159 and 163 Sulphur Springs Scoped Environmental Impact Study

Ancaster, City of Hamilton

2691715 Ontario Inc. & 2568843 Ontario Inc.

133 Hazelton Avenue, Toronto, ON M5R 0A6

Prepared by:

SLR Consulting (Canada) Ltd.

16 Robert Boyer Lane, Bracebridge, ON P1L 1R9

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December 18, 2024

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Revision Record

Revision	Date	Prepared By	Checked By	Authorized By
0	December 18, 2024	Angela Zhou	Joel Davey	Dirk Janas

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Acronyms and Abbreviations

ANSI	Area of Natural and Scientific Interest
COSSARO	Committee on the Status of Species at Risk in Ontario
CSP	Corrugated Steel Pipe
DFO	Department of Fisheries and Oceans Canada
EIS	Environmental Impact Study
ELC	Ecological Land Classification
HCA	Hamilton Conservation Authority
HDF	Headwater Drainage Feature
KHF	Key Hydrologic Feature
KNHF	Key Natural Heritage Feature
LIO	Land Information Ontario
MBCA	Migratory Birds Convention Act
MBR	Migratory Birds Regulations
MECP	Ministry of Environment, Conservation and Parks
MNRF	Ministry of Natural Resources and Forestry
NEC	Niagara Escarpment Commission
NEP	Niagara Escarpment Plan
NEPDA	Niagara Escarpment Planning and Development Act
NHIC	Natural Heritage Information Centre
OP	Official Plan
PPS	Provincial Planning Statement
PSW	Provincially Significant Wetland
SAR	Species at Risk
VPZ	Vegetation Protection Zone

1.0 Introduction

Palmer, now SLR, is pleased to provide this Scoped Environmental Impact Study (EIS) for the proposed residential development consisting of 75 total units, as well as roadways, parking spaces, greenspace, a conservation block, and a stormwater management pond at 159 and 163 Sulphur Springs Road, Ancaster, City of Hamilton (the Subject Property – **Figure 1**). The completion of the following Scoped EIS has been prepared as part of an Official Plan and Zoning By-law Amendment to allow for the Subject Property to be developed with a Draft Plan of Condominium containing both townhouses and single-detached dwellings.

The Subject Property comprises an area of approximately 10 hectares (ha) and currently supports a large pond to the north, small pond to the south, two detached dwellings and their associated driveway and amenities, woodland and maintained lawns with tree cover. The Subject Property has been subject to a series of historical alterations including forest removal, ornamental plantings and landscaping, watercourse modification, and impoundment of the existing watercourse to create a large pond feature.

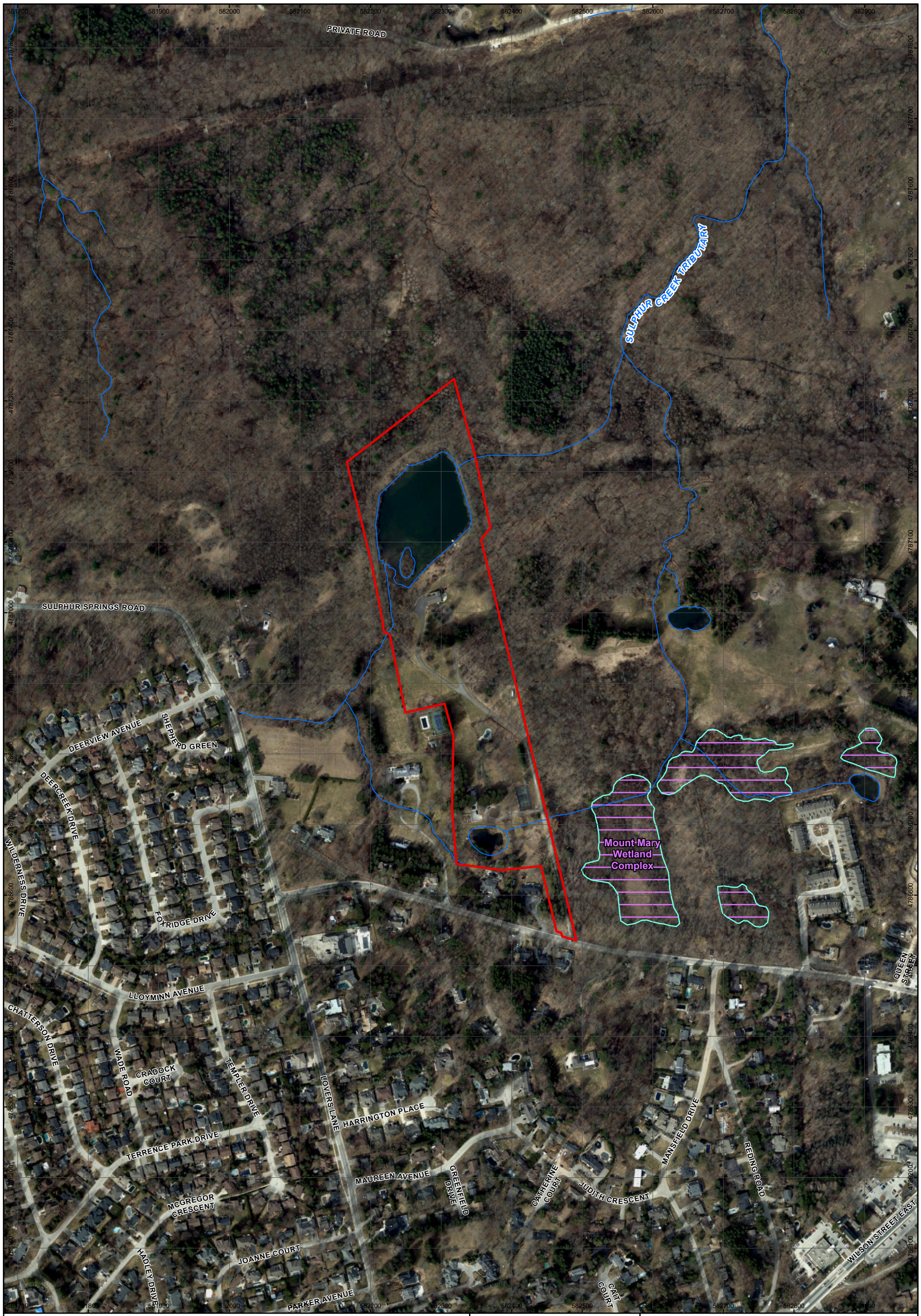
Based on SLR's field investigations in October 2024, vegetated portions of the Subject Property include deciduous forest, cultural woodland, and headwater drainage features (HDFs). A tributary of Sulphur Creek traverses the northern and southern portions of the Subject Property. These features and adjacent lands are Regulated Areas of the Hamilton Conservation Authority (HCA).

1.1 Project Goals and Objectives

The intent of the following Scoped EIS is to provide an initial evaluation of the sensitivity and significance of the existing natural heritage features and ecological functions associated with the Subject Property and assess the impacts of the proposed development. For the natural heritage features requiring protection, avoidance and mitigation measures are recommended where appropriate, to address potential impacts resulting from the proposed development.

The policies and technical requirements of the Provincial Planning Statement (PPS), City of Hamilton Rural and Urban Official Plans (OP), Hamilton Conservation Authority (HCA) policy, and relevant federal and provincial legislation have been reviewed, and conformity to these policies assessed, provided the implementation of recommended mitigation.

It is important note that this report serves as an initial characterization of the natural features within the Subject Property and provides assessments based on field investigations completed between October 16th and 22nd, 2024. An updated EIS will be prepared following completion of additional surveys in 2025, as SLR recognizes that further field surveys and assessment of significance will be needed to fully characterize the natural heritage features within the Subject Property.



LEGEND

- Watercourse[1]
- Wetland - Evaluated Other[1]
- Study Area (10.0 ha)

1 - Land Information Ontario

Key Map

0 50 100 150 200
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:5,000
Page Size: Tabloid (11 x 17 inches)

Drawn: SM
Checked: AZ
Date: Dec 18, 2024

NORTH

Source Notes:
Imagery (2021) provided by City of Hamilton GIS REST service. Contains information licensed under the Open Government Licence – Ontario.

CLIENT
Mizrahi Developments

PROJECT
Sulpher Springs Rd

TITLE
Site Location

Palmer PART OF SLR

REF. NO. 244.024373.00001-1-1

Figure 1

Document Path: G:_Projects\244\244_024373_SulpherSprings\1_Workspace\1_Maps\(2024-10) Ecology and Arborist Report\(2024-10) Ecology and Arborist Report.aprx

2.0 Relevant Policy

Relevant planning policies, legislation, and regulatory requirements pertinent to this assessment are summarized in the following sections. The general relevance of these policies to the Subject Property is also noted. More detailed analysis of policy implications is provided in subsequent sections of this report, where relevant.

2.1 Provincial Planning Statement (2024)

The *Provincial Planning Statement* (PPS) provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources (Ontario Ministry of Municipal Affairs and Housing 2024). The PPS defines eight types of Natural Heritage Features (NHF) and adjacent areas and provides planning policies for each. The *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement* (Ontario Ministry of Natural Resources, 2010) is a technical guidance document used to help assess the natural heritage features listed.

Section 4.1 of the PPS relates to Natural Heritage. The following subsections are provided:

4.1.4. Development and site alteration shall not be permitted in:

a) significant wetlands in Ecoregions 5E, 6E and 7E; and

b) significant coastal wetlands.

4.1.5. Development and site alteration shall not be permitted in:

a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;

b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);

c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River);

d) significant wildlife habitat;

e) significant areas of natural and scientific interest; and

f) coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4.b),

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

4.1.6. Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

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

4.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Each of these natural heritage features is afforded varying levels of protection subject to guidelines, and in some cases, regulations.

The Subject Property is located within Ecoregion 7E (Crins, Gray, Uhlig, & Wester, 2009). As depicted on the Ministry of Natural Resources and Forestry's (MNRF) Natural Heritage

Information Centre (NHIC) mapping. Natural features within the property include woodlands, and an Area of Natural and Scientific Interest (ANSI) – Life Science (Provincially Significant). The southern portion of the Subject Property is located approximately 30 m west of a non-provincially significant wetland. Environmental designations (Niagara Escarpment Plan [NEP] areas, Greenbelt lands) encompass the Subject Property, as shown on **Map A**. A preliminary screening for suitable potential habitat of endangered and threatened species was completed as part of the Scoped EIS and is discussed further in this report. Fish habitat associated with the tributary of Sulphur Creek, and the online pond feature, are also considered and discussed further in this report.

