) | No large banks or cliffs observed on Site. **Not SWH** |
| Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) | No live or dead standing trees in wetlands or lakes are found on the Site. **Not SWH** |
| Colonially - Nesting Bird Breeding Habitat (Ground) | No rocky islands or peninsulas within lakes or large rivers found within the Site. **Not SWH** |
| Migratory Butterfly Stopover Area | Meadow communities within 5km of Lake Erie of Lake Ontario were observed within the Study Area boundaries. **Not SWH** |
| Landbird Migratory Stopover Area | Wooded areas are found within the Study Area, wooded area is under 5 ha and much more than 5km from lakeshore. **Not SWH** |
| Deer Winter Congregation Area | Forested Ecosites are found within the Site, however they are less than 50 ha in size. **Not SWH** |
| **Rare Vegetation Communities or Specialized Habitat for Wildlife** | |
| Cliffs and Talus Slopes | No cliffs or talus slopes found within the Site. **Not SWH** |
| Sand Barren | No sand barrens found within the Site. **Not SWH** |
| Alvar | No alvars found within the Site. **Not SWH** |
| Old Growth Forest | No old growth forests found within the Site. **Not SWH** |
| Savannah | No savannahs found within the Site. **Not SWH** |
| Tallgrass Prairie | No tallgrass prairies found within the Site. **Not SWH** |
| Other Rare Vegetation Communities | No other provincially rare plant communities are found within the Site. **Not SWH** |
| **Specialized Habitat for Wildlife** | |
| Waterfowl Nesting Area | Upland habitat adjacent to wetlands are found on the Site. **Candidate SWH** |
| Bald Eagle and Osprey Nesting, Foraging and Perching Habitat | Forested area not adjacent to lakes river, or ponds within the Site. None of the candidate species were observed during field surveys. **Not SWH** |
| Woodland Raptor Nesting Habitat | Forested Ecosites are found within the Study Area, however they are less than 30 ha in size. **Not SWH** |
| Turtle Nesting Areas | Exposed mineral soill adjacent to wetlands are areas found on the Site. **Candidate SWH** |
| Seeps and Springs | No seeps or springs observed within the Site. **Not SWH** |
| Amphibian Breeding Habitat (Woodland) | No wetlands, pools, or woodlands pools >500m2 and within woodlands are found on the Site. **Not SWH** |
| Amphibian Breeding Habitat (Wetlands) | Wetlands >500m2 are found within the Study Area. **Candidate SWH** |
| Woodland Area - Sensitive Bird Breeding Habitat | No forests over 60 years old and larger than 30 ha found within the Site. **Not SWH** |
| **Habitat for Species of Conservation Concern (Not Including Endangered or Threatened Species)** | |
| Marsh Bird Breeding Habitat | Wetlands found on the Site. However, none of the candidate species were observed on the Site. **Unlikely SWH** |

| Table 2. Significant Wildlife Habitat Assessment for the Study Area | |
|---|---|
| **Significant Habitat Type** | **Site Assessment** |
| Open Country Bird Breeding Habitat | No large grassland areas bigger than 30 ha found within the Study Area. **Not SWH** |
| Shrub/Early Successional Bird Breeding Habitat | No shrub thicket found on the Site, however they are not >10 ha. **Not SWH** |
| Terrestrial Crayfish | Meadows and marshes are present within Study Area. No evidence of terrestrial crayfish was observed, however no targeted surveys were undertaken as part of this assessment. **Unlikely SWH** |
| Special Concern and Rare Wildlife Species | Snapping Turtle, Barn Swallow, and Eastern Wood-pewee were observed on Site during field assessment. **Confirmed SWH** |
| **Animal Movement Corridors** | |
| Bat Migratory Snopover Areas | No confirmed bat migratory stopover areas found within the Study Area. **Not SWH** |
| Amphibian Movement Corridors | Potential movement corridoors between aquatic ecosites found in within the Study Area. **Candidate SWH** |

**SWH Assessment Criteria**

Unlikley: Refers to areas where it is generally considered that significant wildlife habitat is not present based on assessments or known criteria

Confirmed: Identfied as significant wildlife habitat based on thorough assessments and evidence that demonstrate the presence of important species or habitat features

Not significant: refers to areas that have been assessed and found not to meet the criteria for significant wildlife habitat

**References**

Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Crieteria Schedules for Ecoregion 6E. Queen's Printer for Ontario

Ministry of Natural Resources and Forestry. 2000. Significant Wildlife Habitat Technical Guide. Peterborough, ON.

# APPENDIX G
# SNAKE SURVEYS

# APPENDIX 1: Snake Survey Form

Project Details 308646 Date Oct 24, 2022

Number of Surveyors 2 Surveyor Names Elizabeth O'Hara, Marcel van Heijst

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 10:07 Air Temp Start 13 Basking Temp* Start Cloud Cover 0 Wind (Beaufort) 2

End Time 10:59 Air Temp End 16 Basking Temp* End Precipitation ✗ Search Duration 1hr

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
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General Comments (habitat notes, invasive species, potential threats)

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 308646 Date November 4, 2022

Number of Surveyors 1 Surveyor Names Marcel van Heijst

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 2.32pm Air Temp Start 20°C Basking Temp* Start Cloud Cover 0% Wind (Beaufort) 1

End Time 4.17pm Air Temp End 17°C Basking Temp* End Precipitation 0% Search Duration 1.5 hr

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
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General Comments (habitat notes, invasive species, potential threats)
No visible snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details: 308046 Date: November 7, 2022

Number of Surveyors: 1 Surveyor Names: Marcel van Heijst

Location Description:

