5.0 EXISTING CONDITIONS – PART 1

In accordance with the MCEA process, the broad definition of 'environment' as provided in the EAA is applied to this chapter. The prepared environmental description is "an inventory of elements for which a given project is likely to have an impact" (Municipal Engineers Association, 2015).

5.1 Overview

A baseline inventory provides the information needed to evaluate the alternative options and the types and levels of environmental impacts that may result from implementing the preferred trail alignment. The existing conditions are intended to help in the evaluation and selection of a preferred trail alignment and design throughout the MCEA. Areas of focus include:

- Transportation and existing trails;
- Physical environment;
- Biological environment;
- Cultural environment;
- Socioeconomic environment; and
- Engineering/technical considerations.

5.2 Transportation and Trails

5.2.1 Vehicular and Rail Transportation

Road Network

The road network within the project area includes local and principal arterial roads within a residential and commercial area. Table 5-1 categorizes the streets that are within and immediately adjacent to the project area. Additional information on the existing road network can be found in the Technical Memorandum: Traffic Analysis in Appendix J.

Table 5-1: Overview of road types found within and adjacent to the project area.

Road Classification	Characteristics	Local Study Area
Provincial Expressway	• >40, 000 daily motor vehicle volume (both directions) • Minimum of four lanes • Legal speed limit between 80-100 km • Pedestrians prohibited • Cyclists prohibited	• Macdonald Cartier Freeway (Hwy 401)

Road Classification	Characteristics	Local Study Area
Major Arterial	• >20,000 daily motor vehicle volume (both directions) • Minimum of four lanes • Legal speed limit between 50-60 km • Sidewalks on both sides	• Weston Road
Collector	• Legal speed limit between 40-50 km	• St. Philips Road • Fairglen Crescent • Humberview Crescent • Cardell Avenue

Rail Network

The Metrolinx bridge extends east to west and intersects the centre of the project area. Historically, this railway line was used for transport between Toronto and Sarnia in 1856. In present-day, this rail line is used by GO Transit to travel to Brampton and UP Express to travel to Pearson Airport or Union Station.

5.2.2 Cycling and Pedestrian Routes

The only multi-use trail that intersects with the Mid Humber Gap is the HRT, encroaching on the south and north ends of the project area, as shown in Figure 5-1. This segment of the HRT is approximately 13 km from the Lake Ontario Waterfront bike trail network to Weston Road and St. Philips Road.

As shown in Figure 5-2, there are no designated bikeway facilities within the project area beyond the HRT encroaching on the north and south ends. Cyclists in this area are required to share the road with other road users, along Weston Road, or dismount and use the existing sidewalk to make their way around this gap in the Humber Trail.

5.2.3 Public Transit

The Weston GO/UP Express Station is located southeast of the project area at Lawrence Avenue and Weston Road. Toronto Transit Commission (TTC) routes along Weston Road can also be found, including 89 Weston, 73C & 73D Royal York and 59 Maple Leaf (Figure 5-3)

