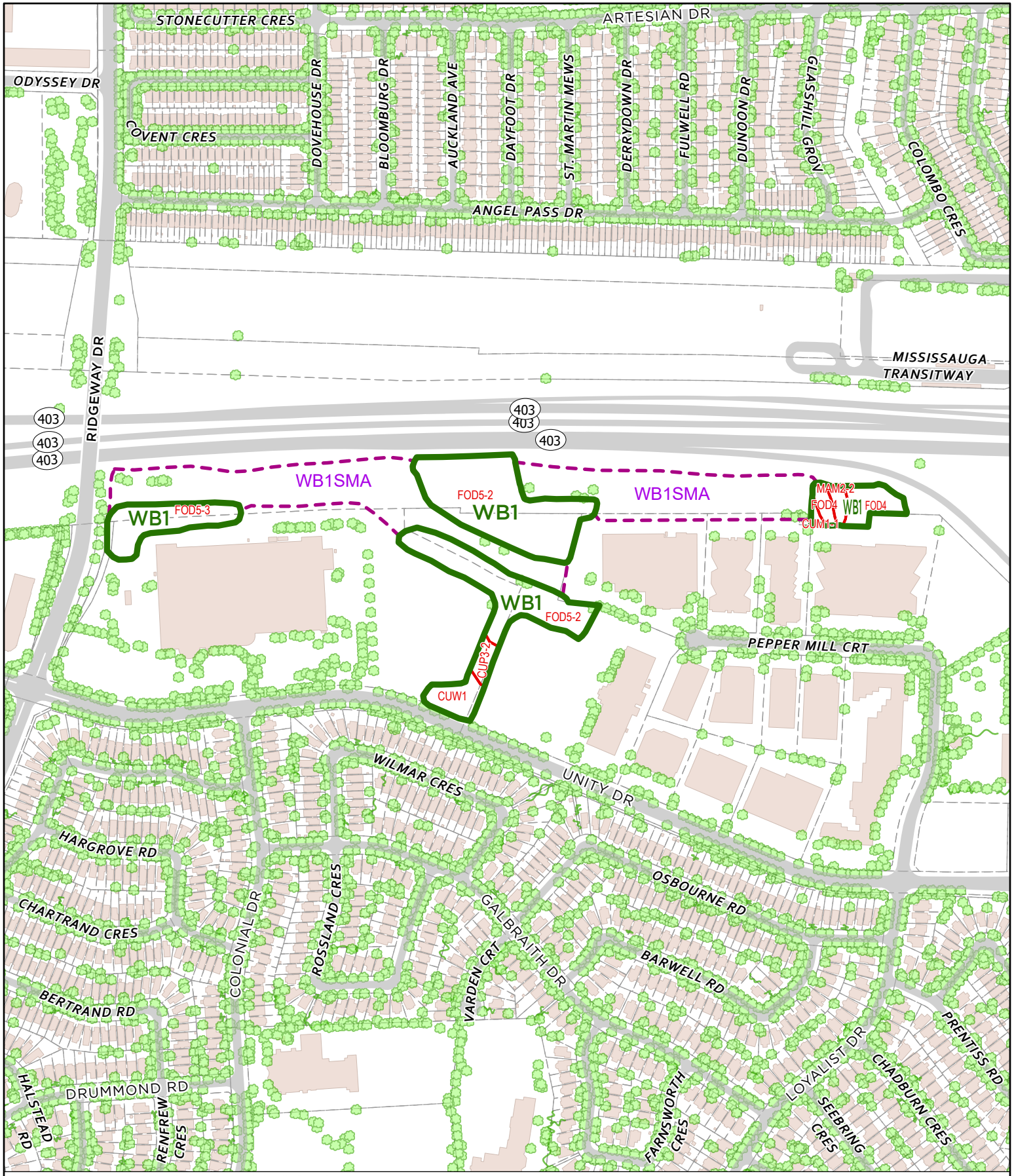

Natural AREAS SYSTEM

2022 NATURAL AREAS UPDATE

SITE WB1

NATURAL AREAS
VEGETATION COMMUNITIES
SPECIAL MANAGEMENT AREAS
LINKAGES

N

0 35 70 140 210 280
Meters

MISSISSAUGA
Produced by Geospatial Solutions

WB1

CLASSIFICATION	Park Name	PLANNING DISTRICT	AREA (Ha)
Significant Natural Area	Erin Mills Twin Arena	Western Business Park	3.90

CONSERVATION AUTHORITY	SUBWATERSHED	OWNERSHIP	SURROUNDING LAND USE
CVC	Sawmill Creek	Private/City	Industrial

GENERAL SUMMARY

North of Unity Drive, between Ridgeway Drive and Winston Churchill Boulevard. The natural area EM10 is located within 500 m to the east. Most of the fragmented woodlots are inaccessible due to industrial development and tall fences (~2.5 m).