Location UTM: UTM Zone: Site Photo #s: Map Attached ☐

Start Time: 10.54 am Air Temp Start: 10°c Basking Temp* Start: / Cloud Cover: 25% Wind (Beaufort): 3

End Time: 12.30 pm Air Temp End: 12°c Basking Temp* End: / Precipitation: 0% Search Duration: 1.5 hr

Habitats surveyed (include ELC where possible) and approximate size of each:

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
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General Comments (habitat notes, invasive species, potential threats)
No visible snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face, leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30)
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 308646 Date November 8, 2022

Number of Surveyors 1 Surveyor Names Marcel van Heijst

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 11:13am Air Temp Start 12°c Basking Temp* Start / Cloud Cover 10% Wind (Beaufort) 2

End Time 12:47pm Air Temp End 14°c Basking Temp* End / Precipitation 0% Search Duration 1.5 hr

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
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General Comments (habitat notes, invasive species, potential threats)
No visible snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 308646 Date November 9, 2022

Number of Surveyors 1 Surveyor Names Marcel van Heijst

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 1:24 pm Air Temp Start 11°C Basking Temp* Start / Cloud Cover 30% Wind (Beaufort) 2

End Time 3:42 pm Air Temp End 10°C Basking Temp* End / Precipitation 0% Search Duration 1.5 hr

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
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General Comments (habitat notes, invasive species, potential threats)
No visible snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30)
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 308646 Date November 10, 2022

Number of Surveyors 1 Surveyor Names Marcel van Heijst

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 12:39pm Air Temp Start 13°c Basking Temp* Start / Cloud Cover 0% Wind (Beaufort) 1

End Time 2:10pm Air Temp End 17°c Basking Temp* End / Precipitation 0% Search Duration 1.5 hr

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
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General Comments (habitat notes, invasive species, potential threats)
No visible snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30)
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 368646 Date Apr. 27, 2023

Number of Surveyors 2 Surveyor Names Kennedy Hanczyk & Elizabeth O'Hara

Location Description

Location UTM UTM Zone Site Photo #s Map Attached ☐

Start Time 12:00pm Air Temp Start 13°C Basking Temp* Start Cloud Cover 10 % Wind (Beaufort) 4km/h

End Time 12:57 Air Temp End 13.8 C Basking Temp* End Precipitation Search Duration

Habitats surveyed (include ELC where possible) and approximate size of each

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
| Red Bellied | 47.937947 | 81.156469 | | 12:25 | under board | juvenile | yes | under cover board #5 |
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General Comments (habitat notes, invasive species, potential threats)
boards #6 was missing - area has been disturbed.

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

*Basking temp should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 307646 Date May 5th/23

Number of Surveyors 1 Surveyor Names Kennedy Hanczyk

Location Description 1766 Wilton Grove, London

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached ☐

Start Time 10:23 Air Temp Start 10 Basking Temp* Start / Cloud Cover 90 Wind (Beaufort) 2

End Time 11:15 Air Temp End 10 Basking Temp* End / Precipitation _____ Search Duration _____

Habitats surveyed (include ELC where possible) and approximate size of each _____

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
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General Comments (habitat notes, invasive species, potential threats)

NO VISIBLE SNAKES

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 307646 Date May 12th/23

Number of Surveyors 1 Surveyor Names Kennedy Hanczyk

Location Description 176b Wilton Grove, London

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached ☐

Start Time 9:03 Air Temp Start 10 Basking Temp* Start 5 Cloud Cover 20% Wind (Beaufort) 2

End Time 9:46 Air Temp End 11 Basking Temp* End 2 Precipitation _____ Search Duration _____

Habitats surveyed (include ELC where possible) and approximate size of each _____

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
| red bellied | | | | 9:03 | under cover | Juvenile | yes | board #2 |
| Red Bellied | | | | 9:22 | " board | " | yes | board #5 |
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General Comments (habitat notes, invasive species, potential threats)

_____

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX 1: Snake Survey Form

Project Details 307646 Date May 23 /23

Number of Surveyors 1 Surveyor Names Kennedy Hanczyk

Location Description 176b Wilton Grove, London

Location UTM _____ UTM Zone _____ Site Photo #s _____ Map Attached ☐

Start Time 9:00 Air Temp Start 11 Basking Temp* Start 5 Cloud Cover 70% Wind (Beaufort) 1

End Time 9:33 Air Temp End _____ Basking Temp* End _____ Precipitation _____ Search Duration _____

Habitats surveyed (include ELC where possible) and approximate size of each _____

Observations

| Species | Easting | Northing | Accuracy (m) | Time | Behaviour | Age / Sex | Photo #s | Notes |
|---|---|---|---|---|---|---|---|---|
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General Comments (habitat notes, invasive species, potential threats)

No snakes observed

**Beaufort Wind Scale:**
0 = calm, smoke rises vertically (0-2km/hr)
1 = Light air movement, smoke drifts (3-5)
2 = Slight breeze, wind felt on face; leaves rustle (6-11)
3= Gentle breeze, leaves & twigs in constant motion (12-19)
4= Moderate breeze, small branches moving, raises dust & loose paper (20-30);
5= Fresh breeze, small trees begin to sway (31-39)
6= Strong breeze, large branches in motion (40-50)

