

# Wilket Creek Forest Environmentally Significant Area (ESA) Management Plan





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## Land Acknowledgement

We acknowledge the land we are meeting on is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.



## Preamble

The City of Toronto (the City) has developed a Management Plan for Toronto's Environmentally Significant Areas (ESA's). That Plan builds upon existing ESA management by providing structure, clarity, and consistency to ESA management processes. A foundational piece of the Plan is the core value and guiding principles (**Figure 1**).

The Management Plan for Toronto's ESAs identifies steps for the preparation of ESA-specific management plans which document the unique characteristics of an ESA or group of ESAs. ESA-specific management plans recommend management actions based on management objectives and site mapping that will help to maintain priority values and address priority pressures that influence the specific ESA(s).

ESA-specific management plans will assist the City in planning, prioritizing, and managing existing programs and program resources to ensure a coordinated and consistent approach to management operations. Where capital projects are identified (e.g., trail improvements), ESA-specific management plans will assist the City in planning for and managing resources to undertake larger management projects.



**Figure 1: The core value “Protect These Lands” and the guiding principles that connect and provide direction for management of the ESAs.**

This ESA-Specific Management Plan for Wilket Creek Forest ESA was developed to test and further refine the step-by-step process for preparing ESA-specific management plans developed through the draft Management Plan for Toronto’s ESAs (**Figure 2**). Therefore, this Plan may have minor variations in format or content from plans for other ESA sites prepared in future. In addition to guidance provided through the Management Plan for Toronto’s ESAs, Engagement with First Nations Treaty Holders and Rights Holders, a Technical Advisory Group and external stakeholders have informed this ESA-Specific Management Plan for Wilket Creek Forest ESA.



**Figure 1: Key steps in preparing an ESA-specific plan.**



## Introduction

Wilket Creek Forest ESA covers approximately 50 ha natural forest and parkland near the intersection of Eglinton Avenue East and Don Mills Road in Toronto, Ontario (**Figure 3**). It overlaps with portions of Wilket Creek Park, Sunnybrook Park and Edwards Gardens.

This ESA-Specific Management Plan for Wilket Creek Forest ESA documents key outcomes from each step of the ESA-specific planning process.

## Engagement Summary

Engagement for this Plan occurred throughout October and November 2024. Through engagement, the City sought to identify site-specific values (ecological features as well as uses) and associated pressures / concerns. Participants were able to provide written comment(s) and map specific locations of interest / concern. Other input that could inform management objectives was also gathered.

Indigenous engagement included meetings with Treaty Holders and Rights Holders as well as a community sharing meeting which included participants who identify as First Nation, Métis, and Inuit.

The City engaged with ESA users, neighboring residents, and the public by hosting two pop-up events, as well as through a neighbourhood mail campaign, an online survey and digital mapping tool (Social Pinpoint).

Participants identified important natural values (including wildlife habitat, flora and fauna diversity, forests and large trees), important built amenity values (including natural surface and paved trails, and seating areas), and valued activities (including walking, nature appreciation and biking). Identified pressures included concerns such as litter / dumping, invasive plants, erosion, noise pollution and off-leash dogs. In terms of City management activities, respondents identified native tree planting, wetland restoration, garbage / litter removal, and invasive species management as top priorities. Feedback received also reflected Indigenous values such as ceremonial space, the health and condition of the creek and forests, strong desires for more naturalization and sustainable access in natural areas.

**Figure 2. Location Map of Wilket Creek Forest ESA.**



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community. ESA Boundary, City of Toronto

## Plan Preparation

### Step 1 | Characterization Report

The Wilket Creek Forest ESA Characterization Report documents the current understanding of site-specific ecologic features and functions, current uses and issues, and existing infrastructure. This report collates existing secondary source information with supplementary field study conducted (June 19<sup>th</sup>, 20<sup>th</sup>, August 31<sup>st</sup> and August 29<sup>th</sup>, 2023) to confirm and add to existing information. Due to sensitive species and location information, that Report has been prepared as an internal resource. A site characterization summary is included in **Appendix A**.