Map A. MNRF NHIC Map depicts the Subject Property consisting of Natural Heritage System (olive green layer), woodlands (dark green layer), an Area of Natural and Scientific Interest – Life Science (yellow patterned layer), and non-provincially significant wetland (blue hatched layer). Although difficult to depict, a watercourse line enters the property in the northwest, then to the large pond, and then exits the east side of the property.

2.2 Greenbelt Plan (2017)

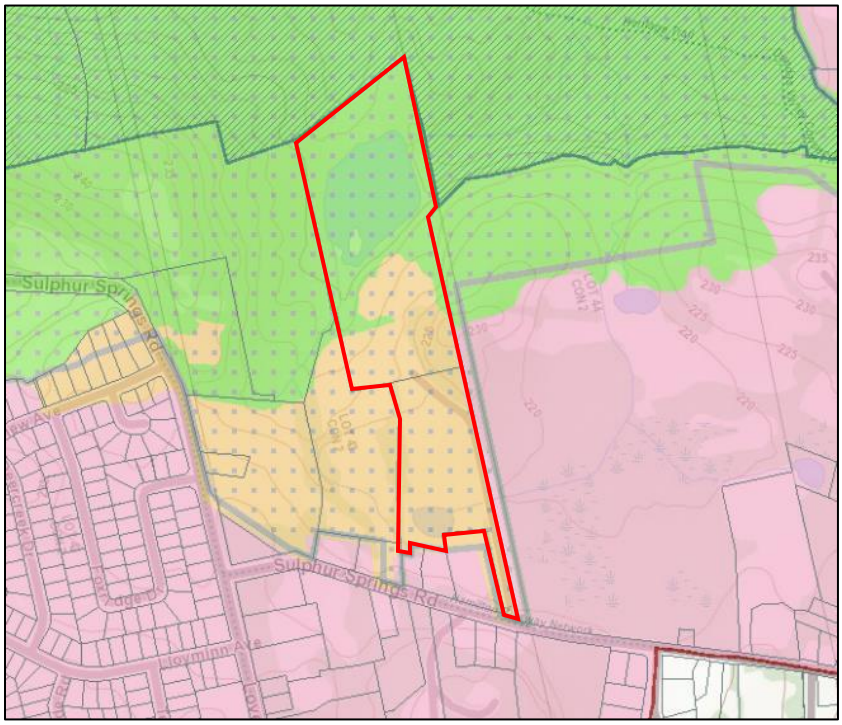
The Subject Property is within the Greenbelt Plan designation. However, Section 2.2 of the Greenbelt Plan states that: *The requirements of the NEP, established under the Niagara Escarpment Planning and Development Act, continue to apply and the Protected Countryside policies do not apply, with the exception of section 3.3.* Section 3.3 of the plan pertains to policies around Parkland, Open Space, and Trails. MNRF NHIC Map (**Map A**) depicts the Subject Property consisting of Natural Heritage System (olive green layer), woodlands (dark green layer), Niagara Escarpment Plan (NEP) Protection Area (orange layer), NEP Natural Area (light green layer), NEP Urban Area (pink layer), and Area of Natural and Scientific Interest

(yellow patterned layer), and is adjacent to NEP Parks and Open Spaces (green hatched layer) and non-provincially significant wetland (blue hatched layer).

2.3 Niagara Escarpment Plan (2017)

The Niagara Escarpment Plan (NEP) is administered by the Niagara Escarpment Commission (NEC). The NEC derives its authority from the *Niagara Escarpment Planning and Development Act (NEPDA)*. The most recent version of the NEP was approved through an Order-in-Council made by the Lieutenant Governor in Council under that Act and came into effect on June 1, 2017 (Niagara Escarpment Commission, 2024). The NEC is mandated with the protection and preservation of the Niagara Escarpment's environmental and landscape features.

Most of the Subject Property is located within lands designated as Escarpment Protection Area (orange area on **Map B**), where the policies aim to protect and enhance natural and hydrologic features and the open landscape character of the Escarpment and lands in its vicinity. The wooded northern portion of the Subject Property is designated as Escarpment Natural Areas (light green area on **Map B**), which includes the most sensitive natural and scenic resources of the Escarpment. The Escarpment Natural Areas policies aim to protect and enhance these natural areas. A permit from the NEC will be required for the subdivision of land within their jurisdiction.



Map B. Niagara Escarpment Plan (NEP) mapping depicts the NEP Protection Area (orange layer), NEP Natural Area (light green layer), NEP Urban Area (pink layer), and Area of Natural and Scientific Interest (yellow patterned layer), and is adjacent to NEP Parks and Open Spaces (green hatched layer)

Under Section 1.3.3. of the NEP, permitted uses within the Escarpment Natural Area include existing uses, and non-motorized trail activities (Niagara Escarpment Commission, 2024). For Escarpment Protection Area, permitted uses include agricultural uses, existing uses, camping and general recreational uses, non-motorized trails, single dwellings, infrastructure, and some limited lot creation (Section 1.4.4 of the NEP), amongst other more site-specific uses, that apply to areas outside of the Subject Property (Niagara Escarpment Commission, 2024).

Section 2.7 of the NEP outlines protections and enhancements for natural heritage features, including:

- Wetlands
- Habitat of endangered species and threatened species
- Fish habitat
- Life Science Areas of Natural and Scientific Interest
- Earth Science Areas of Natural and Scientific Interest
- Significant valleylands
- Significant woodlands
- Significant wildlife habitat
- Habitat of special concern species in Escarpment Natural and Escarpment Protection Areas

Development is not permitted in key natural heritage features (KNHFs); however, some limited development uses may be permitted including single dwellings, infrastructure, forest and fisheries management, and conservation and flood mitigation projects. Large scale development is not included as part of these permitted uses.

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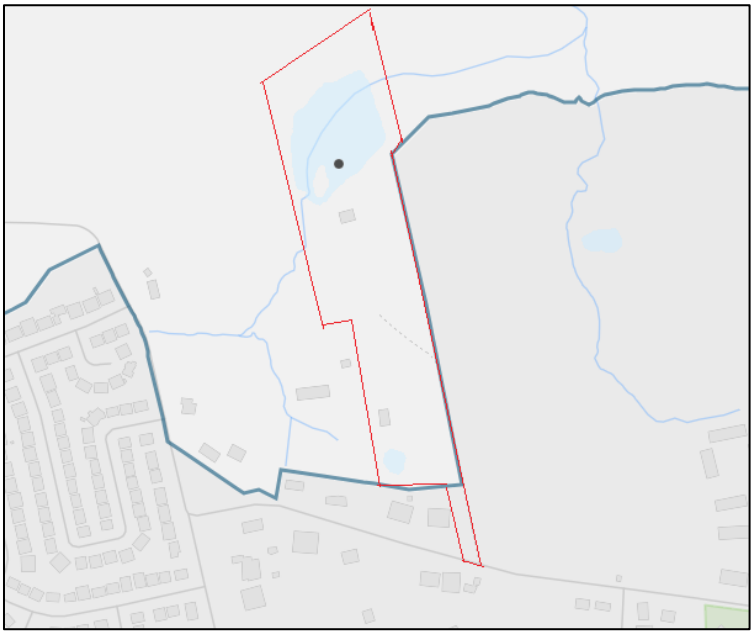
2.4 Rural Hamilton Official Plan (2012)

The City of Hamilton has two Official Plans, one for which applies to Rural land and one which applies to Urban lands. The Subject Property is largely subject to the Rural Official Plan (OP) and the southern entrance within the Urban Boundary, and thus subject to the policies of the Urban OP. As natural heritage considerations are limited within the small entrance area of the Subject Property, this report will mainly focus on the policies contained within the Rural OP. The City's Rural OP was adopted by Council in September 2006 and approved by the Ministry of Municipal Affairs and Housing (MMAH) in December 2008 and came into effect on March 7, 2012 (City of Hamilton, 2012).

The Natural Heritage System policy goals in Section 2.1 of the Rural OP aim to "*protect and enhance biodiversity and ecological functions, achieve a healthy, functional ecosystem, conserve the natural beauty and distinctive character of Hamilton's landscape, … restore and enhance connections, quality and amount of habitat, provide opportunities for recreational and tourism uses where they do not impact natural heritage features, and, monitor and periodically assess the condition of Hamilton's natural environment"* (City of Hamilton, 2012).



Map C. City of Hamilton Interactive Mapping – Policy Planning map showing the Rural/Urban boundary (blue line), approximate Subject Property limits (red line). Rural lands are above the boundary line, and Urban lands below.

Section 2.3.4 of the Rural OP states that*: New development and site alteration shall not be permitted within: provincially significant wetlands, significant coastal wetlands, significant habitat of threatened and endangered species, except in accordance with applicable provincial and federal regulations with respect to significant habitat of threatened or endangered species.*

Schedule B of the Rural OP shows the Subject Property largely designated as Core Areas with a small area of Greenbelt Protected Countryside, and entirely within NEP Area (**Map D**). Section 2.4 of the OP outlines policies relating to areas within the Greenbelt Plan Area within the Greenbelt Natural Heritage System of the Protected Countryside.

Section 2.4.8 states:

Beyond the Greenbelt Natural Heritage System within the Protected Countryside new development and site alteration shall not be permitted within or adjacent to key natural heritage features in the Greenbelt Protected Countryside unless it has been evaluated through an Environmental Impact Statement and has been demonstrated that there shall be no negative impacts on the natural features or their ecological functions.

Section 2.4.9 states:

New development and site alteration within the Protected Countryside of the Greenbelt Plan Area that is proposed to take place within or adjacent to any other Core Area identified on Schedule B – Natural Heritage System, through a consent, Plan of Subdivision, Zoning By-law, Site Plan approval, Official Plan amendment or Site Alteraoin By-law permit shall require an Environmental Impact Statement in accordance with Sections C.2.4.6 of this Plan.