***Basking temp** should be measured in the sun just above the ground

# APPENDIX H
# BREEDING BIRD SURVEYS

| SCIENTIFIC NAME | COMMON NAME | S RANK | SARO STATUS | COSEWIC STATUS | SARA STATUS | G RANK | N RANK | Breeding Likelihood and observed activities |
|---|---|---|---|---|---|---|---|---|
| Anas platyrhynchos | Mallard | S5 | | | | G5 | N5B,N5N,N5M | X - Observed |
| Zenaida macroura | Mourning Dove | S5 | | | | G5 | N5B,N5N,N5M | S - Possible |
| Charadrius vociferus | Killdeer | S4B | | | | G5 | N5B,N4N5N,N5M | S - Possible |
| Cathartes aura | Turkey Vulture | S5B,S3N | | | | G5 | N5B,N5M | X - Observed |
| Contopus virens | Eastern Wood-pewee | S4B | SC | SC | SC | G5 | N5B,N5M | S - Possible |
| Empidonax traillii | Willow Flycatcher | S5B | | | | G5 | N5B | H -Possible |
| Tachycineta bicolor | Tree Swallow | S4S5B | | | | G5 | N5B,N5M | X - Observed |
| Hirundo rustica | Barn Swallow | S4B | SC | SC | SC | G5 | N3N4B,N3N4M | X - Observed |
| Dumetella | Gray Catbird | S5B,S3N | | | | G5 | N5B,N5M | S - Possible |
| Toxostoma rufum | Brown Thrasher | S4B | | | | G5 | N5B,NUN,N5M | S - Possible |
| Sturnus vulgaris | European Starling | SNA | | | | G5 | NNA | X - Observed |
| Turdus migratorius | American Robin | S5 | | | | G5 | N5B,N4N5N,N5M | S - Possible |
| Spinus tristis | American Goldfinch | S5 | | | | G5 | N5B,N5N,N5M | X - Observed<br>S - Possible |
| Spizella passerina | Chipping Sparrow | S5B,S3N | | | | G5 | N5B,N5M | S - Possible |
| Passerculus | Savannah Sparrow | S5B,S3N | | | | G5 | N5B,N4N,N5M | S - Possible |
| Melospiza melodia | Song Sparrow | S5 | | | | G5 | N5B,N5N,N5M | S - Possible |
| Pipilo | Eastern Towhee | S4B,S3N | | | | G5 | N4N5B,N4M | S - Possible |
| Agelaius phoeniceus | Red-winged Blackbird | S5 | | | | G5 | N5B,N5N,N5M | S - Possible |
| Molothrus ater | Brown-headed Cowbird | S5 | | | | G5 | N5B,NUN,N5M | S - Possible |
| Quiscalus quiscula | Common Grackle | S5 | | | | G5 | N5B,NUN,N5M | S - Possible |
| Geothlypis trichas | Common Yellowthroat | S5B,S3N | | | | G5 | N5B,N5M | S - Possible |
| Setophaga ruticilla | American Redstart | S5B | | | | G5 | N5B,N5M | S - Possible |
| Setophaga petechia | Yellow Warbler | S5B | | | | G5 | N5B,N5M | S - Possible |
| Setophaga | Chestnut-sided Warbler | S5B | | | | G5 | N5B,N5M | S - Possible |
| Cardinalis cardinalis | Northern Cardinal | S5 | | | | G5 | N5 | S - Possible |

**NHIC Srank (Subnational) Legend**

| | |
|---|---|
| S4 | Apparently secure, at fairly low risk of extirpation. |
| S5 | Secure, at low or no risk of extirpation. |
| SNA | Not applicable because species is not a suitable target for conservation activities e.g., non-native |
| S#B | Conservation status refers to breeding population. |
| S#N | Conservation status refers to non-breeding population. |

**G-Rank (Global Rank) Legend**

| | |
|---|---|
| G1 | Extremely rare, typically 5 or fewer occurrences worldwide or very few remaining individuals. |
| G2 | Very rare, typically 6-20 occurrences worldwide or few remaining individuals. |
| G3 | Rare or uncommon, typically 21-100 occurrences worldwide. |
| G4 | Widespread and fairly common but could be at some risk in the future. |
| G5 | Common, widespread, and not at risk. |

**N-Rank (National Rank) Legend**

| | |
|---|---|
| N1 | Extremely rare in the country. |
| N2 | Very rare in the country. |
| N3 | Rare but not immediately threatened |
| N4 | Fairly widespread, but could face some threats. |
| N5 | Common and not at risk in the country. |
| B-Breeding | |
| M-Migrant | |

**OBBA Breeding Codes**

| | |
|---|---|
| *OBSERVED* | |
| x | Species observed during its breeding season, but NOT in suitable nesting habitat (no breeding evidence found). Note that this code is rarely used as birds tend to occupy nesting habitat during the breeding season. Do not use for species known to be migrants. |
| *POSSIBLE* | |
| H | Species observed in suitable nesting Habitat during its breeding season. |
| S | Singing male or adult producing other sounds associated with breeding (e.g., calls or drumming) in suitable nesting habitat during the species' breeding season. |
| *PROBABLE* | |
| M | Multiple singing/calling/drumming individuals (7 or more) heard during one visit to a single square and in suitable nesting habitat during the species' breeding season. Use with caution to avoid counting migrants.. |
| P | Pair observed in suitable nesting habitat during the species' breeding season. |
| T | Presumed Territory 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, one week or more apart, during the species' breeding season. |
| D | Courtship or Displays involving a male and female (e.g., courtship feeding, copulation) or antagonistic behavior between two or more individuals (e.g., territorial disputes or chases), in suitable nesting habitat during the species' breeding season. |
| V | Bird Visiting a probable nest site in suitable nesting habitat during the species' breeding season. |
| *A* | Agitated behavior or alarm calls of an adult in suitable nesting habitat during the species' breeding season. |
| B | Brood patch or cloacal protuberance on an adult in suitable nesting habitat during the species' breeding season. |
| N | Nest-building by wrens or nest hole excavation by woodpeckers (both may build dummy or roosting nests so nest-building alone is not enough to confirm breeding). |
| *CONFIRMED* | |
| NB | Nest building, including the carrying of nesting material, by all species except wrens and woodpeckers. |
| DD | Distraction Display, injury-feigning, or other displays attempting to draw attention away from a nest or young. |
| NU | Empty Nest Used or identifiable eggshells from earlier in the same nesting season. |
| FY | Recently Fledged Young (nidicolous species – whose young are raised in a nest) or downy young (nidifugous species – whose young leave the nest soon after hatching) incapable of sustained flight. |
| AE | Adult Entering, occupying, or leaving a nest site (visible or not) or whose behavior suggests the presence of an occupied nest |
| FS | Adult carrying a Faecal Sac. |
| CF | Adult Carrying Food for young. |
| NE | Nest containing eggs |
| NY | Nest with Young (seen or heard) |