### Step 2 | Identification of Values and Pressures

Informed by the ESA Characterization Report and site-specific engagement, values in the ESA and pressures that affect ESA values(s) were identified. Existing uses were also assessed to determine if they align with the guiding principles for ESA management, if they are considered value(s) or pressure(s), and / or if they are a priority for management.



**Values** include features, functions and activities / uses that are important from an ecological, cultural, economic, or social perspective. Examples of values include unique or rare species and / or landforms, environmental services provided, and amenity features like trails.

**Pressures** include disturbances or activities (natural or human-caused) that currently do or have potential to negatively impact a value. Examples of pressures include the presence of invasive species, erosion and informal trails.

Values and pressures identified for Wilket Creek Forest ESA are presented in **Table 1**. Management feasibility and priority are assigned to each value and pressure. Management feasibility is informed through consideration of types of effective and reasonable management options and tools available. Management priority, for those values and pressures which can be managed, are assigned a relative ranking (i.e., High, Medium, Low) as informed by ecological, alignment with the ESA Management guiding principles, and engagement outcomes.

**Table 1. Identification of Values and Pressures in Wilket Creek Forest ESA**

<b>Value</b>	<b>Pressure (including Cause / Source if known)</b>	<b>Management Feasibility</b>	<b>Management Priority Level (for Manageable Pressures)</b>
High sensitivity forest and wetland communities, high vulnerability bluff community	Trails – Informal natural surface trails	Management options available <ul style="list-style-type: none"> <li>Requires further assessment of trail-use and planning to determine site-specific feasibility.</li> </ul>	<b>High</b> High Sensitivity / Ecological Value in ESA
High sensitivity forest and wetland communities, high vulnerability bluff community	Invasive species	Management options available <ul style="list-style-type: none"> <li>Populations (at the time of plan preparation) are still of manageable size / density (discreet populations).</li> <li>May need to consider proximity to water feature.</li> </ul>	<b>High</b> High Sensitivity / Ecological Value in ESA
High sensitivity forest and wetland communities,	Erosion	Management options available <ul style="list-style-type: none"> <li>Planned infrastructure capital projects can address some erosion concerns.</li> </ul>	<b>High</b> High Sensitivity / Ecological Value in ESA

Value	Pressure (including Cause / Source if known)	Management Feasibility	Management Priority Level (for Manageable Pressures)
high vulnerability bluff community		<ul style="list-style-type: none"> <li>Other issues contributing to erosion requires further assessment to determine feasibility and supporting resources.</li> </ul>	
Biodiversity	Invasive species	Management options available: <ul style="list-style-type: none"> <li>Where populations are still of manageable size / density (discreet populations).</li> <li>May need to consider proximity to water feature.</li> </ul>	<b>High</b> Ecological value is high Pressure is manageable (for discreet populations)
Biodiversity	Domestic animals (off-leash dogs)	Not manageable within context of individual ESA-specific management.	<b>N/A</b>
Biodiversity	Litter, dumping	Management options available. <ul style="list-style-type: none"> <li>Operations staff may consider targeted or enhanced efforts for removal via existing access.</li> </ul>	<b>Low</b> Ecological value is high, however, management requires a multi-divisional site-by-site approach
Habitat integrity	Dumping (from neighbouring private properties – e.g., yard waste)	Management options available: <ul style="list-style-type: none"> <li>Further assessment required to determine feasibility and supporting resources.</li> </ul>	<b>Low</b> Ecological value is high, however, management requires a multi-divisional site-by-site approach
Recreational Trail Amenities and Infrastructure	High user demand and potential for conflicts between user groups	Management options available: <ul style="list-style-type: none"> <li>Requires further assessment of trail-use and planning to determine site-specific feasibility.</li> <li>Some pressures are not manageable within context of ESA-specific management.</li> </ul>	<b>Medium</b> Recreational use value is high