Section 2.4.10 states:

An Environmental Impact Statement shall also propose a vegetation protection zone which:

a) *Has sufficient width to protect the Core Area and it's ecological functions from impacts of the proposed land use or site alteration occurring during and after construction, and where possible, restores or enhances the Core Area and/or its ecological functions; and*
b) *Is established to achieve, and be maintained as natural self-sustaining vegetation.*

Section 2.4.11 states:

Where vegetation protection zones have not been specified by watershed and sub-watershed plans, Secondary or Rural Settlement Area Plan policies, Environmental Assessments and other studies, the following minimum vegetation protection zone width objectives shall be evaluated and addressed by Environmental Impact Statements:

a) Permanent and intermittent streams: 30-metre vegetation protection zone on each side of the watercourse, measured from beyond the stable top of bank;

b) Wetlands: 30-metre vegetation protection zone. The Environmental Impact Statement shall also take into consideration adjacent upland habitat that is required by wetland species for breeding, foraging, dispersal, and other life processes;

c) Fish habitat: 30-metre minimum vegetation protection zone measured from beyond either side of the top of bank or meander belt allowance;

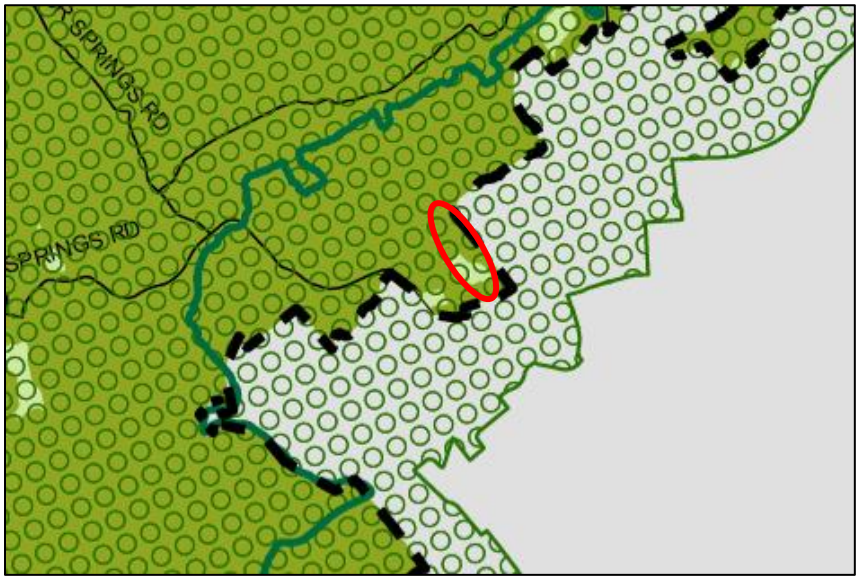
d) Woodlands: 15-metre minimum vegetation protection zone measured from the drip line of trees at the woodlands edge;

e) Significant Woodlands: a minimum 30-metre vegetation protection zone measured from the drip line of trees at the woodlands edge;

f) Areas of Natural and Scientific Interest (ANSIs): a minimum 30-metre vegetation protection zone.

g) Designated valley lands: 15-metre minimum vegetation protection zone measured from top of bank; and

h) Lakes: 30-metre vegetation protection zone, measured from the stable slope of the shoreline.

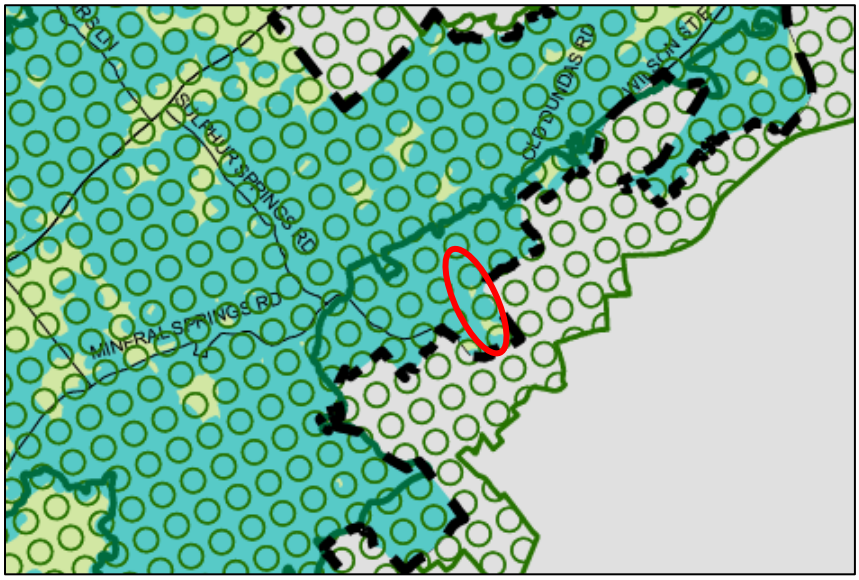


Map D. City of Hamilton Rural OP Schedule B: Natural Heritage System. Approximate Subject Property (red outline), Core Areas (green layer), Greenbelt Protected Countryside (pale green layer), NEP Areas (green circle pattern layer).

Section 2.4.13 states:

Within the Protected Countryside of the Greenbelt Plan area, new development and site alteration adjacent to wetlands, seepage areas, springs, fish habitat, lakes, permanent and intermittent streams and significant woodlands shall maintain a minimum 30-metre vegetation protection zone as measured from the outside boundary of the feature. Such a vegetation protection zone shall be established with natural, self-sustaining vegetation where the land within the vegetation protection zone is not used for agricultural purposes. New agricultural buildings and structures for agricultural uses are required to provide a 30-metre vegetation protection zone from a key natural heritage feature within the Greenbelt Natural Heritage System or a key hydrologic feature anywhere in the Protected Countryside but may not be required to establish a condition of natural self-sustaining vegetation, if the land is, and will continue to be, used for agricultural purposes.

Schedule B-2 of the Rural OP shows that the majority of the Subject Property is designated as Key Natural Heritage Feature Significant Woodlands (**Map E**). As outlined above, Policy 2.4.11 of the Rural OP has relevance for several natural heritage features within the Subject Property including Significant Woodlands, adjacent wetlands, permanent and intermittent streams, and fish habitat; all which need to be analyzed and addressed through this EIS.



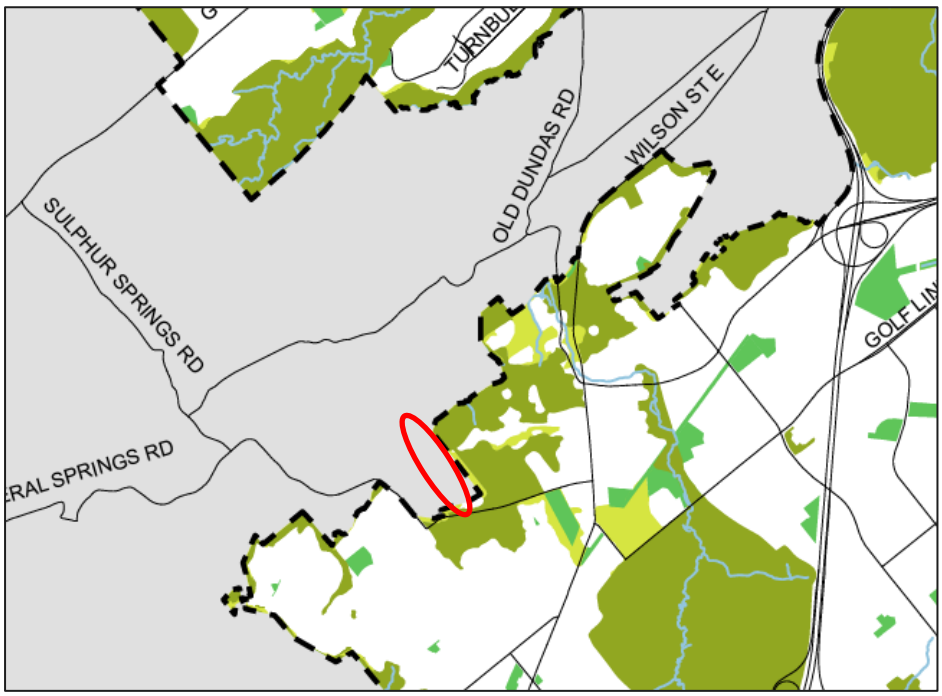
Map E. Rural OP Schedule B-2 Detailed Natural Heritage Features Key Natural Heritage Feature Significant Woodlands. Approximate Subject Property (red outline), Key Natural Heritage Feature Significant Woodland (blue layer), NEP Area (green circle pattern), Greenbelt Protected Countryside (light green).

2.5 Urban Hamilton Official Plan (2013)

As mentioned, the very southern portion of the Subject Property (i.e., the entrance driveway) is subject to the Urban Official Plan (OP), which was adopted by Council in July 2009, and approved by the Ministry of Municipal Affairs and Housing (MMAH) in March 2011, and came into effect on August 16, 2013 (City of Hamilton, 2013). The Urban Hamilton Official Plan was updated November 2022 as modified by the Official Plan Adjustments Act, 2023.

The Natural Heritage System policies of the City's Urban OP aim to *protect and enhance biodiversity and ecological functions, achieve a healthy, functional ecosystem, conserve the natural beauty and distinctive character of Hamilton's landscape, maintain and enhance the contribution made by the Natural Heritage System to the quality of life of Hamilton's residents, restore and enhance connections, quality and amount of natural habitat, provide opportunities for recreational and tourism uses where they do not impact natural heritage features and monitor and periodically assess the condition of Hamilton's natural environment* (Policy C.2.0).

Core Areas within the Greenbelt Plan Area are discussed within the Rural OP and are shown on **Map F**.



Map F. The City's OP Schedule B – Natural Heritage System depicts the southern extent of the Subject Property (approximated in red outline) to consist of Core Areas (olive green) and Linkages (light green). Key Hydrologic Feature Streams (blue line) are within adjacent lands.

From review of Urban OP's Schedule B, Core Areas and Linkages appear to generally abut the Subject Property on its eastern and southern limits. Due to the coarse nature of the Schedule mapping, it is not determinable whether these natural heritage designations overlap with any part of the entrance driveway.

2.6 Hamilton Conservation Authority (O. Reg 41/24)

On April 1, 2024, a new provincial Regulation came into force – Ontario Regulation 41/24 – Prohibited Activities, Exemptions and Permits Regulation (hereinafter referred to as "the Regulation"). The Regulation, issued under the *Conservation Authorities Act* replaced all 36 individual Conservation Authority regulations (including HCA's former Regulation 161/06) with one consistent province-wide regulation. The "pollution" and "conservation of land" tests for granting permission were removed from the *Act* and a new emphasis on public safety was added. Conservation Authorities, including the HCA, may grant permission for development activities if in the opinion of the Conservation Authority the proposal is not likely to affect the control of flooding, erosion, dynamic beaches, unstable soil or bedrock and when the development activities are not likely to create conditions or circumstances that in the event of a natural hazard might jeopardize the health or safety of persons or result in the damage or destruction of property.