# APPENDIX I
# AMPHIBIAN BREEDING SURVEYS

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route # _____ Route Name: _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: 1 Day: 17 Month: May Year 2022

Cloud Cover (10th): 0 Temperature (°C or °F): 9 Beaufort Wind Scale (0-6): 1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2009.xls Rev 10 2009

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GREF | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area

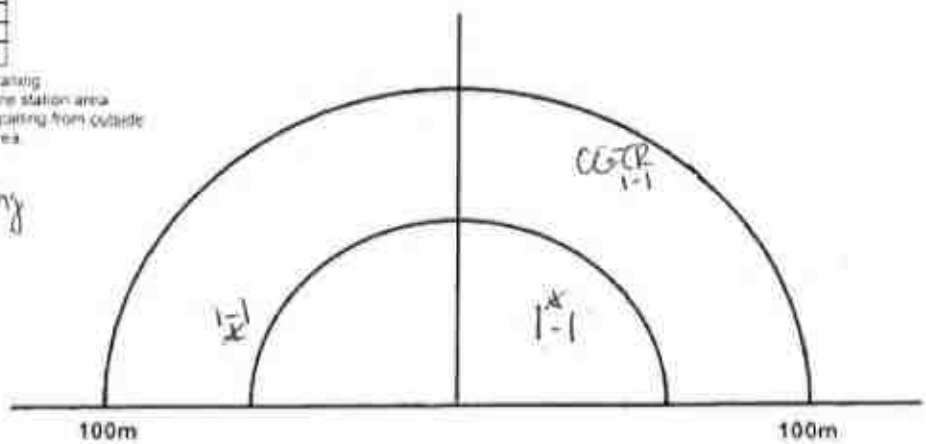
**Station A**

**Station Start Time (24 hr):** 23:10

**Background Noise Code (1-4):** 3-4

401 loud in distance.

SE 138°




-lots of birds calling

*call not distinguishable - short; high pitched.

Pinchin File Number: _____ Client: _____ Address/Site: _____

Glanworth 1,2

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: 1 Day: 17 Month: May Year: 2022

Cloud Cover (10th): 0 Temperature (°C or °F): 8-9°C Beaufort Wind Scale (0-6): 0-1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| COTR | | |
| FOTO | | |
| GRTR | | |
| GREF | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area

Station ~~A~~ B

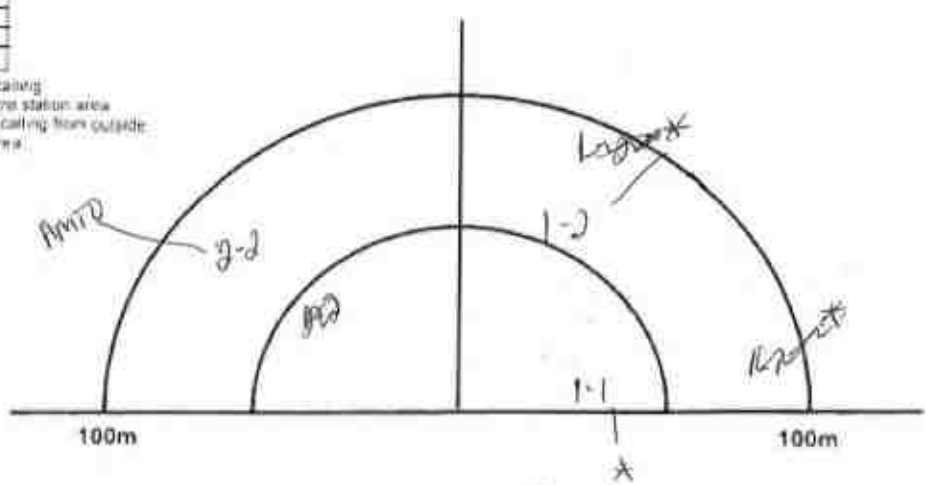
SW

213°

**Station Start Time (24 hr):** 23:20

**Background Noise Code (1-4):** 2-3

-401 still quite loud in distance




*Some call as A - slight quack, moderate pitch

Pinchin File Number: _____ Client: _____ Address/Site: _____

Glanworth 3.