Value	Pressure (including Cause / Source if known)	Management Feasibility	Management Priority Level (for Manageable Pressures)
Indigenous cultural value of flora and fauna	Biodiversity loss	Management options available: <ul style="list-style-type: none"> <li>• Management may be achieved in part by addressing other issues.</li> </ul>	<b>High</b> Cultural value is high

### **City-wide Values and Pressures Heard from Engagement**

In addition to what is included in Table 1, Indigenous cultural values that were identified through engagement included interests in traditional medicine gardens / plantings and harvesting, co-management (including paid / economic opportunities), recognizing historical significance (signage, art, traditional language), archaeological studies and access for cultural uses and placemaking (fires, teaching, programming). Through the Reconciliation Action Plan, the City is working on supportive processes and opportunities where these interests can be implemented and / or further discussed.

Comments received during public engagement relating to motorized recreational vehicles on trails, speed limits on trails, general park amenity requests and park servicing are outside the scope of ESA-specific management which is focused on preserving the ecologic features and functions of the specific ESA. Some concerns and their potential solutions require a more comprehensive approach to be considered as part of city-wide management and communication strategies (e.g., sign standards, bylaw enforcement).

## **Step 3 | Management Objectives**

The following site-specific management objectives for Wilket Creek Forest ESA have been identified based on the site characterization and existing conditions (Step 1) and prioritized values and pressures (Step 2).

Wilket Creek Forest ESA is highly valued for the diversity of sensitive and high-quality ecological communities present and for various recreational uses. Many of the pressures identified are feasible to be managed at a site level. Management objectives at this site include:

- Promote biodiversity by managing populations of invasive vegetation and planting native species.
- Improve ecological connectivity.

- Coordinate infrastructure and restoration planning and implementation with others to align opportunities and support efficiency, where possible.
- Explore opportunities to reduce or mitigate harmful impacts of informal or unsustainable trail use / access, or other unsustainable activities.

## Step 4 | Application of Management Zones

Management zones provide information for City decision-makers and project leads to assess the appropriateness or extent of planned and compatible uses and management activities in ESAs. Zones are defined by consistent overarching management themes:

- **Ecological Preservation Zone** | Areas containing natural features with highest value and sensitivity.
- **Conservation Zone** | Areas containing natural features with less sensitivity to public use that may already have some effects from existing authorized uses or recent disturbances.
- **Passive Recreation Zone** | Areas containing natural features that are being impacted by high social and public use values or heavier disturbances from planned capital projects.

All previous steps contribute to how mapping of management zones within the ESA has been applied. Not all priority values / pressures or management objectives that support those values / pressures can be mapped if they lack a specific physical location or are widespread considerations (e.g., Biodiversity, Indigenous cultural value of flora and fauna). In such cases, management activities to support them is considered appropriate in all management zones.

**Table 2** provides additional rationale for how management zones were assigned and applied. Technical mapping details are provided in **Appendix B**. Management zone mapping for Wilket Creek Forest ESA is illustrated in **Figure 4**.

**Table 2. Application of Management Zones in Wilket Creek Forest ESA**

Priority Value / Existing Site Condition	Management Zone	Rationale
High sensitivity forest and wetland communities, <ul style="list-style-type: none"> <li>• High vulnerability bluff community</li> </ul>	Ecological Preservation	High Sensitivity / Ecological Value in ESA
Habitat Integrity / Locations of Significant Species and Communities	Conservation	Ecological Value
Existing asphalt multi-use recreational trails	Passive Recreation	High Recreational Use Value
City-managed natural surface recreational trails	Conservation	Recreational-use Value



Priority Value / Existing Site Condition	Management Zone	Rationale
Existing City-managed amenity space(s) <ul style="list-style-type: none"> <li>Picnic areas, manicured spaces</li> </ul>	Passive Recreation	High Recreational-use Value

## Step 5 | ESA-Specific Plan

The ESA-Specific Plan (**Table 3**) combines elements of all previous steps to identify management activity recommendations. This plan is to be used in conjunction with guidance from the Management Plan for Toronto's ESAs as a roadmap for management decisions and how projects or management activities will be planned for and implemented to ensure the best outcomes for the Wilket Creek Forest ESA. The implementation of ESA management activity recommendations (e.g., invasive species management) or the delivery of subsequent detailed project planning (e.g., trail planning) is determined by the same opportunities and restrictions that influence all City operations or detailed project planning undertakings.