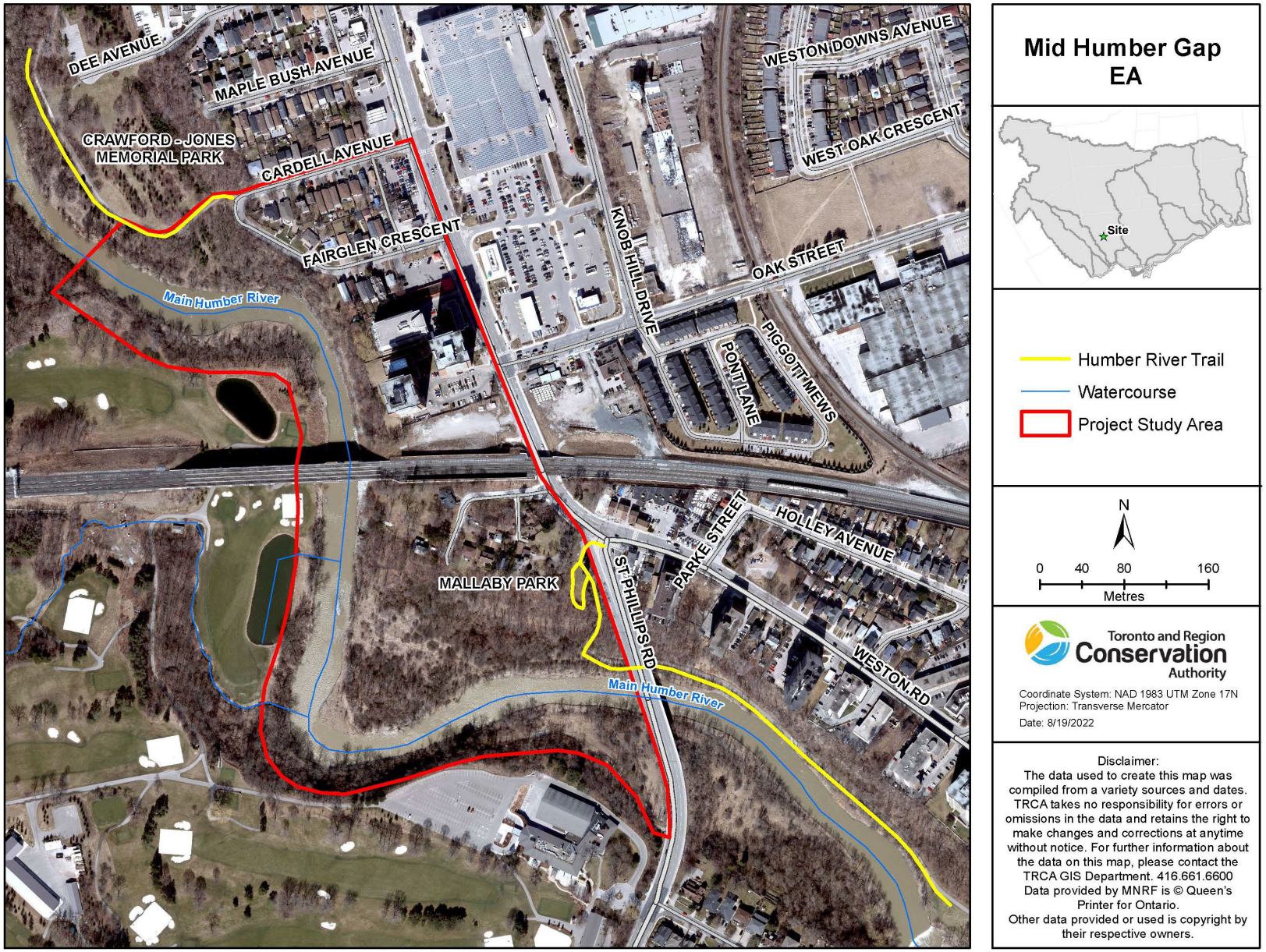

Figure 5-1: Mid Humber Gap project area and the existing HRT (denoted by yellow line), illustrating the gap between Crawford-Jones Memorial Park and Mallaby Park where trail users are forced out of the ravine and onto Weston Road.

