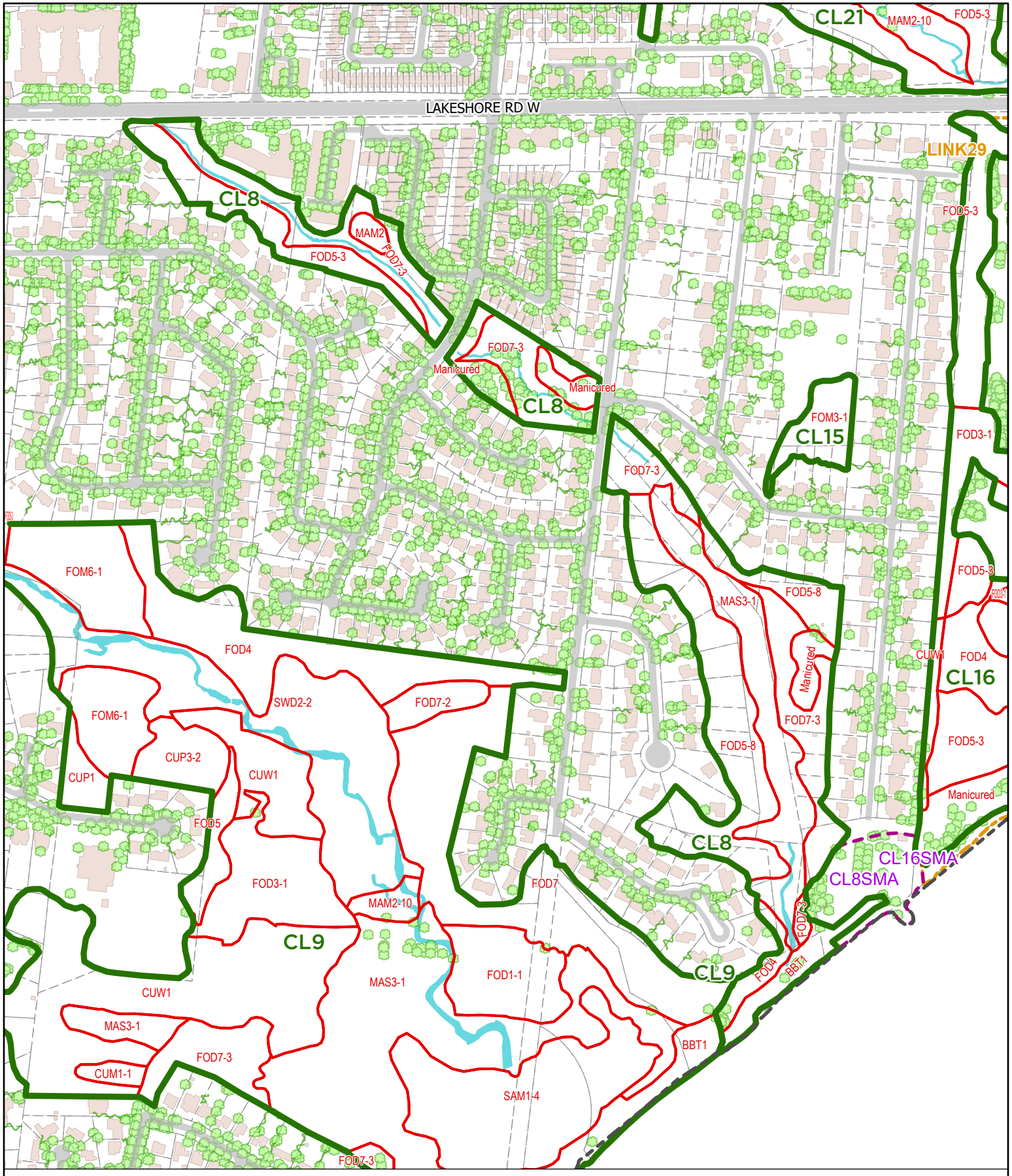

Natural AREAS SYSTEM

2024 NATURAL AREAS UPDATE

SITE CL8

- NATURAL AREAS
- VEGETATION COMMUNITIES
- SPECIAL MANAGEMENT AREAS
- LINKAGES

N

0 35 70 140 210 280

Meters

MISSISSAUGA

Produced by IT-GIS, Client Services

CL8

CLASSIFICATION	Park Name	PLANNING DISTRICT	AREA (Ha)
Significant Natural Area	Glenleven Park	Clarkson-Lorne Park	13.74

CONSERVATION AUTHORITY	SUBWATERSHED	OWNERSHIP	SURROUNDING LAND USE
CVC	Turtle Creek	Municipal/ Private	Residential

GENERAL SUMMARY

South of Lakeshore Road West and east of Meadow Wood Road following Turtle Creek to Lake Ontario. The natural areas CL9, CL15, and CL16 are all located approximately 500 m in distance. Turtle Creek links this site with natural area CL43. This site is linked to a number of natural areas and parklands by the Lake Ontario shoreline and the Waterfront Trail.