Most ESA management objectives will be achieved through current and (as applicable) future ESA-related programs and program resources. Opportunities to coordinate with capital infrastructure or similar projects may also be identified as opportunities to undertake beneficial management activities for the ESA.

Management recommendations identified in this Plan will be implemented over time in consideration of phasing, follow-up treatment, adaptive management, available resources, shifting priorities and collaboration opportunities. Some recommendations that require larger commitments of time or resources may benefit from immediate and interim actions while working towards the larger goal. Other effective management activities beyond what is recommended in this report can also be considered for implementation where they align with the core value and guiding principles for ESA management and stated objectives for Wilket Creek ESA.



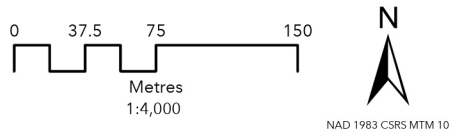
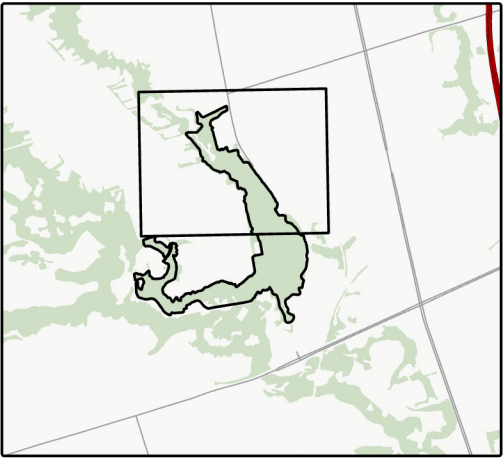
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Figure 4-1: Management Zones

Wilket Creek ESA Management Plan

- ESA Boundary
- Watercourse (MNRF)
- Private Ownership
- Management Zone / Opportunity
  - Ecological Preservation (68%)**
    - High sensitivity forest and wetland communities
    - High vulnerability bluff community
  - Conservation (25%)**
    - Habitat Integrity
    - Locations of Significant Communities/Species
    - Existing City managed natural surface trails with 2m buffer
  - Passive Recreation (7%)**
    - Existing asphalt trails with 5m buffer
    - Existing City managed amenity spaces and manicured turf (i.e. picnic areas)



Orthoimagery Source: Maxar

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by Queen's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.