PHYSICAL DESCRIPTION

This site is located within the Sawmill Creek subwatershed. Topography is rolling. Soil moisture is dry mesic (in the remnant woodlots) to wet mesic (in the cattail marsh). A drainage swale runs through the centre of the site. Underlying bedrock geology consists of the red shales of the Queenston Formation. These are overlain by soils and glacial deposits consisting of imperfectly drained Chinguacousy clay loams and poorly drained Jeddo clay loams, both formed within Halton till plain deposits.

CONDITION

This site is in fair condition. Disturbances present at this site are trampling, garbage, unplanned trail network, soil compaction from mountain-biking, past logging evidence, man-made structures, noise from Highway 403, fire evidence (vandalism), windthrow, and extreme fragmentation. The size of this site has been severely decreased by industrial development. The creation of the drainage swale has fragmented FOD5-2 and increased edge effects. Highly invasive plant species (as regarded by Ontario Invasive Plant Council) found on site are: Purple Loosestrife (*Lythrum salicaria*), Common Reed (*Phragmites australis subsp. australis*), Tartarian Honeysuckle (*Lonicera tataria*), Garlic Mustard (*Alliaria petiolata*), European Buckthorn (*Rhamnus cathartica*). 44 introduced plant species are present at this site (representing 31.43% of the total number of species present).

ECOLOGICAL LAND CLASSIFICATION

Number of Plant Communities

This site is composed of four individual woodlots connected by a Special Management Area (see accompanying figure). 7 vegetation communities are present: dry-fresh sugar maple oak deciduous forest type (FOD5-3), dry-fresh sugar maple-beech deciduous forest type (FOD5-2), fresh-moist lowland ash deciduous forest type (FOD7-2), red pine coniferous plantation type (CUP3-2), dry-fresh deciduous forest ecosite (FOD4), reed-canary grass mineral meadow marsh type (MAM2-2), and dry-fresh old field meadow type (CUM1-1).

Significant Plant Communities

There are no Significant Plant Communities in WB1.

SPECIES RICHNESS

Flora

The native FQI is 35.25 and the native mean coefficient is 3.60, which are medium values, respectively. The native FQI and the native mean coefficient have both increased and decreased from previous values of 35.00 and 3.63, respectively.

There are 140 floral species documented for this site.

No provincially significant flora species have been noted.

3 locally significant flora species have been noted on site; all are uncommon species (known from 4 to 10 locations) within the City.

23 Credit Valley Conservation flora Species of Conservation Concern (Tier 1-3).

Fauna

There are 29 bird, 2 mammal, 1 reptile, 1 odonata, and 2 lepidoptera species documented at this site. However, most of these are migrants. In terms of wildlife habitat, the natural areas are small and highly fragmented, and their value as wildlife habitat is degraded by the extreme amount of noise generated by traffic on Highway 403, which is evident even in the earliest part of the dawn. Fauna consisted entirely of habitat generalist species adapted to a wide range of small forests and cultural vegetation communities throughout Ontario. The open areas contiguous with these woodlots provide habitat for a few species specialized to open habitats including Savannah Sparrow and Killdeer. In the past, Red-tailed Hawk, which forages in open areas but nests in forests and forest edges, had been documented from this site.

There are 34 faunal species documented for this site.

1 provincially significant fauna species have been noted: 1 Threatened.

9 Credit Valley Conservation fauna Species of Conservation Concern (Tier 1-3).

MANAGEMENT RECOMMENDATIONS

1. The City park, Erin Mills Twin Arena, is included within this natural area.
2. Woodlot remnants were retained along with the other small portions of this site. Their close proximity to each other and location along a highway right of way make them ideal candidates for restoration.
3. A Conservation Plan should be developed including restoration options to ensure the continued presence of this site.

REFERENCES

Proctor and Redfern Limited. 1992. Sawmill Creek Subwatershed Plan.

ECOLOGICAL LAND CLASSIFICATION

Dry-fresh Sugar Maple Oak Deciduous Forest Type (FOD5-3)

The western woodlot is dominated by an open canopy of Green Ash (*Fraxinus pennsylvanica*), with White Pine (*Pinus strobus*), Trembling Aspen (*Populus tremuloides*), and Northern Red Oak (*Quercus rubra*) as associates. The canopy is 10 to 25 m in height and covers greater than 60% of the community.