Section 28 (1) of the Act states that "Subject to subsections (2), (3) and (4) and section 28.1, no person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority (**Map G**):

1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.
2. Development activities in areas that are within the authority's area of jurisdiction and are,
    i. hazardous lands,
    ii. wetlands,
    iii. river or stream valleys the limits of which shall be determined in accordance with the regulations,
    iv. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations, or
    v. other areas in which development should be prohibited or regulated, as may be determined by the regulations. 2017, c. 23, Sched. 4, s. 25."

The HCA still requires permits to be obtained before undertaking development, interference and alteration activities in regulated areas as defined under the Conservation Authorities Act and in O. Reg. 41/24 including watercourses (with flood plains and meander belt), hazardous lands, wetlands (and up to 30 m adjacent lands), and rivers or valley streams. Regulated Areas encompass most of the Subject Property, and most of the proposed activities fall within it (**Map G**).

Map G. HCA Regulated Area (beige) encompassing the Subject Property (approximated Subject Property outlined in red).

2.7 Provincial Endangered Species Act (2007)

Species designated as Endangered or Threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO) are listed as Species at Risk (SAR) in Ontario (Government of Ontario 2007). These SAR and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation, and migration) are afforded legal protection under the Endangered Species Act (ESA), 2007 (Government of Ontario 2007). This Act is administered by the Ministry of Environment, Conservation and Parks (MECP).

The protection provisions for species and their habitat within the ESA apply only to those species listed as Endangered or Threatened on the SARO list, being Ontario Regulation 230/08 of the ESA. Species listed as Special Concern may be afforded protection through policy instruments respecting significant wildlife habitat (e.g., the PPS) as defined by the Province, or other relevant authority, or other protections contained in Official Plans.

2.8 Migratory Birds Convention Act (1994)

The Migratory Birds Convention Act, 1994 (Government of Canada 1994) and Migratory Birds regulations, 2014 (MBR), along with the provincial Fish and Wildlife Conservation Act, protect most species of migratory birds and their nests and eggs anywhere they are found in Canada (Government of Canada, 1994). General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters / areas frequented by them. The MBR includes an additional prohibition against incidental take, which is the inadvertent harming or destruction of birds, nests, or eggs.

Compliance with the MBCA and MBR is best achieved through a due diligence approach, which identifies potential risk, based on a site-specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website.

2.9 Fisheries Act (1985)

The *Fisheries Act*, as administered by the Department of Fisheries and Oceans Canada (DFO), was updated on August 28, 2019. The updated *Fisheries Act* aims to protect all fish and fish habitat through general protection provisions. Of these provisions, two core prohibitions provide legislative protection against the death of fish caused by means other than fishing (subsection 34.4(1)), and the "*harmful alteration, disruption or destruction of fish habitat"* (HADD) (subsection 35(1)).

Under subsection 2(1) the federal *Fisheries Act*, fish habitat is defined to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. Specific examples of areas that can directly or indirectly support life processes of fish include, but are not limited to, spawning grounds and nursery, rearing, food supply and migration areas.

3.0 Study Approach

3.1 Background Review

SLR has reviewed relevant background material to provide a focus to field investigations and ensure compliance with applicable regulations and policy. Background information collection is guided by the Natural Heritage Information Request Guide (Ministry of Natural Resources and Forestry, 2018). Current direction from the Ministry of Natural Resources and Forestry (MNRF) and Ministry of Environment, Conservation and Parks (MECP) is to gather natural heritage information and species occurrence records from available sources; the NHIC Make-a-Map application being the main source of information and records from the Ministry itself (Ministry of Natural Resources and Forestry, 2024). Information gathered is recommended to be balanced and supplemented by professional ecological review of potential habitats and characteristics of a project site.

Background review for the Subject Property included the collection of relevant mapping and reports, including regulations and policies, Official Plans, and zoning by-laws; and the NHIC Make-a-Map application for species occurrences and designated area mapping. In addition to these sources, the following data sources were reviewed for the project:

- Natural Heritage Information Centre (NHIC) database (Ministry of Natural Resources and Forestry, 2024);
- Land Information Ontario (LIO) database (2024);
- Department of Fisheries and Oceans (DFO) Aquatic Habitat and Species at Risk Mapping (Fisheries and Oceans Canada, 2024);
- MNRF Aquatic Resource Areas (MNRF, 2024)
- Ontario Breeding Bird Atlas (Bird Studies Canada, 2024);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2024);
- Rural Hamilton Official Plan, 2012 (City of Hamilton, 2012);
- Hamilton Conservation Authority mapping (Hamilton Conservation Authority, 2024).

In addition to the above public information sources, other consultant documents, associated with the proposed development project, were also reviewed by SLR, and their findings integrated into the text of this report, where applicable. These documents include:

- *159 and 163 Sulphur Springs Road, City of Hamilton: Planning Rationale Report* (The Biglieri Group Ltd., 2024);
- *Fluvial Geomorphological Assessment and Erosion Hazard Delineation, Sulphur Creek and Tributaries 159 and 163 Sulphur Springs Road, Ancaster, Ontario* (GEO Morphix, 2024).

Other sources of information, such as aerial photography and topographic maps, were also consulted prior to commencing field assessments. Following the Information Request Guide, MECP advice and direction should be solicited once Species at Risk (SAR) interactions or potential interactions are identified via field investigation and analysis.

3.2 Ecological Surveys

Palmer undertook various field investigations during October 2024 (**Table 1**) to capture an initial inventory of existing vegetation communities and to provide a preliminary assessment of the ecological features and functions within the Subject Property. Further ecological surveys are proposed for 2025. Survey methods are described below.

Table 1. Ecological Field Investigations and Dates

Investigations	Dates	Weather Conditions
Aquatic Assessment, Ecological Land Classification, Incidental Wildlife	October 16, 2024	7ºC, 14 km/h winds, 70% cloud cover, no precipitation
Tree Inventory, Incidental Wildlife	October 18, 2024	6ºC, 6 km/h winds, 20% cloud cover, no precipitation
Tree Inventory, Incidental Wildlife	October 22, 2024	12ºC, 7 km/h winds, 20% cloud cover, no precipitation

3.2.1 Vegetation and Flora

Vegetation communities were mapped and described following the ELC System for Southern Ontario (Lee, et al., 1998). Vegetation community boundaries were delineated on field maps through the interpretation of recent aerial photographs and refined in the field. Information collected or verified during ELC surveys includes dominant species cover, community structure, as well as level of disturbance, presence of indicator species, and other notable features. A search for SAR flora, such as Butternut (*Juglans cinerea*) - an *Endangered* SAR tree, was completed during the fall survey.

Due to the extent of tree cover and woodland areas within the property, SLR also completed a detailed tree inventory. Due to the large inventory and complexity of the woodland resources, SLR has prepared a site-specific Arborist Report, and provided under a separate cover (SLR, 2024). Applicable findings and high-level information from SLR's Arborist report, as it relates to the treed resources of the Subject Property, are detailed at various points throughout this report.

3.2.2 Aquatic Habitat Assessment and Headwater Drainage Feature Assessment

An assessment of the general aquatic habitat within the Subject Property was completed on October 16, 2024. The aquatic habitat assessment consisted of a survey of the Sulphur Creek tributary corridor, and the large online pond within the Subject Property. Data recorded during the assessment included stream morphology, flow regime, location of inflows, in-stream features, and general habitat conditions. Additionally, while completing the habitat assessment, general riparian characteristics, and any disturbances to the natural environment within the Subject Property were also documented.

As part of the aquatic habitat assessment carried out within the Subject Property, several small Headwater Drainage Features (HDFs) within the southern portion of the property were also evaluated. The HDFs were classified according to the Evaluation, Classification and Management of Headwater Drainage Features Guidelines (TRCA and CVC, 2014). Aerial photograph interpretation formed the basis for the HDF assessment, which were reviewed and confirmed in the field. A subsurface HDF from the southern pond that extends eastward off site was also evaluated to the extent possible.

For context, the HDF guidelines use an integrated approach for the evaluation of key attributes of drainage features including flow and feature form (combined under the term hydrology), riparian vegetation, fish and fish habitat and terrestrial habitat. The evaluation divides headwater drainage features into segments, with breaks between segments occurring where key attributes change. Each segment is assigned a rating of its functional significance of 'important', 'valued', 'contributing' or 'limited'. The functional significance of all attributes of each segment is then considered to determine the recommended management option for each segment. These evaluations can lead to one of six possible management recommendations – Protection, Conservation, Mitigation, Recharge Protection, Maintain or Replicate Terrestrial Linkage, and No Management.

For context relating to site drainage and erosion hazard information, the GEO Morphix's Geomorphology assessment report (GEO Morphix, 2024) was also reviewed. Information from GEO Morphix's report relating to the Subject Property's HDFs is included in Sections 4 and 5 of this report.

3.2.3 Incidental Wildlife Observations

Incidental observations of wildlife were made during all field investigations. SLR ecologists assessed the Subject Property and adjacent lands, noting any evidence of wildlife or sensitive habitat features (e.g., stick nests) as well as gaining a general characterization of available habitat. Incidental observations included direct sightings and indirect evidence such as nests, tracks, scat, and browse.

A range of additional ecological surveys are proposed for 2025 including targeted breeding bird and breeding bird surveys, further botanical surveys, and surveys for an assessment of potential Significant Wildlife Habitat.

4.0 Existing Conditions

4.1 Vegetation Communities and Flora

Field investigations and background review identified nine vegetation communities within the Subject Property (**Figure 2**). Some communities are influenced by non-native/exotic species, with 21 of the 67 (31%) species identified being non-native to Ontario (MNRF, 2020). A plant species list will be provided as part of the updated EIS Addendum. The ELC descriptions of these vegetation communities are provided in **Table B**.

All species observed are considered locally and provincially common (Oldham, 2010) (MNRF, 2020). Two SAR, the Cucumber Tree (*Magnolia acuminata*) and Kentucky-tree (*Gymnocladus dioicus*) were observed on site and believed to both be planted species within the anthropogenic area. No other SAR or rare species were identified during Fall surveys. Further plant surveys will be completed in 2025.