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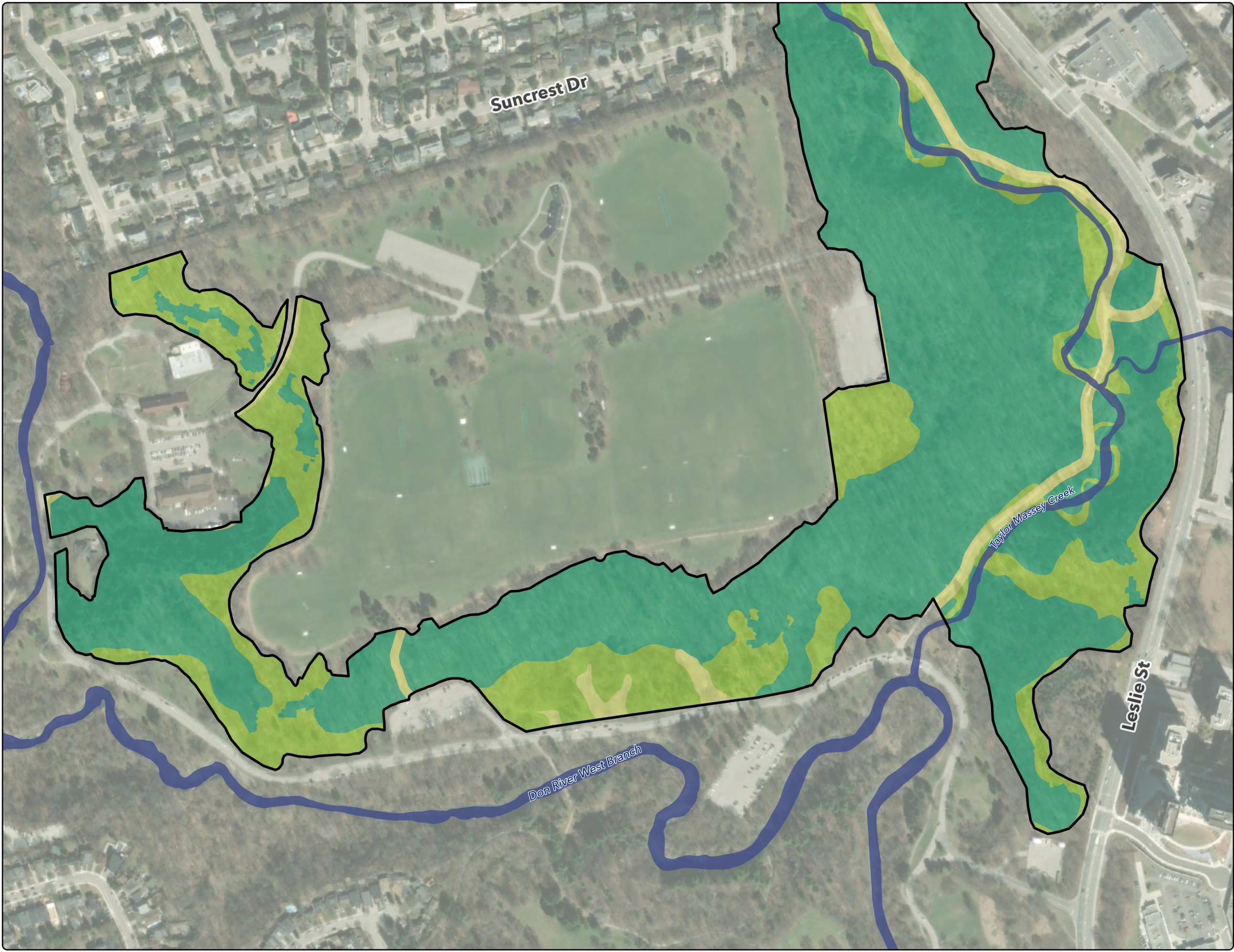
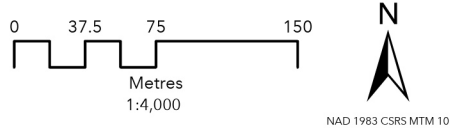


Figure 4-2: Management Zones

Wilket Creek ESA Management Plan

- ESA Boundary
- Watercourse (MNRF)
- Private Ownership
- Management Zone / Opportunity
- Ecological Preservation (68%)**
- High sensitivity forest and wetland communities
  - High vulnerability bluff community
- Conservation (25%)**
- Habitat Integrity
  - Locations of Significant Communities/Species
  - Existing City managed natural surface trails with 2m buffer
- Passive Recreation (7%)**
- Existing asphalt trails with 5m buffer
  - Existing City managed amenity spaces and manicured turf (i.e. picnic areas)



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**Table 3. Summary of Priority Values / Pressures, Management Objectives, Management Zones and Recommended Management Actions for Wilket Creek Forest ESA**