PHYSICAL DESCRIPTION

The topography of this site varies greatly from steep slopes to level floodplain. Bedrock geology of the site consists of grey shales of the Georgian Bay Formation. These are buried by up to 7.5 m of soils and glacial deposits consisting of Fox sands developed in a sand plain with good drainage. An unconfined shallow sand aquifer is associated with the sand plain. Turtle Creek flows through the site and empties into Lake Ontario. Soil moisture at the site varies from mesic on the slopes to wet in the wetland.

CONDITION

An evaluated wetland is present within this site.

This site is currently in poor condition. Disturbances include garbage dumped on the valley slopes, residential encroachment (manicuring to the creek edge), windthrow, and at least one street sewer running into the wetland. Ad-hoc trails, erosion, and soil compaction were noted in the sugar maple – oak forest at the west end of this natural area.

Invasive plant species are prevalent and include Norway Maple (*Acer platanoides*), Multiflora Rose (*Rosa multiflora*), Purple Loosestrife (*Lythrum salicaria*), Tartarian Honeysuckle (*Lonicera tatarica*), European Buckthorn (*Rhamnus cathartica*), Common Reed (*Phragmites australis* ssp. *australis*), and Garlic Mustard (*Alliaria petiolata*).

ECOLOGICAL LAND CLASSIFICATION

Number of Plant Communities

This site is composed of eight vegetation communities (see accompanying figure); fresh-moist willow lowland deciduous forest type (FOD7-3), dry-fresh sugar maple - white ash deciduous forest type (FOD5-8), dry-fresh sugar maple – oak deciduous forest type (FOD5-3), mineral treed beach/bar ecosite (BBT1), mineral meadow marsh ecosite (MAM2), cattail organic shallow marsh type (MAS3-1), dry-fresh deciduous forest (FOD4), and manicured parkland.

Significant Plant Communities

There are no Significant Plant Communities in CL8.

SPECIES RICHNESS

Flora

There are 206 flora species documented for this site. The native FQI is 40.52 and the native mean coefficient is 3.55, high and medium values, respectively. The native FQI has increased, and the native mean coefficient has decreased from previous values of 40.39 and 3.59, respectively. There are 76 introduced flora species recorded at this site, representing 36.9% of the total flora species present.

Four provincially significant flora species have been documented at this site.

Eight locally significant flora species have been documented at this site.

Forty-three Credit Valley Conservation flora

species of Conservation Concern (Tier 1-3) have been documented at this site.

Fauna

There are a total of 57 fauna species documented for this site: 42 bird, 12 mammal, and 3 amphibian and/or reptile species.

Four provincially significant fauna species have been documented at this site.

Thirty-one Credit Valley Conservation fauna species of Conservation Concern (Tier 1-3) have been documented at this site.

MANAGEMENT RECOMMENDATIONS

1. In view of the significance outlined in the preceding section, this site should be managed for its natural values.
2. The City owned land to the east of this site identified as Special Management Area within natural area CL16 (Jack Darling Park) could be restored to expand the area of natural habitat and provide a continuous natural link along the Lake Ontario shoreline from natural area CL9 (Rattray Marsh) to natural area CL17 (Lorne Park Estates).
3. Initiate landowner contact programme to encourage management for natural values by landowners.
4. Access to the site should be controlled.

REFERENCES

Brownell (1993)

City of Mississauga (1978b)

ECOLOGICAL LAND CLASSIFICATION

Fresh-moist Willow Lowland Deciduous Forest Type (FOD7-3)

The willow lowland forest occurs on both sides of Silver Birch Trail as well as near in the east of the site by Lake Ontario. Along Silver Birch Trail the canopy is composed of scattered mature White Willow (*Salix* alba), Crack Willow (*Salix fragilis*), Weeping Willow (*Salix* x *pendulina*), and Black Walnut (*Juglans nigra*). The canopy is 10-25m in height and covers greater than 60% of the community. The sub-canopy is composed of Black Walnut, Manitoba Maple (*Acer negundo*), Littleleaf Linden (*Tilia cordata*), and Staghorn Sumac (*Rhus typhina*). The sub-canopy is 2-10m in height and covers greater than 60% of the community. The understory contains an abundance of Red-osier Dogwood (*Cornus sericea*), Common Reed (*Phragmites australis* ssp. *australis*), Broad-leaved Cattail (*Typha latifolia*), and Riverbank Grape (*Vitis riparia*). The understory if 0.5-2m tall and covers greater than 60% of the community. The ground layer contains an abundance of Garlic Mustard (*Alliaria petiolata*), Canada Goldenrod (*Solidago canadensis*), Yellow Avens (*Geum aleppicum*), Orchard Grass (*Dactylis glomerata*), and Woodland Angelica (*Angelica sylvestris*).

Dry – Fresh Deciduous Forest Ecosite (FOD4)

The forest near the lake has a canopy that is composed of Eastern Cottonwood (*Populus deltoides*), Norway Maple (*Acer platanoides*), and Green Ash (*Fraxinus pennsylvanica*). The canopy trees are 10-25 m in height and covers greater than 60% of the community. The sub-canopy is dominated by Manitoba Maple and Green Ash. Sub-canopy trees are 2-10 m in height and cover greater than 60% of the community. The understory contains an abundance of Riverbank Grape (*Vitis riparia*), Green Ash saplings, Alternate-leaved Dogwood (*Cornus alternifolia*), and Canada Goldenrod. The understory is 1-2 m in height and covers greater than 60% of the community. The ground layer contains an abundance of European Buckthorn (*Rhamnus cathartica*), Orchard Grass (*Dactylis glomerata*), and Timothy (*Phleum pratense*).