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route # _____ Route Name _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: _____ Day: 17 Month: May Year: 2022

Cloud Cover (10th): 0 Temperature (°C or °F): 8-9°C Beaufort Wind Scale (0-6): 0-1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GREFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area

**Station AC**

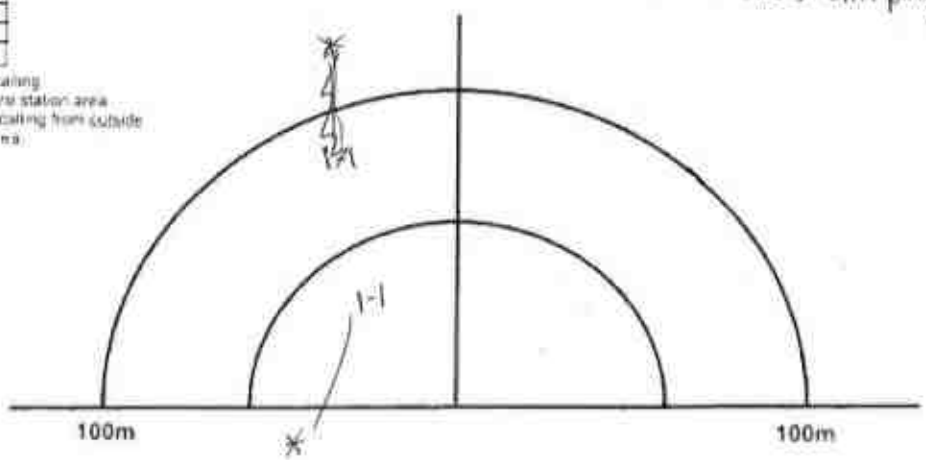
NE

44

**Station Start Time (24 hr):** 21:32

**Background Noise Code (1-4):** 2

- dull noise of 401 present.
- Some birds chirping




* Same as Stations A&B.

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route # _____ Route Name: _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: 1 Day: 17 Month: May Year 2022

Cloud Cover (10th): 0 Temperature (°C or °F): 8 Beaufort Wind Scale (0-6): 0-1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| COTR | | |
| FOTO | | |
| GRTR | | |
| GREF | | |
| MIFR | | |
| NLFR | | |
| PEEP | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area

**Station AD**

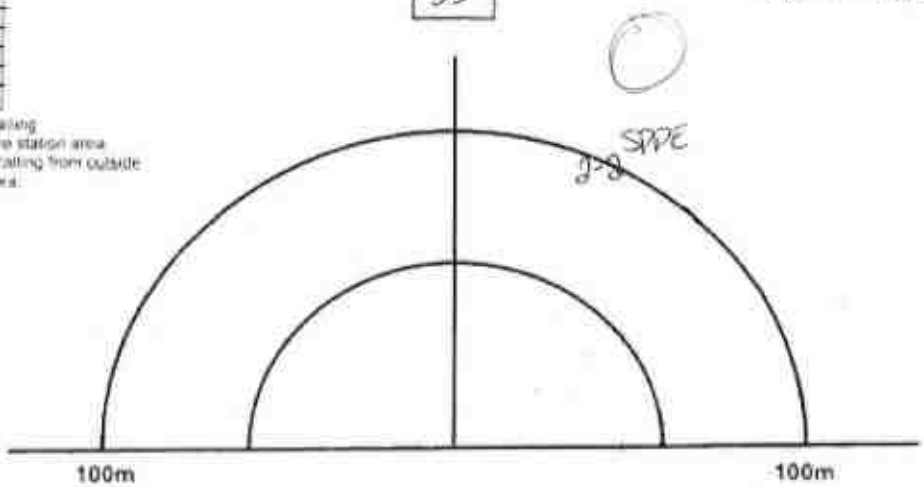
NE

33°

**Station Start Time (24 hr):** 23:41

**Background Noise Code (1-4):** 2

-trouble hearing >50m




Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: _____

Visit #: 2 Day: 1 Month: June Year: 2022

Cloud Cover (10th): _____ Temperature (°C or °F): 18 Beaufort Wind Scale (0-6): 0

Precipitation (check one): ◯ None/Dry ◯ Damp/Haze/Fog ◯ Drizzle ◯ Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2008.cdr, rev 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PEFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

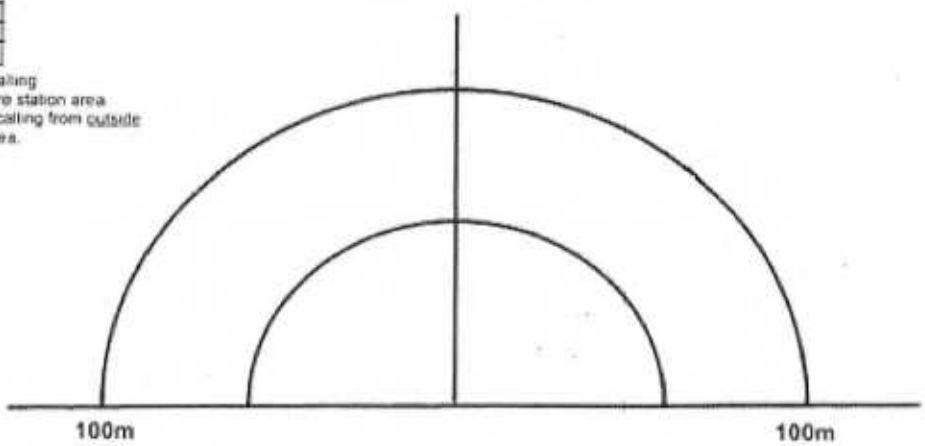
** Check if species is calling from outside 100-metre station area.