Table 2. Ecological Land Classification

ELC Community	Description
Terrestrial System – Cultural and Anthropogenic	
ANTH: Anthropogenic	This community comprises the majority of the Subject Property. It contains two freehold houses with associated driveways, a swimming pool, and tennis court. Various landscaping and planted trees and shrubs are also found in this area (**Photo 1**). One Cucumber Tree and several young Kentucky Coffee-tree were observed within the central portion of this community. It is believed that these trees were planted as they are surrounded by other landscaped species arranged on the sides of a pathway (**Photo 2 and 3**). The southern half of the Subject Property contains two small wet depressions less than 0.1 ha in size (**Figure 2**). Both features lack canopy cover and are dominated with Narrow-leaved Cattail (*Typha angustifolia*) that provides >60% cover. Other species within these communities include Red-osier Dogwood (*Cornus sericea*), Spotted Jewelweed (*Impatiens capensis*), and American Water-horehound (*Lycopus americanus*).
CUT1: Mineral Cultural Thicket	One cultural thicket community is south of the large pond on site. Scattered, young European Black Alder (*Alnus glutinosa*) provide 10% canopy cover at 5 m height. The majority of vegetation is comprised of Red Raspberry (*Rubus idaeus*), Multiflora Rose (*Rosa multiflora*) and Riverbank Grape (*Vitis riparia*) providing >60% cover at a height of 1 m (**Photo 3**).
CUW1: Cultural Woodland	A number of cultural woodland communities are present within the Subject Property. The western communities contains various deciduous species including Black Walnut (*Juglans nigra*), Basswood (*Tilia americana*), Red Maple (*Acer rubrum*), and Black Cherry (*Prunus serotina*) providing canopy and subcanopy cover of approximately 40% (**Photo 4**). Understory and ground cover of over 60% at a height of <2 m is provided by Multiflora Rose, Canada Goldenrod (*Solidago canadensis*), and Black Raspberry (*Rubus occidentalis*). The eastern community contains similar ground species with more abundant coniferous trees including White Pine (*Pinus strobus*) and Norway Spruce (*Picea abies*). A cluster of dense phragmites (*Phragmites australis* subsp. *australis*) is found between the southern end of the large pond and CUW1 community (**Photo 5**).
HR: Hedgerow	Various hedgerow communities within the Subject Property are found within the southern half of the property (**Photo 6**). They are comprised of a variety of deciduous and coniferous species and in some areas, lack ground vegetation.
Terrestrial System - Forest	
FOD: Deciduous Forest	This community type is found towards the northern half of the Subject Property. Dominant canopy species that provide >60% cover at a height of >10 m include Black Walnut, Basswood, Green Ash (*Fraxinus pennsylvanica*), and Freeman's Maple (*Acer* x *freemanii*). Understory species include Multiflora Rose, Black Raspberry, Riverbank Grape, and honeysuckle (*Lonicera* sp.). A

ELC Community	Description
	patch of Black Locust (*Robinia pseudoacacia*) dominated canopy is found at the northern corner of the Subject Property (**Photo 7**).
FOD5: Dry – Fresh Sugar Maple Deciduous Forest	The Sugar Maple Deciduous Forest is located at the northeastern portion of the Subject Property. Sugar Maple (*Acer saccharum*) is the dominant canopy and subcanopy species, followed by Norway Maple (*Acer platanoides*) and Bitternut Hickory (*Carya cordiformis*) which provide >60% cover at over 10 m high. Understory and ground vegetation is sparse, with cover of 10-20% comprised of Multiflora Rose, Herb-Robert (*Geranium robertianum*), Broad-leaved Enchanter's Nightshade (*Circaea canadensis*), and Virginia Waterleaf (*Hydrophyllum virginianum*) (**Photo 8**).
Wetland System	
OAO: Open Aquatic	Two ponds are present within the Subject Property. Limited canopy or subcanopy tree canopy from adjacent trees provides cover for either pond (**Photo 9**). The larger, northern pond has vegetation around the pond perimeter such as young European Black Alder and Multiflora Rose. The southern pond has scattered Weeping Willow (*Salix babylonica*) trees surrounding it, along with common wetland plants like Narrow-leaved Cattail and American Water-horehound (**Photo 10**). Both ponds contain Lesser Duckweed (*Lemna minor*) and other submerged aquatic vegetation.

Photo 1: View of Anthropogenic area (October 16, 2024).

Photo 2: View of Planted SAR Trees (October 18, 2024).

Photo 3: View of CUT1, facing northwest (October 22, 2024).

Photo 4: View of western CUW1, facing north (October 16, 2024).

Photo 5: View of phragmites patch, facing north (October 16, 2024).

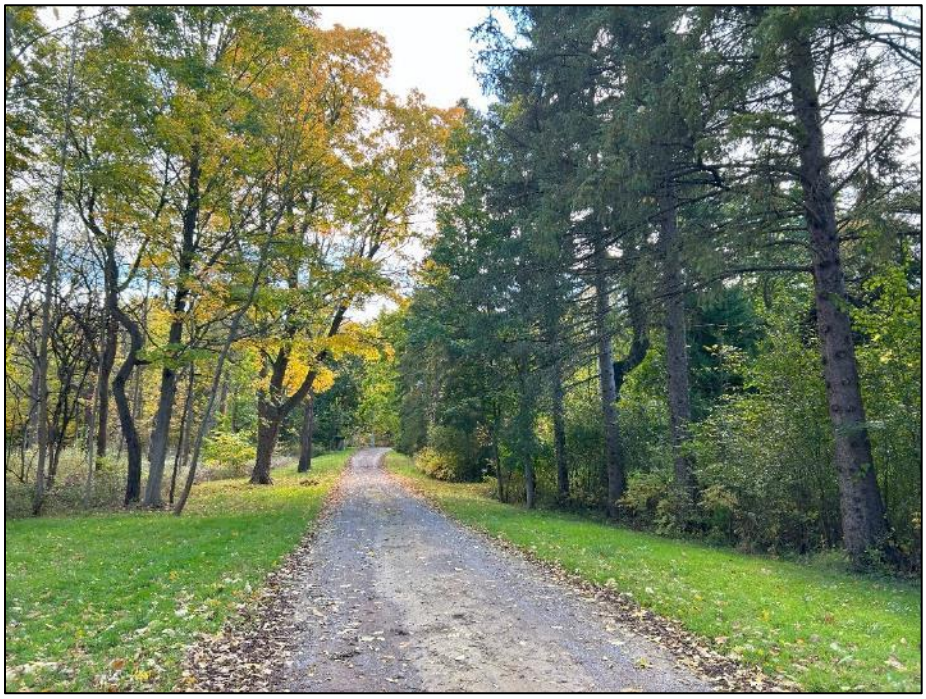


Photo 6: Southern hedgerow (right), facing southeast (October 16, 2024).

Photo 7: FOD, facing north from north of the pond (October 16, 2024).

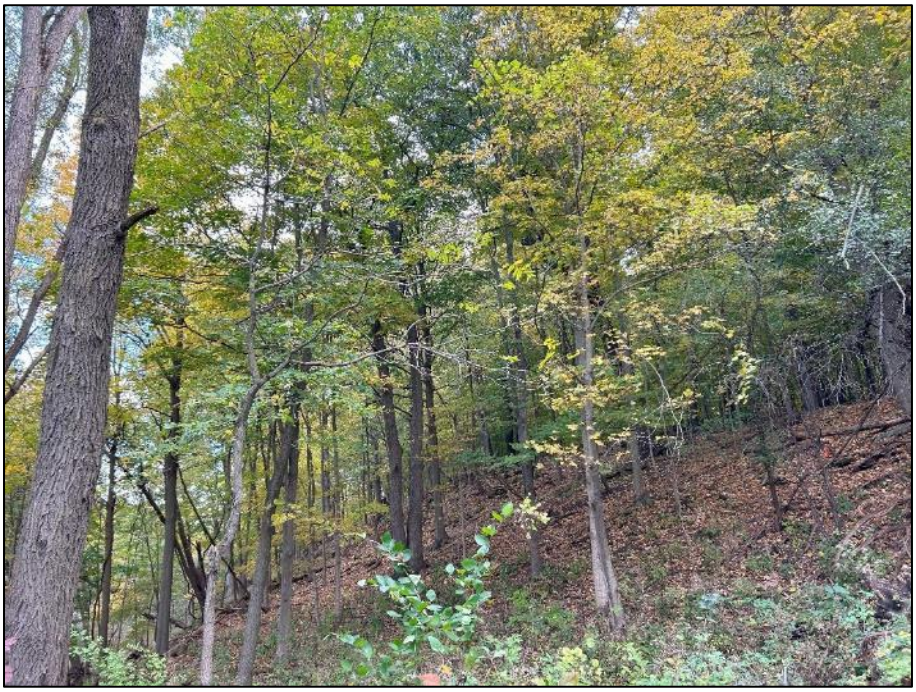


Photo 8: FOD5, facing northeast (October 16, 2024).

Photo 9: View of northern pond, facing north (October 16, 2024).

Photo 10: View of southern pond, facing north (October 16, 2024).

ELC Legend:

Terrestrial Communities:

Forest (FO)
FOD: Deciduous Forest
FOD5: Dry – Fresh Sugar Maple Deciduous Forest

Cultural (CU)
CUM1-1: Dry – Moist Old Field Meadow
CUT1: Mineral Cultural Thicket
CUW: Mineral Cultural Woodland
ANTH: Anthropogenic
HR: Hedgerow

Wetland Communities:
OAO - Open Aquatic

FOD (0.94 ha)
Black Locust Patch (0.10 ha)
OAO (1.63 ha)
CUW1 (0.07 ha)
CUT1 (0.20 ha)
FOD5 (0.73 ha)
Phragmites Patch (0.11 ha)
ANTH (3.85 ha)
CUW1 (0.84 ha)
FOD (0.78 ha)
Wet Depression (0.04 ha)
FOD (Offsite)
HR (0.38 ha)
HR (0.06 ha)
OAO (0.12 ha)
Wet Depression (0.09 ha)
Mount Mary Wetland Complex
HR (0.20 ha)
LOVERS LANE
SULPHUR SPRINGS ROAD

LEGEND

- Cucumber Tree (Planted)
- Kentucky Coffee-Tree (Planted)
- Watercourse[1]
- Headwater Drainage Feature (HDF)
- Subsurface HDF
- Meander Belt
- Wetland - Evaluated Other[1]
- Ecological Land Classification (ELC)
- ELC Inclusion
- Study Area (10.0 ha)

1 - Land Information Ontario

0 25 50 75 100
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

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CLIENT: Mizrahi Developments

PROJECT: Sulphur Springs Rd

TITLE: **Existing Environmental Conditions**

Palmer | PART OF SLR

REF. NO. 244.024373.00001-2-1

Figure 2

Document Path: G:_Projects\244\244_024373_SulpherSprings\1_Workspace\1_Maps\(2024-10) Ecology and Arborist Report\(2024-10) Ecology and Arborist Report.aprx

4.2 Incidental Wildlife

Incidental wildlife observations were recorded from the Subject Property and surrounding landscape during field investigations. These included species such as Black-capped Chickadee (*Poecile atricapillus*), White-breasted Nuthatch (*Sitta carolinensis*), Eastern Grey Squirrel (*Sciurus carolinensis*) and White-tailed Deer (*Odocoileus virginianus*). The mix of forested and open habitat are conducive to supporting these types of species.