Priority Value	Priority Pressure	Management Objectives	Management Zone	Recommended Site-Specific Actions
High sensitivity forest and wetland communities, high vulnerability bluff community	Invasive species	<ul style="list-style-type: none"> <li>Promote biodiversity by managing populations of invasive vegetation and planting native species</li> </ul>	Ecological Preservation	1) Reduce levels of invasive species in accordance with BMPs (where available). Ongoing management and monitoring may be required.  2) Plant native trees, shrubs, herbaceous ground covers in areas managed for invasive species.  3) Monitor the site.
High sensitivity forest and wetland communities, high vulnerability bluff community	Trails – Informal natural surface foot trails	<ul style="list-style-type: none"> <li>Explore opportunities to reduce or mitigate identified harmful impacts of informal or unsustainable trail use or trail access</li> </ul>	Ecological Preservation	1) Conduct phased assessment of trail use planning in coordination with others to determine site-specific feasibility of mechanisms for trail management.
High sensitivity forest and wetland communities, high vulnerability bluff community	Human-induced Erosion	<ul style="list-style-type: none"> <li>Explore opportunities to reduce or mitigate human-induced erosion risks and / or impacts that negatively affect natural processes and conditions</li> </ul>	Ecological Preservation	1) Conduct assessment of erosion causes and potential solutions in coordination with other departments / agencies.

Priority Value	Priority Pressure	Management Objectives	Management Zone	Recommended Site-Specific Actions
Biodiversity / Indigenous Cultural Value of Flora and Fauna	Invasive species	<ul style="list-style-type: none"> <li>Promote biodiversity by managing populations of invasive vegetation and planting native species</li> </ul>	Ecological Preservation and Conservation	1) Reduce levels of invasive species in accordance with BMPs (where available). Ongoing management and monitoring may be required.  2) Plant native trees, shrubs, herbaceous ground covers in areas managed for invasive species.  3) Plant native trees and shrubs to support naturalization and ecological connectivity where there are gaps in canopy or natural cover.  4) Monitor the site.
Recreational trails and amenity spaces (applicable to existing and planned)	High user demand and potential for conflicts between user groups	<ul style="list-style-type: none"> <li>Prioritize maintenance of high-quality and sustainable trail networks and connectivity within the ESA</li> <li>Coordinate infrastructure and restoration planning and implementation with others to align opportunities and support efficiency, where possible</li> </ul>	Passive Recreation	1) Conduct phased assessment of trail-use and planning in coordination with other departments / agencies.  2) Education / Awareness campaign may be considered, but not within context of individual ESA-specific management planning.



# APPENDIX 1 | ESA Characterization Summary

# Willet Creek Forest

## ESA Characterization Summary

Willet Creek Forest Environmentally Significant Area (ESA) lies within the Don River watershed and includes portions of Wilket Creek Park, Sunnybrook Park and Edwards Gardens. The ESA encompasses river corridor and ravine area, with steep slopes extending throughout the site. Wilket Creek Forest ESA covers 50 ha; the majority (98%) is owned and/or managed by the City of Toronto.

### WHAT MAKES WILKET CREEK FOREST AN ESA?

Presence of significant flora, fauna and vegetation communities.

- **29 significant flora species**
- **5 significant vegetation communities**

A high diversity of flora, fauna and vegetation communities.

- **Area is of large size**
- **75 L1 to L4 flora and fauna species**
- **38 vegetation communities**

Providing important ecological functions beyond its boundaries.

- **Notable stopover area for migrant songbirds**
- **Wetlands present**
- **Marshes and swamps provide 3.6 ha of water storage area**

Landforms that are high-quality and unique within the City and Greater Toronto Area.

- **High-quality example of a high-gradient stream (a stream with a steep slope and rapid flow of water)**
- **Several high-quality water features, including meanders (a series of bends or curves in the watercourse)**





## Vegetation

Wilket Creek Forest ESA encompasses a wide range of vegetation types, including forest, cultural, wetland, aquatic and bluff communities. Forest communities are the most prevalent at 41.58 ha. They are primarily found along the upper and middle slopes. Tree species found within these communities include sugar maple, American beech, red oak and eastern hemlock.