**Station A**

**Station Start Time (24 hr):** 21:31

**Background Noise Code (1-4):** 3-4

E 100°




-401 noise significant; faint bird calls audible. * Glanworth 4

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen).*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: 2 Day: 1 Month: June Year: 2022

Cloud Cover (10th): _____ Temperature (°C or °F): 18 Beaufort Wind Scale (0-6): 0

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphdfms2009.cdr, rev 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

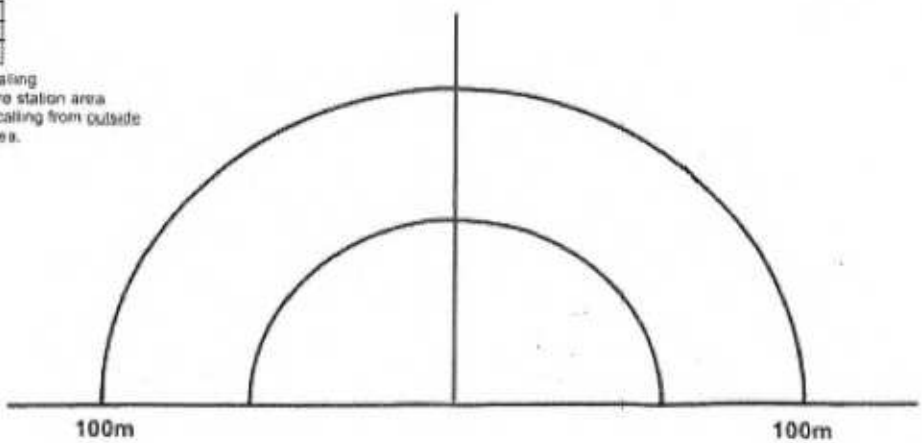
** Check if species is calling from outside 100-metre station area.

Station ~~A~~ B.

| | |
|---|---|
| Station Start Time (24 hr): | 21:18 |
| Background Noise Code (1-4): | 4 |

SE 150°

-401 noise significant




- Some bird calls audible within 50m

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen).*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: _____

Visit #: 2 Day: 1 Month: June Year: 2022

Cloud Cover (10th): _____ Temperature (°C or °F): 16 Beaufort Wind Scale (0-6): 1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2008 cdr, rev 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

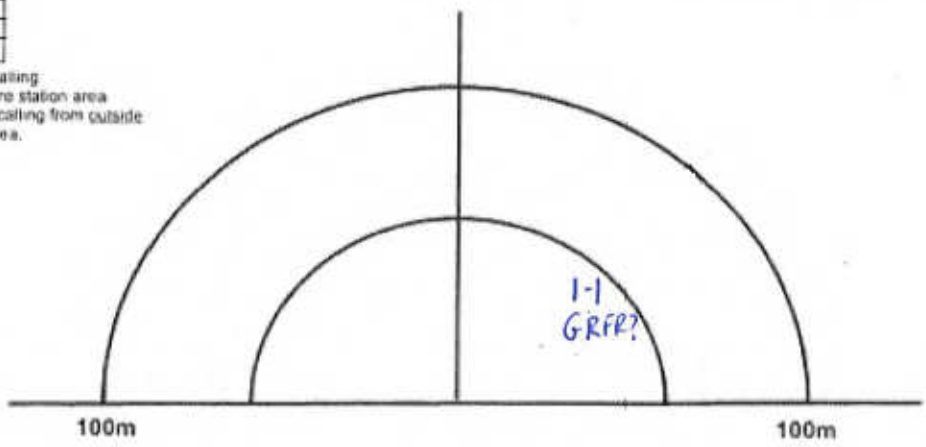
** Check if species is calling from outside 100-metre station area.

Station ~~A~~ C

Station Start Time (24 hr): 21:51

Background Noise Code (1-4): 3

NE 33° -401 noise significant




* Glanworth 6

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: _____

Visit #: 2 Day: 1 Month: June Year: 2022

Cloud Cover (10th): _____ Temperature (C or °F): 16. Beaufort Wind Scale (0-6): 1

Precipitation (check one): ◯ None/Dry ◯ Damp/Haze/Fog ◯ Drizzle ◯ Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2008 cdr, rev. 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRYR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

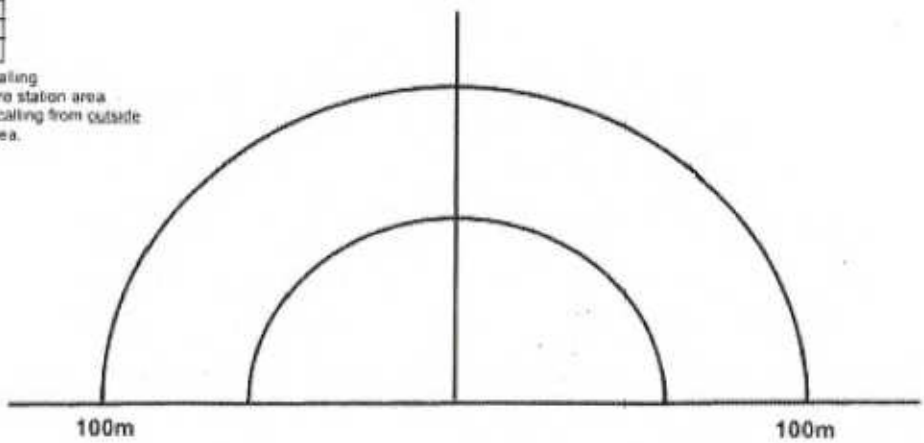
** Check if species is calling from outside 100-metre station area.