Dry-fresh Sugar Maple - White Ash Deciduous Forest Type (FOD5-8)

The Sugar Maple (*Acer saccharum*) – White Ash (*Fraxinus americana*) forest is dominated by Red Oak (*Quercus rubra*), Sugar Maple, and Norway Maple (*Acer platanoides*) in the canopy. White Ash has experienced die off from the invasive beetle, Emerald Ash Borer, and may warrant a change in this community classification in the future. Conifers, such as Scot's Pine (*Pinus sylvestris*) or Norway Spruce (*Picea abies*) are planted along higher slopes in places. The canopy vegetation is 10-25 m in height with some trees over 25 m, and these trees cover greater than 60% of the community. The sub-canopy is 2-10 m in height and primarily consists of Norway Maple which covers greater than 60% of the community. The understory is densely vegetated (greater than 60% cover) with European Buckthorn and Tatarian Honeysuckle (*Lonicera tatarica*). The understory vegetation is 1-2 m in height. The ground layer is dominated by Garlic Mustard and Yellow Avens. Ground layer vegetation is 0.2-0.5 m in height and covers greater than 60% of the community.

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

The maple – oak forest is dominated by Norway Maple and Red Oak in the canopy. The canopy trees are greater than 25 m high and cover greater than 60% of the community. The sub-canopy is also dominated by Norway Maple but is more diversely vegetated than the canopy with associate species including: White Birch (*Betula papyrifera*), Basswood (*Tilia americana*), Black Cherry (*Prunus serotina*), and American Beech (*Fagus grandifolia*). The sub-canopy species cover greater than 60% of the forest and are 5-25 m in height. The understory is densely vegetated (greater than 60% cover) with Choke Cherry (*Prunus virginiana*), and Witch Hazel (*Hamamelis virginiana*). The understory vegetation is 0.5-2 m in height and covers 25-60%. The ground layer

vegetation consists primarily of Zig-zag Goldenrod (*Solidago flexicaulis*), False Solomon's-seal (Maianthemum *racemosum*), and Lady Fern (*Athyrium filix-femina*). The ground layer is 0.2-0.5m in height and covers 25-60%.

Mineral Treed Beach/Bar Ecosite (BBT1)

The treed beach is mostly bare of vegetation except for a row of vegetation along the northwestern edge of the community. European Black Alder (*Alnus glutinosa*) and Cottonwood dominate the canopy are 10-25 m in height and cover approximately 30% of the community. The sub-canopy consists of European Black Alder and Green Ash trees which are 2-10 m in height and cover approximately 30% of the community. The understory primarily contains Canada Goldenrod and Tatarian Honeysuckle which are 1-2 m in height which covers approximately 30% of the community as a whole. The ground layer contains Rough Cocklebur (*Xanthium strumarium*), Long-spined Sandbur (*Cenchrus longispinus*), Silvery Cinquefoil (*Potentilla argentea*), and Common Milkweed (*Asclepias syriaca*). The ground layer is less than 0.2m in height and covers 30% of the community.

Mineral Meadow Marsh Ecosite (MAM2)

A mineral meadow marsh is located within the willow lowland forest off Cristina Court. This meadow marsh has a sparse canopy of Slender Willow (*Salix petiolaris*) which is 10-25 m and covers 25-60% of the community. The sub-canopy is the dominant layer in the community and contains an abundance of non-native Common Reed (*Phragmites australis* subsp. *australis*). The sub-canopy is 2-10 m in height and covers greater than 60% of the community. With such a dense sub-canopy the understory and ground layer are fairly minimal. The understory primarily contains Devil's Beggarticks (*Bidens frondosa*) which is 0.2-0.5 m in height and covers 10-25% of the community. The ground layer mainly consists of sedges (*Carex sp.*) and Perennial Ryegrass (*Lolium perenne*). The ground layer is less than 0.2 m in height covers 25% of the community.

Cattail Organic Shallow Marsh Type (MAS3-1)

The cattail shallow marsh is dominated by Broad-leaved Cattail in the canopy. The canopy is 2-10 m in height and covers greater than 60% of the community. The sub-canopy is dominated by Spotted-jewelweed (*Impatiens capensis*) and Purple Loosestrife (*Lythrum salicaria*) which is 1-2 m in height and covers 25-60% of the community. The understory primarily consists of Purple Loosestrife and Water-Plantain (*Alisima plantago-aquatica*). The understory vegetation is 0.2-0.5 m in height and covers greater than 60% of the community. The ground layer vegetation is less than 0.2 m and is dominated by Small Forget-me-not (*Myosotis laxa*).

Manicured Parkland

There are two small, manicured areas between Silver Birch Trail and Bexhill Road. One is mowed grass and one is a park, Glenleven Park. This community has not been directly surveyed.