4.3 Aquatic Environment

The Subject Property is situated within the headwaters of the Sulphur Creek watershed. This watershed arises from the Copetown Bog, the only kettle bog identified in the City of Hamilton, and eventually empties into Spencer Creek, approximately 7 km downstream of the Subject Property. From Spencer Creek, flow reaches Lake Ontario through the Cootes Paradise Marsh and Hamilton Harbour, to the east of Dundas, Ontario.

The Sulphur Springs watershed drains an area of approximately 17 km^2 (Hamilton Conservation Authority, 2010). Land use within the watershed, as summarized in the GEO Morphix report, predominantly consists of open space (5.33 km^2), residential lands (4.66 km^2), and agricultural (2.58 km^2). Forest cover accounts for 62.2%, meadows cover 1.2%, and wetlands are <1% of the subwatershed cover (GEO Morphix, 2024).

The Sulphur Creek watershed generally exhibits cool-to-coldwater conditions, as groundwater discharges from the fractured bedrock to serve to moderate water temperatures (Hamilton Conservation Authority, 2010). Temperature studies completed in Spring and Sulphur Creeks generally indicate that the daily maximum water temperature rarely exceed 20 ºC during the summer months, except in the reaches that have been impacted by residential development (Hamilton Conservation Authority, 2010).

Within the Subject Property, a man-made pond exists in the northern half of the property (**Photo 11**), and a smaller man-made pond in the south. A cold-water stream, which is a tributary of Sulphur Creek, transverses the Subject Property to the northern pond (**Photo 12; Figure 2**).

The northern pond is relatively large, with a pond bed that slopes downwards to its eastern extent. Pond substrates appeared to be a mix of sand and gravel within its western extent, becoming rockier with large cobbles as you progressed eastwards (**Photo 12**). The pond's riparian boundary was comprised of mid-aged and mature trees, within the FOD5, CUT1, and CUW1 ecosites (**Figure 2**). During SLR's October 2024 site visit, several individuals of Largemouth Bass (*Micropterus nigricans*), a species more commonly associated with warmwater conditions, were observed along the pond's northwestern quadrant within shallower waters. Along the pond's eastern limit, a noticeable berm and grade change is noted. Water was observed being collected within a small outlet grate, and outflow observed leaving the Subject Property through a small CSP culvert at the bottom of the berm. From review of GEO Morphix's report, it is noted that the pond appears on historical imagery sometime in 1959, replacing a former wetland/pond feature (GEO Morphix, 2024). The pond's eastern berm effectively cuts off fish migration from downstream habitats. Upstream of the pond certain portions of the Sulphur Creek tributary may be accessible to fish from the pond; however, a number of cascades (up to 0.5 m in height) effectively limit fish migration to less than 100 m upstream of the large pond.

Upstream of the pond, the tributary of Sulphur Creek enters the Subject Property along its western limit. Here, the tributary passes beneath a large CSP culvert, which forms a portion of the existing private trail that encircles the northern pond. As it enters the property, the tributary exhibits a 'step-and-pool' morphology, with small, intermittent cascades feature along its active

channel. GEO Morphix identified this upstream segment as SCT3 in their report, identifying the feature as being partially confined, and limited in aquatic habitat due to the general shallow depth of the channel, and lack of deep pools (GEO Morphix, 2024). SLR agrees with these general observations as it relates to aquatic habitat, as the small cascades likely preclude fish passage upstream from the online pond, during most times of the year. The tributary of Sulphur Creek drains into the online pond through a dense stand of *Phragmites* in its southwestern corner. A considerable amount of Watercress (*Nasturtium officinale*), a groundwater indicator plant species, was not amongst the Phragmites patch.

Photo 11: Drone Image of northern OAO (October 16, 2024).

Photo 12: Drone Image of the Sulphur Creek tributary (October 16, 2024).

Three, small HDFs are located in the southern half of the property, along with a small man-made pond. Two HDFs are centred around the southern man-made pond, and in GEO Morphix's report, are identified as SCT1-5 and SCT1-3. SCT1-5 originates from a weeper tile system located along an armourstone wall associated with the residential properties fronting onto Sulphur Springs Road (**Photo 13**). SCT1-3 is contained within a subsurface draining system, gathering drainage from the southern pond, and directing it eastwards off the property towards the Mount Mary Wetland complex. The other HDF is identified as SCT6 in GEO Morphix's report; from SLR's onsite review SCT6 arises from a groundwater seep near an old well casing, and quickly drains off the property to the west (**Photo 14**). During SLR's October 2024 site visit, HDFs SCT1-5 and SCT6 were observed flowing, while SCT1-3 contained standing water through an exposed grate (**Photo 15**).

To fully characterize the individual hydrologic regime and provide a comprehensive management recommendation for each of the individual HDFs, in accordance with the 2014 HDF guidelines (TRCA and CVC, 2014), additional surveys will be required in the spring of 2025.

The small, southern pond is completely enclosed in a landscaped area (i.e., manicured lawn). As mentioned, the pond receives inflow from the SCT1-5 feature and appears to outlet to the SCT1-3 feature. The pond features a narrow band of riparian vegetation and appeared clear during SLR's October 2024 site visit (**Photo 16**). A Muskrat (*Ondatra zibethicus*) was observed using the southern pond during SLR's site visit.

Photo 13. The SCT1-3 feature draining northwards from the armourstone wall. Good flow observed on October 16, 2024.

Photo 14. Feature SCT6 arising from a groundwater seep near an old well structure. Minimal flow observed on October 16, 2024.

Photo 15. Open grate observed along the SCT1-3 subsurface drainage pathway. Standing water observed on October 16, 2024.

Photo 16. Small southern pond feature.

5.0 Assessment of Significance and Constraints

5.1 Significant Woodland

The wooded portions of the Subject Property are designated as Key Natural Heritage Feature Significant Woodlands in the Rural Hamilton OP and generally require a 30 m vegetation protection zone from the dripline edge (**Figure 3**). Due to the historically altered nature of the majority of the Subject Property (i.e., ornamental and manicured landscaping), there may be woodland boundaries where certain VPZ's width could be reduced, and strategic plantings and restoration may be implemented elsewhere within the property to help enhance other, more mature woodland boundaries. These encroachment and restoration areas are outlined on **Figure 3**.

5.2 Aquatic Habitat and Fish Habitat

In the City's Rural OP, a 30 m VPZ is generally required from permanent and intermittent streams and fish habitat. Consistent with Policy 2.4.13, the 30 m setback is initiated from the outside boundary of the feature. This setback will apply to Sulphur Creek in the northern portion of the Subject Property (**Figure 3**).

This 30 m setback has been applied to the watercourse corridor which extends towards the western property limit (**Figure 3**). This segment of the tributary of Sulphur Creek provides a permanent cold-water contribution downstream and is to be protected.

The large northern pond likely provides a mixture of cold, cool and warmwater habitat as the pond's depth likely provides some thermal stratification. Due to observed presence of Large-mouth Bass, there is evidence that warmwater conditions are maintained in certain portions of

the pond to allow the species to be present. Overall, the northern pond is protected within the natural heritage setbacks associated with the adjacent woodlands. No development is proposed within the northern pond area.

The southern man-made pond provides minimal aquatic habitat or riparian habitat function. No fish were observed within the pond itself. The southern pond conveys flow from the southern residential properties, and provides flow eastwards, eventually draining offsite. Due to the nature of the existing drainage system (i.e., a subsurface weeper tile system), the system does not appear to flow continuously, as observed during the October 16, 2024 site visit where the subsurface grate contained only standing water and no flow. It is SLR's understanding that no development is proposed within or adjacent to the southern pond.

The HDFs within the southern half of the property provided minimal flow (SCT1-5 and SCT6) or were not flowing (SCT1-3) during October 2024. These features will need to be further evaluated in spring 2025 to fully characterize their hydrologic function. It is SLR's understanding that the SCT6 and SCT1-5 features are to remain in place, and the subsurface SCT1-3 flow conveyance will be maintained as part of the future development. Outside of hydrologic functions, it is likely that all HDFs within the Subject Property provide minimal riparian, and terrestrial habitat function due to their placement within a manicured, urbanized landscape (i.e., lawn).

5.3 Wetlands

No wetlands were identified within the Subject Property. However, on adjacent lands, east of the Subject Property, the Mount Mary Wetland Complex is identified as a non-provincially significant wetland on NHIC mapping. A 30 m vegetation protection zone has been considered for this feature, as per the Rural Hamilton OP (**Figure 3**). The wetland, along with it's 30 m VPZ setback, do not overlap with the Subject Property limits.

5.4 Species at Risk

Approximately four Kentucky Coffee-tree saplings and four seedlings were observed in a cluster within the anthropogenic area on site. In this same area, a Cucumber Tree was also observed. Kentucky Coffee-tree and Cucumber Tree are listed as Threatened SAR in Ontario. The trees are proposed to be removed; however, these individuals are believed to have been planted and are thus not expected to be protected under the *ESA* (OMNRF, 2017). Consultation with the MECP will confirm the required direction to be taken regarding the planted trees.