Station ~~A~~ D

Station Start Time (24 hr): 22:02

Background Noise Code (1-4): 2-3

E 92°




X Glanworth 7

Pinchin File Number: _____ Client: _____ Address/Site: _____

* several calls of AMTO audible near buildings on south portion of site when leaving (4-5)

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen).*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: EG

Visit #: 3 Day: 14 Month: June Year: 2022

Cloud Cover (10th): 2 Temperature (°C or °F): 24 Beaufort Wind Scale (0-6): 1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2009 cdr, rev 02/2008

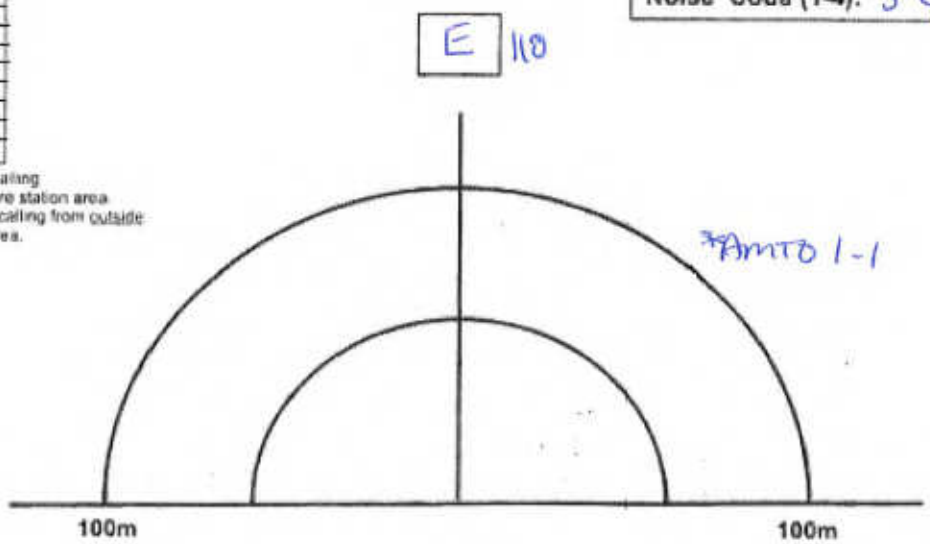
| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area.
** Check if species is calling from outside 100-metre station area.

**Station A**

**Station Start Time (24 hr):** 21:40

**Background Noise Code (1-4):** 3-4




Faint bird calls heard, 401 very loud in distance

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen).*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: Emily Gillies

Visit #: 3 Day: 14 Month: June Year: 2020

Cloud Cover (10th): 2 Temperature (°C or °F): 24 Beaufort Wind Scale (0-6): 1

Precipitation (check one): (X) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphdhm2009.cdr, rev. 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

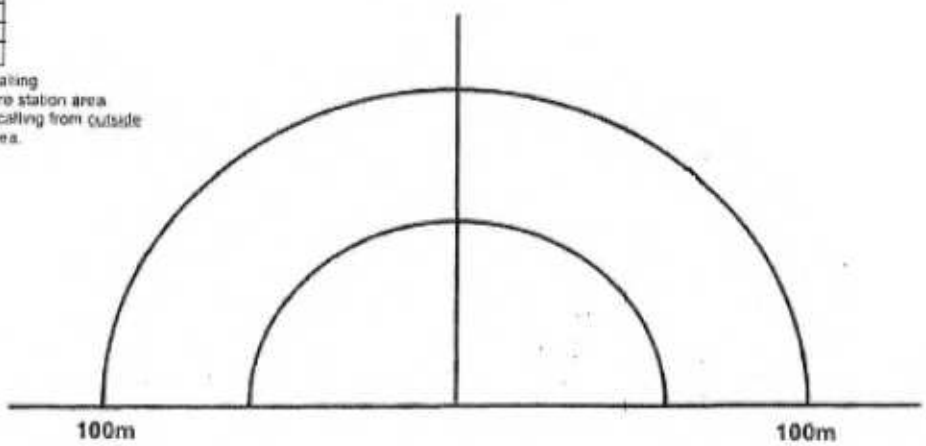
** Check if species is calling from outside 100-metre station area.

**Station** ~~A~~ B

**Station Start Time (24 hr):** 21:32

**Background Noise Code (1-4):** 4

SE 143°




*401 very loud in background.

Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen).*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: EG

Visit #: 3 Day: 14 Month: June Year: 2022

Cloud Cover (10th): 2 Temperature (°C or °F): 24 Beaufort Wind Scale (0-6): 1-2

Precipitation (check one): ✓ None/Dry ◯ Damp/Haze/Fog ◯ Drizzle ◯ Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2009.cdr, rev 02/2004

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GRFR | | |
| MIFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area.