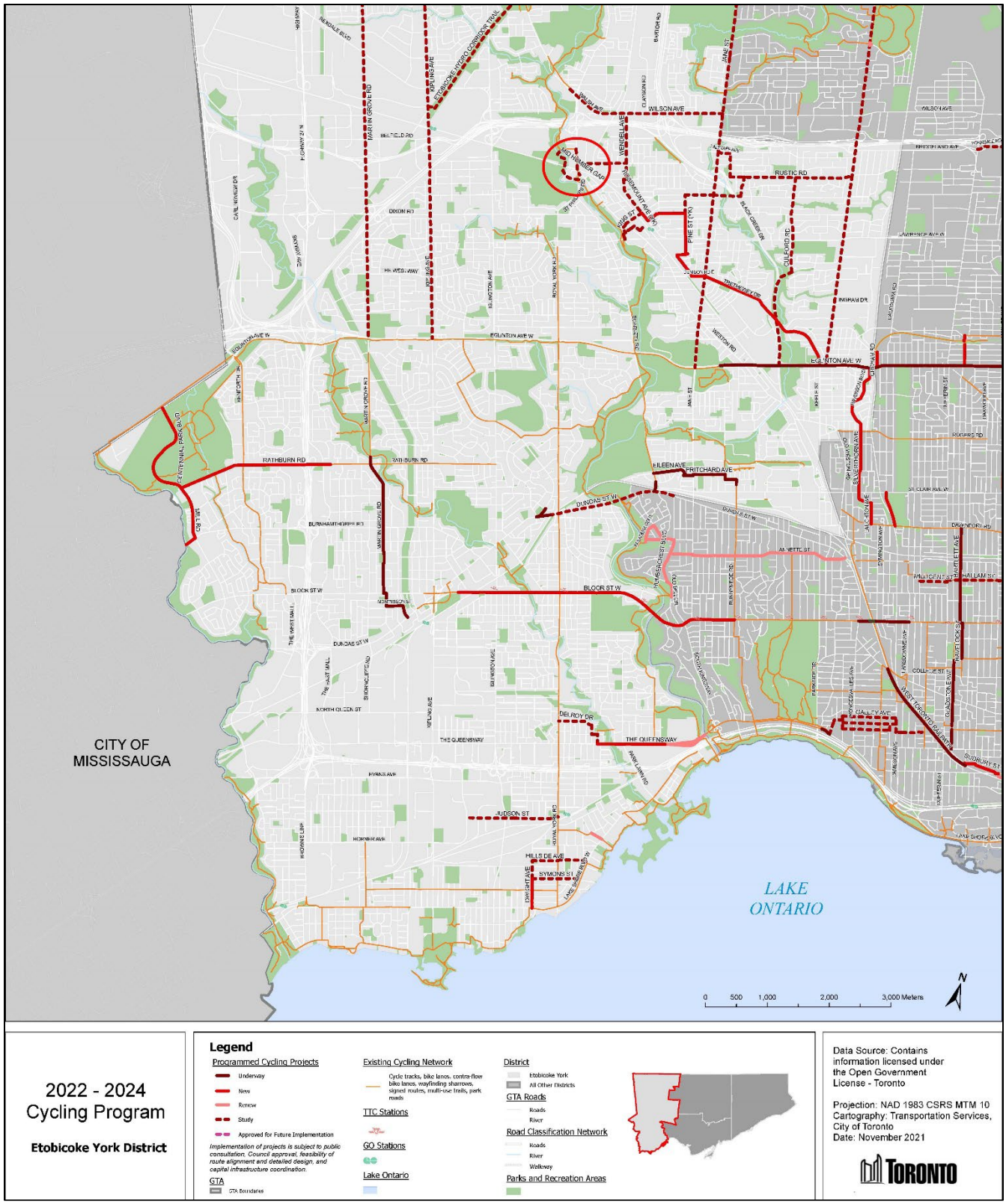

Figure 5-2: Existing and Near Term Planned (2022-2024) planned cycling and trail networks in the vicinity of the project area (denoted by red circle). (City of Toronto Cycling Newtwork Plan - Update, 2021)