Cultural communities have a smaller presence in the ESA, at 4.1 ha. These communities are the result of recent or historical human activities that have caused disturbance and often contain a higher proportion of non-native and invasive species. They are primarily found along the lower slopes and bottomlands in Wilket Creek Forest ESA. Species found in these communities include Norway maple, Manitoba maple and common buckthorn.

Wetlands and aquatic communities make up 3.65 ha of the ESA. This includes swamps, thickets, marshes, and open aquatic habitats with species like willow, white cedar, silky dogwood and cattails.

Wilket Creek Forest ESA also contains two small bluff communities, including the regionally rare Deciduous Treed Bluff. A bluff is a steep bank, high ridge or cliff, typically located near a river or body of water.

Regionally rare plant species found in Wilket Creek Forest ESA include red pine, Carolina rose and meadow evening primrose.



## Wildlife

One of the features that contributed to the designation of Wilket Creek Forest as an ESA was its function as a notable stopover for migrant songbirds. At the time of designation, 2.1% of migrant songbird records within the city were coming from Wilket Creek Park. During a 2023 survey, 21 bird species were noted. Three species at risk were also noted during field assessments: chimney swift, Eastern wood pewee and barn swallow.



## Invasive Plant Species

Twenty-three invasive plant species from the City's priority invasive management list have been documented in Wilket Creek Forest ESA. This includes Manitoba maple, dog-strangling vine, Japanese knotweed, garlic mustard and common buckthorn. The City has been actively working on management of invasive species in Wilket Creek and Sunnybrook Park. Invasive species management is carried out according to best management practices. Following management



of invasive plants, the City works to restore plant communities and improve biodiversity by planting native trees and shrubs



## Infrastructure

Wilket Creek Forest ESA has 2.89 km of formal trails, 10 formalized access points and 6 staircases. Within the watercourse there are 5 outfalls, 1.55 km of retaining walls and 8 bridges that cross over watercourse features. The ESA also includes 0.57 ha of areas managed as manicured and park amenity spaces. Park amenities include firepits and picnic areas..



## Pressures Impacting Wilket Creek Forest ESA

- Invasive Species
- Informal Trails
- Erosion
- Dumping and Littering



### L Ranking

Local (L) ranks score species and vegetation communities based on local distribution. Scores range from L1 (rarest) to L5 (most common).

### Significance

Species and communities are considered significant if they are vulnerable, rare, threatened or endangered within the City and Greater Toronto Area.

### Significant Wildlife Habitat (SWH)

SWH includes habitat features and vegetation communities that are utilized by sensitive or at-risk species in Ontario.

## APPENDIX 2 | Other Tables

**Table 4. Technical Mapping Details of Management Zones in Wilket Creek Forest ESA**

<b>Priority Value / Existing Site Condition</b>	<b>Management Zone</b>	<b>How to Map</b>
High sensitivity forest and wetland communities, <ul style="list-style-type: none"><li>• High vulnerability bluff community</li></ul>	Ecological Preservation	Based on ELC communities; see also 'Highest' and 'High' Sensitivity mapping in NSE Management Summary Maps (2015)
Habitat Integrity / Locations of Significant Species and Communities	Conservation	Based on NSE Management Summary Maps (2015) - 'Locations of Significant Species and Communities' (where no overlap with Ecological Preservation zones above), and locations of Low – Moderate Sensitivity where no overlap with 'Passive Recreation' management zones below
Existing asphalt multi-use recreational trails	Passive Recreation	Based on City trail asset data, including 5m buffer on either side
City-managed natural surface recreational trails	Conservation	Based on City trail asset data, including 2m buffer on either side
Existing City-managed amenity space(s) <ul style="list-style-type: none"><li>• Picnic areas, manicured spaces</li></ul>	Passive Recreation	Mapped as 'Anthropogenic' in current ELC mapping