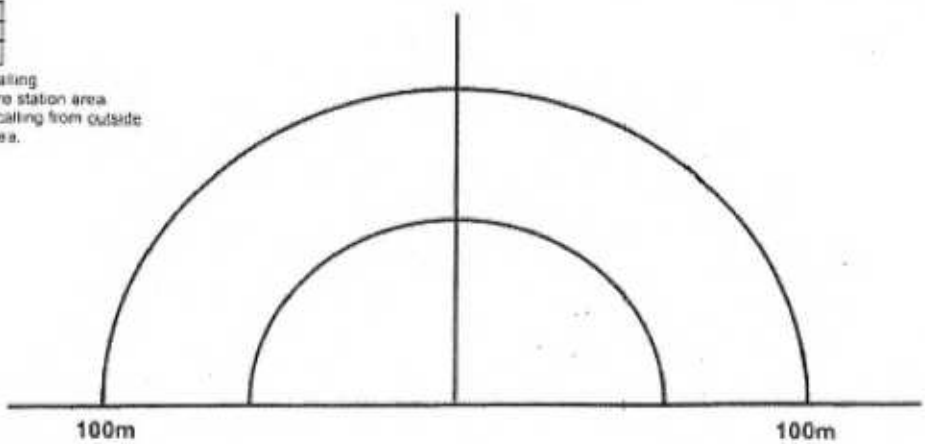
Station ~~A~~ C

Station Start Time (24 hr): 21:53

Background Noise Code (1-4): 2

NE 42°

401 noise still disruptive




Pinchin File Number: _____ Client: _____ Address/Site: _____

# Marsh Monitoring Program - Amphibian Data Form

**Return by 31 July**

*Please write legibly (in pen)*

MARSH MONITORING PROGRAM

## VISIT INFORMATION

Route #: _____ Route Name: _____

Observer #: _____ Observer Name: _____

Visit #: 3 Day: 14 Month: June Year: 2022

Cloud Cover (10th): 2 Temperature (°C or °F): 24 Beaufort Wind Scale (0-6): 1

Precipitation (check one): (✓) None/Dry ( ) Damp/Haze/Fog ( ) Drizzle ( ) Rain

## CALL LEVEL CODES

Code 1: Calls not simultaneous, number of individuals can be accurately counted

Code 2: Some calls simultaneous, number of individuals can be reliably estimated

Code 3: Full chorus, calls continuous and overlapping, number of individuals cannot be reliably estimated

Amphibians2008.cdr rev 02/2008

| Species | In* | Out** |
|---|---|---|
| AMTO | | |
| BCFR | | |
| BULL | | |
| CHFR | | |
| CGTR | | |
| FOTO | | |
| GRTR | | |
| GNFR | | |
| MBFR | | |
| NLFR | | |
| PIFR | | |
| SPPE | | |
| WOFR | | |

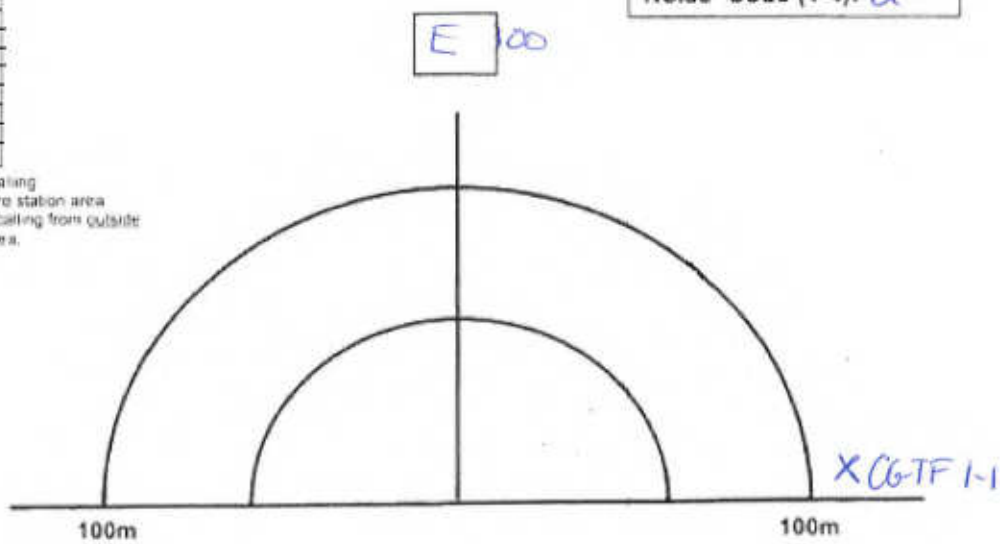
* Check if species is calling from inside 100-metre station area

** Check if species is calling from outside 100-metre station area.

Station A D

Station Start Time (24 hr): 22:04

Background Noise Code (1-4): 2




Pinchin File Number: _____ Client: _____ Address/Site: _____

# APPENDIX J
# PROPOSED SITE PLAN

| PARKING SPACE | LARGEST PARKING LOT (SQM) |
|---|---|
| PROPOSED | 1,000 |

| ZONE | LARGEST PARKING LOT (SQM) |
|---|---|
| ZONE A | 1,000 |
| ZONE B | 1,000 |
| ZONE C | 1,000 |
| ZONE D | 1,000 |
| ZONE E | 1,000 |
| ZONE F | 1,000 |
| ZONE G | 1,000 |

| SITE STATISTICS | |
|---|---|
| GFA BELOW | 257,761.63 |
| GFA ABOVE GRADE - BLDG 1 | 257,761.63 |
| GFA ABOVE GRADE - BLDG 2 | 204,481.84 |
| GFA ABOVE GRADE - BLDG 3 | 148,648.77 |
| TOTAL BLDG AREA | 610,892.24 |
| TOTAL SITE AREA | 27,173.00 |

| | | | |
|---|---|---|---|
| EXISTING ZONING: LANDOWNER/CIVIC USE ZONE | | | |
| PROPOSED ZONING: LANDOWNER/CIVIC USE ZONE | | | |
| LOT AREA (SQ M) | 27,173.00 | 27,173.00 | 27,173.00 |
| LOT FRONTAGE (M) | 0.00 | 0.00 | 0.00 |
| GFA + CODE PR. SPC. (SQM) | 1.5 x 2=1500 | 3000 (CODE) | 3.0 x 2 |
| GFA (SQ M) | 610,892.24 | 610,892.24 | N/A |
| BLDG HT. (M) | 20.0 (ZONE) | 20.0 (ZONE) | 20.0 |
|