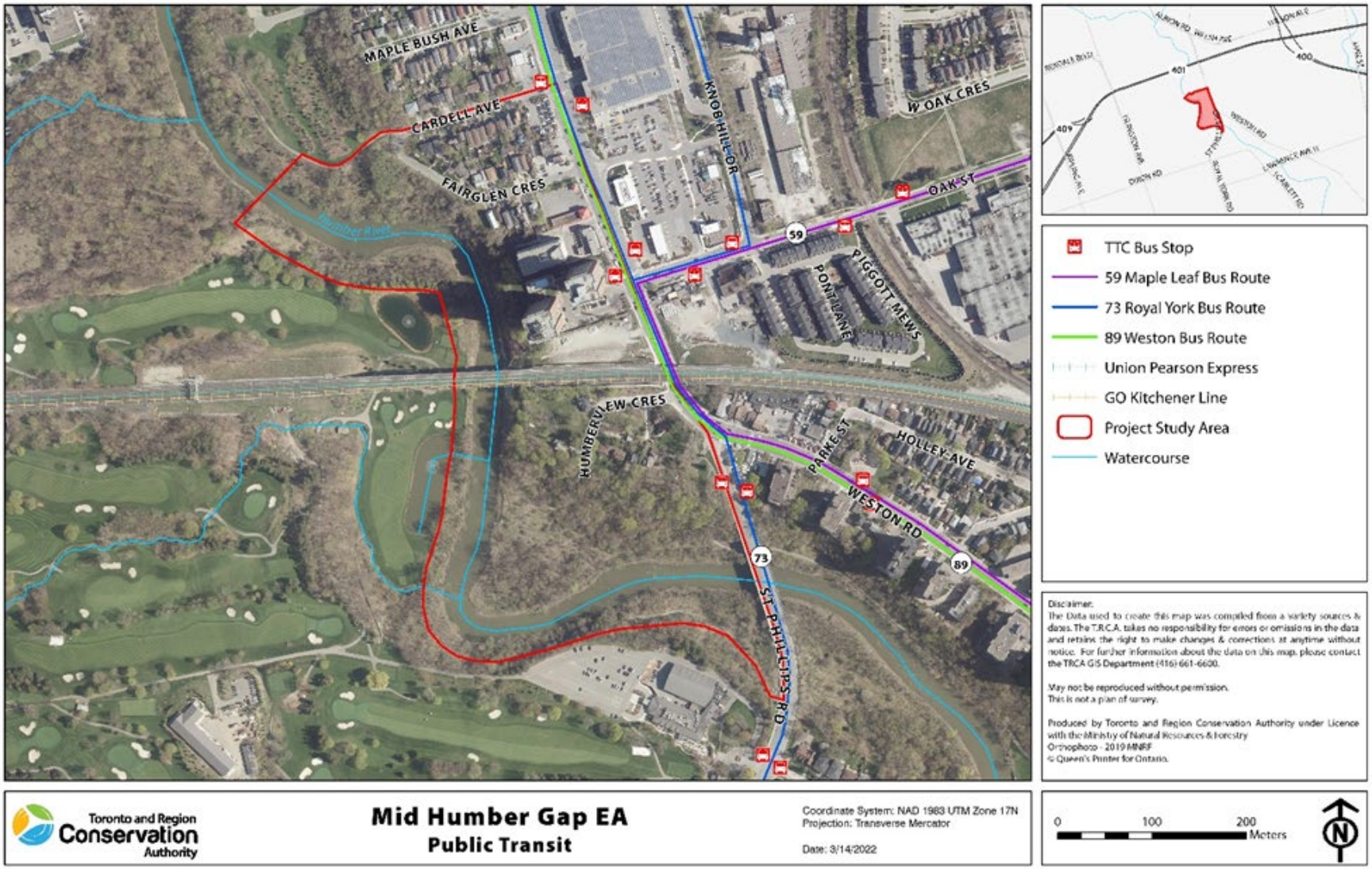

Figure 5-3: Public transit within the project area.

5.3 Biological Inventory

Vegetation community and flora and fauna species data were collected by TRCA throughout 2021. When conducting field surveys, only areas with permission to access were inventoried. Additional terrestrial inventory will be completed as part of the detailed design phase following negotiation with the private landowners.

5.3.1 Methodology

Vegetation communities (flora) and native vertebrate animals (fauna) are scored based on ecological sensitivity, habitat requirement, and abundance by TRCA biologists to assign conservation concern status ranks (L-ranks) as shown in Table 5-2.

Flora species are scored using four criteria; local occurrence, population trend, habitat dependence, and sensitivity to impacts associated with development. Fauna species are scored using seven criteria: local occurrence, local population trend, continent-wide population trend, habitat dependence, sensitivity to development, area sensitivity, and patch isolation sensitivity.

Table 5-2: High level break down of L Ranks

L-rank	Conservation Concern
L1	Of high level of concern in TRCA jurisdiction
L2	Of regional concern, typically occurs in less-disturbed natural area
L3	Of regional concern, restricted in occurrence and/or requires specific site conditions
L4	Able to withstand some disturbance; generally secure in rural matrix; of concern in urban matrix
L5	Able to withstand disturbance; currently considered secure, including in the urban matrix
L+	Exotic; not native to the TRCA jurisdiction; exotic species are not scored

Please refer to the Mid Humber Gap Terrestrial Biological Inventory Report (January 2022) in Appendix C for a complete account of the L Rank scoring methodology.

5.3.2 Quantity of Natural Cover

Vegetation surveys in 2021 documented 6.4 hectare (ha) of natural cover. Twenty different vegetation communities, spanning 5 classes were documented as shown below in Table 5-3.

Table 5-3: Summary of vegetation communities surveyed in the project area.

Class	Number of Types	Total Area (ha)	% of Natural
Forest *(includes*	11	2.2	34
Successional	4	1.1	17
Meadow	3	0.3	5
Wetland	1	-	-
Aquatic	1	2.8	44

5.3.3 Vegetation Community Representation

Lowland Forest

Within the project area, the riparian corridor to either side of the Humber River is characterized by two types of lowland forest: Dry-Fresh Willow Lowland Deciduous Forest (0.8 ha) and Fresh-Moist Manitoba Maple Lowland Deciduous Forest (0.8 ha). Crack willow (*Salix x fragilis*), Manitoba maple (*Acer negundo*), and Norway maple (*Acer platanoides*) are the three most dominant tree species and all three are exotic (non-native) (Figure 5-4). One small section of native lowland forest classified as Fresh-Moist Black Walnut Lowland Deciduous Forest (0.1 ha) occurs to the south and is dominated by black walnut and basswood (*Tilia americana*).