The sub-canopy is dominated by White Elm (*Ulmus americana*). The sub-canopy is 2 to 10 m in height and covers 10 to 25% of the community. The understory is dominated by Green Ash saplings at a height of 1 to 2 m and 1 to 10% ground cover. The ground layer is partly comprised of Virginia Waterleaf (*Hydrophyllum virginianum*), and Spotted Jewelweed (*Impatiens capensis*). The ground layer is 0.2 to 0.5 m in height and covers 25-60% of the forest floor. With the introduction of Emerald Ash Borer, invasive plant species, and a change in hydrology, this area is declining and will become a cultural woodland.

Dry-fresh Sugar Maple-beech Deciduous Forest Type (FOD5-2)

This forest contains mostly Sugar Maple (*Acer sachharum*), with some Northern Red Oak, American Beech (*Fagus grandifolia*) and White Pine (*Pinus strobus*). The canopy is greater than 25 m in height and covers greater than 60%. The sub-canopy is dominated by Eastern Hop-hornbeam, Sugar Maple and American Beech. The sub-canopy is between 2 and 25 m in height and covers greater than 60% of the community. The understory is dominated by Sugar Maple, Chokecherry (*Prunus virginiana*), European Buckthorn and Green Ash saplings (*Fraxinus pennsylvanica*). The understory is less than 2 m in height and covers >60% of the layer. The ground layer is diverse but sparsely populated by species including Enchanter's Nightshade (*Circaea canadensis*), Virginia Creeper (*Parthenocissis quinquefolia*) Oak Sedge (*Carex pensylvanica*), and Herb-Robert (*Geranium robertianum*). There is Garlic Mustard present in the northern woodlot (*Alliaria petiolata*). This ground layer is less than 1 m in height and covers 10 to 60% of the forest floor. This community has been bisected by an access corridor.

Mineral Cultural Woodland (CUW)

The southern woodlot is a former Green Ash lowland forest but due to the decline in Ash it now has a sparse canopy with ash snags. The canopy is an equal mix of White Elm and Green Ash, but only has a cover of 10-25% and a height of between 10 and 25 m. The sub-canopy is dominated by European Buckthorn with some Green Ash and White Elm present. The sub-canopy has a density of 60% cover and a height of 2-10 m. The understory contains European Buckthorn (*Rhamnus cathartica*) and Green Ash. The understory is 1 to 2 m in height and covers >60% of the community. The ground layer is predominantly composed of Riverbank Grape (*Vitis riparia*), Purple Loosestrife, Grass-leaved goldenrod (*Euthamia graminifolia* and Herb-Robert (*Geranium robertianum*). The ground layer is <1 m in height and covers 25 to 60% of the forest floor. With the introduction of Emerald Ash Borer, invasive plant species, and a change in hydrology, this area is declining and will become a cultural woodland.

Red Pine Coniferous Plantation Type (CUP3-1)

This plantation of mainly of Red Pine (*Pinus resinosa*) is located on the east edge of the central woodlot. A very small portion of this community continues to be present. The canopy is >25 m in height and covers greater than 60% of the community. The understory is dominated by a dense layer of White Elm and some Norway Maple (*Acer platanoides*) which is 10-25 m in height and covers greater than 60% of the community. The understory and ground layers contain White Elm and European Buckthorn, which are 1-10 m and cover >60% of the community.

Dry-fresh Deciduous Forest Ecosite (FOD4)

The early successional forest is composed of scattered White Pines in the canopy at a height of

10 to 25 m and covers 25 to 60% of the community. The sub-canopy is comprised of immature Bur Oak (*Quercus macrocarpa*). The understory is 2 to 10 m in height and covers 25 to 60% of the community. The understory contains European Buckthorn, Blackberry (*Rubus allegheniensis*), Red Raspberry (*Rubus idaeus*), and Riverbank Grape (*Vitis riparia*). The understory is 0.5 to 2 m in height and covers 25 to 60% of the forest floor. The ground layer is predominantly composed of Herb-Robert and Garlic Mustard. The ground layer is 0.2 to 0.5 m in height and covers 25 to 60% of the forest floor.

Reed-canary Grass Mineral Meadow Marsh Type (MAM2-2)

This lowland drainage area divides the early successional forest and is entirely dominated by Common Reed (*Phragmites australis*).

Dry-fresh Old Field Meadow Type (CUM1-1)

A small cultural meadow exists at the edge of the early successional forest. This community primarily consists of herbaceous species that have grown up resulting from the area not being mowed. Such species growing in the cultural meadow include: Canada Goldenrod (*Solidago canadensis*), Smooth Brome (*Bromus inermis*), and Wild Carrot (*Daucus carota*). The vegetation is 0.5 to 1 m in height and covers greater than 60% of the ground.