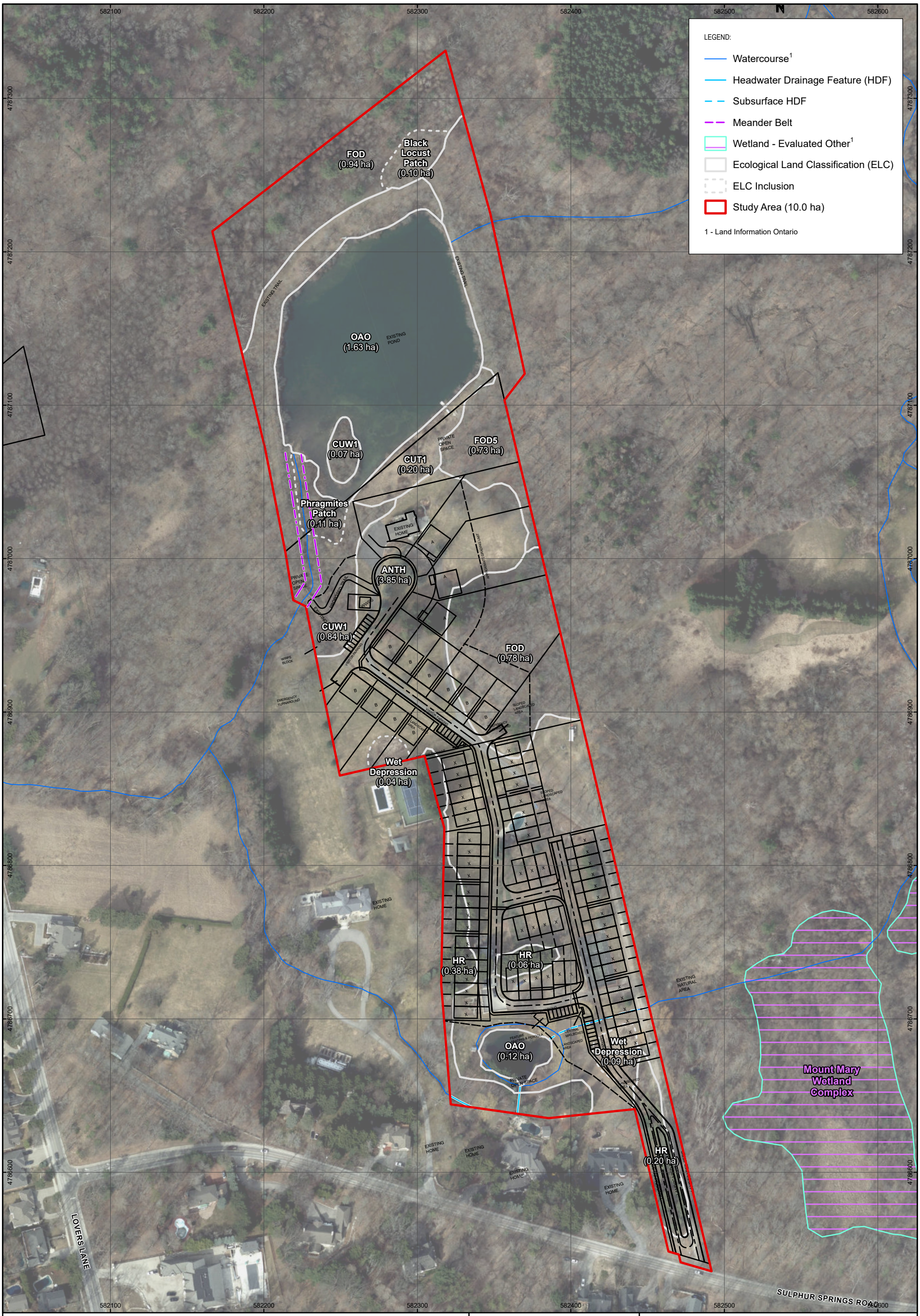
Further assessment for snag trees in late 2024 or early 2025 (once all leaves have fallen from trees) will inform whether it should be recommended that tree clearing only occur outside of the appropriate bat timing window. Further MECP consultation may be required to determine appropriate compensation and/or mitigation measures. Results and final recommendations will be discussed as part of the updated EIS.

A full Species at Risk screening and assessment, including targeted surveys, will be completed in 2025. If any other SASR (i.e., birds, herptiles) are identified during SLR's 2025 surveys, potential impacts and appropriate mitigation measures (if applicable) will be discussed as part of the updated EIS, including any additional consultation with MECP that may be necessary.

6.0 Proposed Development

Based on the current site plan and grading plan dated October 15, 2024, and November 25, 2024, respectively, the proposed development consists of 61 townhouses and 14 houses along with associated driveways, visitors parking, and a shared amenities building. Various Landscape Areas and Private Open Space areas are proposed adjacent to existing natural heritage features such as the northern pond and woodlands and the southern pond. The proposed development and general grading disturbance limits are displayed on **Figure 3**.

Development is focused within the southern portion of the Subject Property, while a conservation block is identified around the northern pond. Consistent with the NEP's permitted uses for the *Escarpment Natural Area* designation, it is proposed that the existing, non-motorized, nature trail be preserved to maintain future access to the naturalized area around the pond.



ELC Legend:

Wetland Communities:
OAO - Open Aquatic

Terrestrial Communities:
Forest (FO)
FOD: Deciduous Forest
FOD5: Dry – Fresh Sugar Maple Deciduous Forest

Cultural (CU)
CUM1-1: Dry – Moist Old Field Meadow
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North American Datum 1983
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CLIENT
Mizrahi Developments

PROJECT
Sulphur Springs Rd

TITLE
Proposed Development

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REF. NO. 244.024373.00001-3-2

Figure 3

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7.0 Impact Assessment and Mitigation Measures

The Subject Property is largely comprised of anthropogenic/culturally influenced communities (i.e., historically developed and landscaped lands, cultural thicket, cultural woodland). While the proposed removals (i.e., scattered trees on maintained lawns and 0.48 ha of woodland) will result in some localized loss of wildlife habitat, much of these areas are considered low-quality, and may not pose constraints to the proposed development. Natural heritage features such as the extensive deciduous forest and watercourse corridor at the northern end of the Subject Property will be retained.

7.1 Vegetation Communities and Flora

7.1.1 Cultural Communities

The proposed development is largely occurring in anthropogenic and hedgerow communities. Removals of these communities will result in some loss of low-quality wildlife habitat.

7.1.2 Woodlands and Buffers

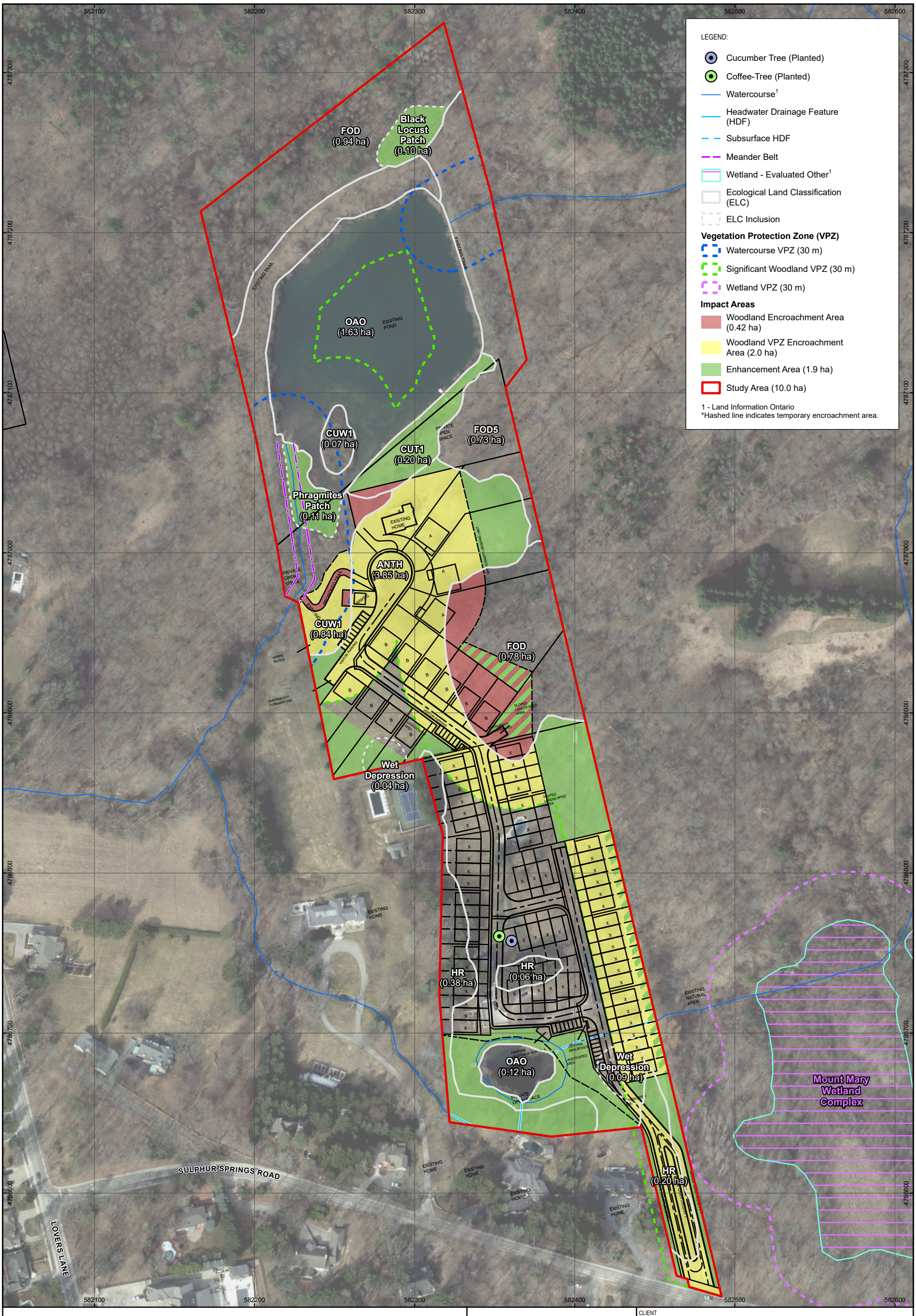
Based on the site plan, a small amount of woodland edge encroachment (0.48ha) of the northwestern and eastern cultural woodland is proposed where the proposed grading and development limits overlap with the woodlands (**Figure 4**). The removal of these areas of woodland edge habitat is not expected to negatively impact the overall woodland ecological functions with the implementation of compensation and off-setting plantings. Further field surveys in 2025 will be completed to better understand all potential impacts.

Significant woodlands require a 30 m VPZ, based on the Rural Hamilton OP. The current site plan and grading plan limits overlap with 2.0 ha of significant woodland VPZ area. To offset any potential impacts to the woodland and woodland VPZ encroachments, restoration plantings are proposed within Private Open Space and Landscape areas, which are proposed adjacent to these existing woodlands (**Figure 4**). Currently, a minimum 5 m buffer is proposed along the development units along the southeast side of the concept plan. Potential refinement of the development plan subject to the 2025 field surveys and further assessment of ecological functions may result in the incorporation of further buffer areas.

7.1.3 Woodland Compensation

Planting and restoration efforts will aim to restore the natural areas within a site level context where disturbances have occurred as a result of the proposed development and construction works. Trees are to be planted at appropriate densities for woodland restoration that will provide ecological benefits and buffer to existing woodlands and other natural features.

As the primary objective of compensation is restoration rather than street tree establishment, it is recommended that younger tree stock (150 – 200 cm potted/whip stock) be employed for practicality of implementation and to ensure greater establishment in areas without planned regular maintenance. Native tree species will be selected for planting and the Region will accommodate the tree plantings within the Subject Property to the extent possible where space permits and, where permitted, on public or private property. A detailed woodland compensation and restoration plan should be completed in consultation with the agencies as part of the development approval process.



ELC Legend:

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Terrestrial Communities:
Forest (FO)
FOD: Deciduous Forest
FOD5: Dry – Fresh Sugar Maple Deciduous Forest

Cultural (CU)
CUM1-1: Dry – Moist Old Field Meadow
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North American Datum 1983
Universal Transverse Mercator Projection Zone 17

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CLIENT
Mizrahi Developments

PROJECT
Sulphur Springs Rd

TITLE
Encroachment and Enhancements

Palmer PART OF SLR

REF. NO. 244.024373.00001-4-1

Figure 4

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7.1.3.1 Planting Material

The planting material must be native to Ontario and sourced from local plant nurseries. Further details to suggested species and quantities are outlined in the Arborist Report for this project.

7.1.3.2 Mulch

Based on site conditions (i.e., for areas with limited organic material for moisture retention), the planted trees should be surrounded by organic mulch (i.e., wood chips or shredded bark) to help retain soil moisture, moderate soil temperature and reduce competition with the established herbaceous vegetation layer. A mulch layer of 5 to 10 cm in thickness should be applied over the entire root area. The root collar area should be kept clear by applying a thinner layer of mulch near the tree trunk.

7.1.4 Wetlands

While there are two man-made ponds on the property, there are no wetlands identified within the Subject Property limits. One non-provincially significant wetland, the Mount Mary Wetland Complex, is found on adjacent lands to the east as shown on **Figures 2** and **3**. This feature and it's 30 m VPZ do not overlap with the Subject Property limits and is not anticipated to be impacted by the proposed development provided that the hydrological conditions supporting the wetland are maintained. Thus, no compensation or mitigation beyond Erosion Sediment Control (ESC) measures (outlined in Section 7.4) will be required.

7.2 Wildlife Habitat

Additional 2025 surveys will be conducted and discussed as part of the updated EIS. The proposed development has the potential to impact more common wildlife (e.g., primarily birds and common mammals) due to tree and vegetation removals. Impacts to wildlife associated with wetlands will require further assessment as part of the updated EIS. The 2025 surveys will further inform the types of wildlife habitat that may be affected and potential for the identification of further mitigation measures.

To avoid and mitigate impacts to breeding birds and ensure compliance with the MBCA, removal of vegetation should be completed outside of the breeding bird season (April 1 – August 31). However, vegetation removal timing may require clearing within that window. Should this prove to be the case, it is recommended that shortly before vegetation clearing a qualified biologist complete an active nest survey of the vegetation proposed for removal, to ensure that there are no conflicts with the MBCA. A no-nesting result is most likely to be found early and late in the season (i.e., April and August). If nesting activity is detected, clearing activities should be delayed until it can be determined that the birds have fledged and left the nest.

It is noted that a more conservative tree removal timing window, with respect to SAR bats, is discussed in Section 7.3 below.

Additional wildlife habitat impacts and mitigation measures, if applicable, will be discussed as part of an updated EIS following 2025 surveys, and will include a full assessment of Significant Wildlife Habitat.

7.3 Species at Risk

As discussed, the SAR trees observed within the Subject Property were planted and are thus not expected to be protected by the ESA. Agency consultation with MECP will confirm this.

If any Species at Risk are identified during SLR's 2025 surveys, potential impacts and appropriate mitigation measures (if applicable) will be discussed as part of the updated EIS.

7.4 Tributary of Sulphur Creek

Direct encroachment into the northwest Sulphur Creek tributary is not planned as part of the proposed development. A proposed trail and a grading are proposed within the outer limit of the 30 m VPZ measured out from the meander belt of this feature. The proposed trail will connect the existing private trail around the pond with the future development area.

Potential impacts to the general area surrounding the southeast Sulphur Creek tributary will be assessed as part of the detailed design to avoid and/or mitigate potential direct or indirect negative effects from the development.

For the HDFs and the southern pond, no development is proposed within the vicinity of the pond and associated southern HDFs (i.e. SCT1-5, and SCT6 features). The eastern portion of the subsurface HDF (SCT1-3) is proposed to be developed; however, hydrologic function from SCT1-3 will be maintained towards the Mount Mary wetland complex.

During the construction phase of the development there is potential for erosion and off-site transport of sediment to be directed to the watercourse. Therefore, to avoid potential impacts to the northeast Sulphur Creek tributary, the project will implement Best Management Practices (BMPs) related to Erosion Sediment Control (ESC) measures, including a comprehensive ESC plan. These measures will be used by the contractor and should meet guidelines as outlined in the *Erosion and Sediment Control Guideline for Urban Construction* (Greater Golden Horseshoe Conservation Authorities 2006), or equivalent standards. With appropriate ESC measures and compensation, no negative impacts to the watercourse or its ecological functions are anticipated.

With regards to other potential harmful substances associated with construction activities (i.e., fuel, oil, hydraulic fluid, etc.), it is recommended that a spill kit and plan be implemented by the proponent or contractor to address any release of hydrocarbons to the surrounding environment and prevent them from being drawn downstream into the watercourse. All machinery or equipment is recommended to be re-fueled or serviced at least 30 m from any watercourse.

8.0 Policy Conformity

A summary of applicable natural heritage policies and the manner in which the proposed development plan meets or requires further assessed to determine policy conformity is provided in **Table 3**. With the implementation of current and future mitigation and enhancement measures, it may be possible to limit negative impacts to the Natural Heritage Features through avoidance, mitigation, compensation and enhancement. This will require further assessment of the significance and sensitivity of the natural features, and confirmation and potential refinement of the development plan. Policy conformity will be further reviewed as part of the proposed Official Plan Amendment associated with this project.

Table 3. Review of Policy Conformity

Policy Document	Policy Intent/Objective	Implications and Policy Conformity
Migratory Birds Convention Act	The Migratory Birds Convention Act (MBCA), 1994, and Migratory Birds Regulations (MBR), 2014,	Vegetation removal should be completed between September 1 and March 31 of any given year (please note the SAR Bat

Policy Document	Policy Intent/Objective	Implications and Policy Conformity
	protect most species of migratory birds and their nests	Maternity Roosting timing window below). Biologist to screen for nest(s) for any proposed vegetation removal outside of this period.
Endangered Species Act	Species designated as Endangered or Threatened by the COSSARO are listed as SAR under SARO. These SAR and their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation and migration) are afforded legal protection under the ESA.	Based on initial SAR screening and fieldwork, two Threatened tree species were recorded within the developed portion of the property. These trees, however, were planted and thus not protected under the ESA. SAR wildlife and their habitat will be further assessed in 2025. The cautionary timing window mitigation outlined in Section 7.3 avoids potential contravention of the Act in the event SAR bats are present. Subject to further assessment, MECP consultation may be necessary.
Provincial Planning Statement	Direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features.	Further assessment of natural features as part of the updated EIS is required to assess for policy conformity.
Niagara Escarpment Plan	NEP policies aim to protect and enhance natural and hydrologic features and the open landscape character of the Escarpment and lands in its vicinity.	Further assessment of natural features as part of the updated EIS is required to assess for policy conformity.
Rural Hamilton Official Plan	The City's Natural Heritage System encapsulates Core Areas and Key Hydrological Features (KHF). Development or site alteration within the Natural Heritage System shall be accompanied by an EIS.	The proposed development is largely within existing anthropogenically altered lands. For portion of the development and grading that are within natural heritage feature edges or their VPZs, enhancement plantings will occur onsite to offset any habitat removal and potential impacts from the proposed development.
Urban Hamilton Official Plan	The City's Natural Heritage System encapsulates Core Areas and Key Hydrological Features (KHF). Development or site alteration within the Natural Heritage System shall be accompanied by an EIS.	The southern tip of the Subject Property that is within the Urban boundary of the OP is entirely within anthropogenic lands. Enhancement plantings will occur onsite to offset any potential impacts to developing within the VPZ of adjacent natural heritage features.

Policy Document	Policy Intent/Objective	Implications and Policy Conformity
Ontario Regulation 41/24 – Prohibited Activities, Exemptions and Permits Regulation	HCA regulates activities in natural and hazardous areas.	A permit under O. Reg. 41/24 will be required for development or site alteration within the HCA regulation limits associated with the HDF. Policy conformity needs to be confirmed following 2025 surveys and any revisions to the site plan.

9.0 Closure

The findings of our study are the result of a background review, preliminary ecological field surveys, and an analysis of data using current scientific understanding of the ecology of the area and natural heritage policy requirements. We have evaluated the environmental sensitivities and constraints of the Subject Property, which are described in this report and illustrated on **Figures 2** and **3**.

Based on the results of the Scoped EIS thus far, further ecological assessment is needed to understand the full representation of ecological features and functions of the Subject Property and adjacent lands and the potential impacts from the proposed development to the identified natural heritage features. This information will further inform the recommended mitigation measures described in this report, including the need for a detailed restoration and compensation plan. Further refinement of the proposed development may be necessary. An updated EIS will identify any additional potential impacts that result from 2025 field investigations to better the environmental effects of the project and to inform the updated EIS conclusions and recommendations.

Regards,

SLR Consulting (Canada) Ltd.

Angela Zhou, B.E.S.
Ecologist

Joel Davey, B.BRM, M.ES
Senior Aquatic Ecologist

Dirk Janas, B.Sc.
Technical Director – Terrestrial Ecology

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