The understories of all lowland communities are overgrown by native and exotic vines and forbs (broad leafed, non-woody plants). Among the exotic species present, are dog-strangling vine (*Vincetoxicum rossicum*), garlic mustard (*Alliaria petiolata*), urban avens (*Geum urbanum*), and dame's rocket (*Hesperis matronalis*) are prolific and highly aggressive (TRCA, 2022).

Figure 5-4: Floodplain Forest communities along the main Humber River are dominated by exotic willow and maple tree species.

Upland Forest

Narrow portions of Dry-Fresh Sugar Maple-Oak Deciduous Forests extend into the project area along the north-western and southern boundaries and covers 0.3 ha. This community supports mature sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), and bur oak (*Quercus macrocarpa*). Shrubs in this area include common species such as choke cherry, alternate-leaved dogwood (*Cornus alternifolia*), and saplings of white ash (*Fraxinus americana*) and sugar maple. At the ground layer poison ivy (*Toxicodendron radicans var. rydbergii*), virgina waterleaf (*Hydrophyllum virginianum*), dandelion (*Taraxacum officinale*) and garlic mustard were observed, with the latter being common along informal trail edges.

More disturbed upland forest types, Dry-Fresh Sugar Maple-Basswood Deciduous Forest and Dry-Fresh Manitoba Maple Deciduous Forest (0.012 ha total) are found towards the northeast, near Cardell and Fairglen Crescent. In these more disturbed communities' exotic shrubs, vines, and forbs are prolific (TRCA, 2022).

5.3.4 Successional Communities

Treed woodlands along the southwestern riparian corridor are dominated by Siberian elm (*Ulmus pumila*), crack willow and white willow (*Salix alba*) and classified as Exotic Successional Woodland (0.3 ha). Further south, described as Native Successional Woodland (0.6 ha), exotic species remain present, but the community includes a higher proportion of black walnut.

Similar to the floodplain communities, the understory and ground layers are a mix of weedy native and exotic shrubs and forbs. Pests, disease, and storm damage have negatively impacted the community structure (TRCA, 2022).

5.3.5 Wetland and Aquatic Communities

A single inclusion of Forb Mineral Meadow Marsh, associated with panicled aster (*Symphyotrichum lanceolatum var. lanceolatum*) and swamp milkweed (*Asclepias incarnata ssp. Incarnato*) is located within a larger Native Successional Woodland in the south. Wetland plants are sensitive to competition from invasive species. Currently, disturbed conditions in sections of the lowland habitat favour the establishment of non-native reed canary grass.

The section of the Humber River located within the project area is classified as Open Aquatic (open water, no vegetation) (2.8 ha) (TRCA, 2022).

5.3.6 Vegetation Communities of Concern

The project area has three vegetation communities of conservation concern (two forests and one wetland) ranked L4 at the southern limit of the project area and two forest communities of urban concern located at the northwest and southern limits of the project area. Both vegetation communities of concern are located outside of the preferred trail alignment (Figure 5-5). A pocket of Forb Mineral Meadow March, found in lowland habitat, marks the only wetland type in the study area. The community shows disturbance from invasive reed canary grass (*Phalaris arundinacea*) but does support swamp milkweed.

Vegetation community surveys within the project area confirm a high occurrence of aggressive non-native species growing in the upper and understory layers, particularly Siberian elm, Norway maple, and Manitoba maple. Over time native riparian forests may shift or succeed into more exotic woodlands and forests. The succession is further exacerbated by invasive pests and diseases that alter community structure through die-back and mortality (TRCA, 2022).

5.3.7 Flora

Native species account for just under half (42) of the naturally occurring 86 species found in the project area (Figure 5-6). The prevalence of exotic species is moderate to high, which is expected given the high degree of disturbance exerted from the surrounding urban landscape.

Invasive species (exotic plants, pests, and disease) are present in all habitats. Highly aggressive non-native plant species, such as dog-strangling vine and garlic mustard, can be found in lowland and upland habitats, and both pose a serious risk to native biodiversity. Their spread is partially facilitated by the presence of informal trails found throughout the project area.

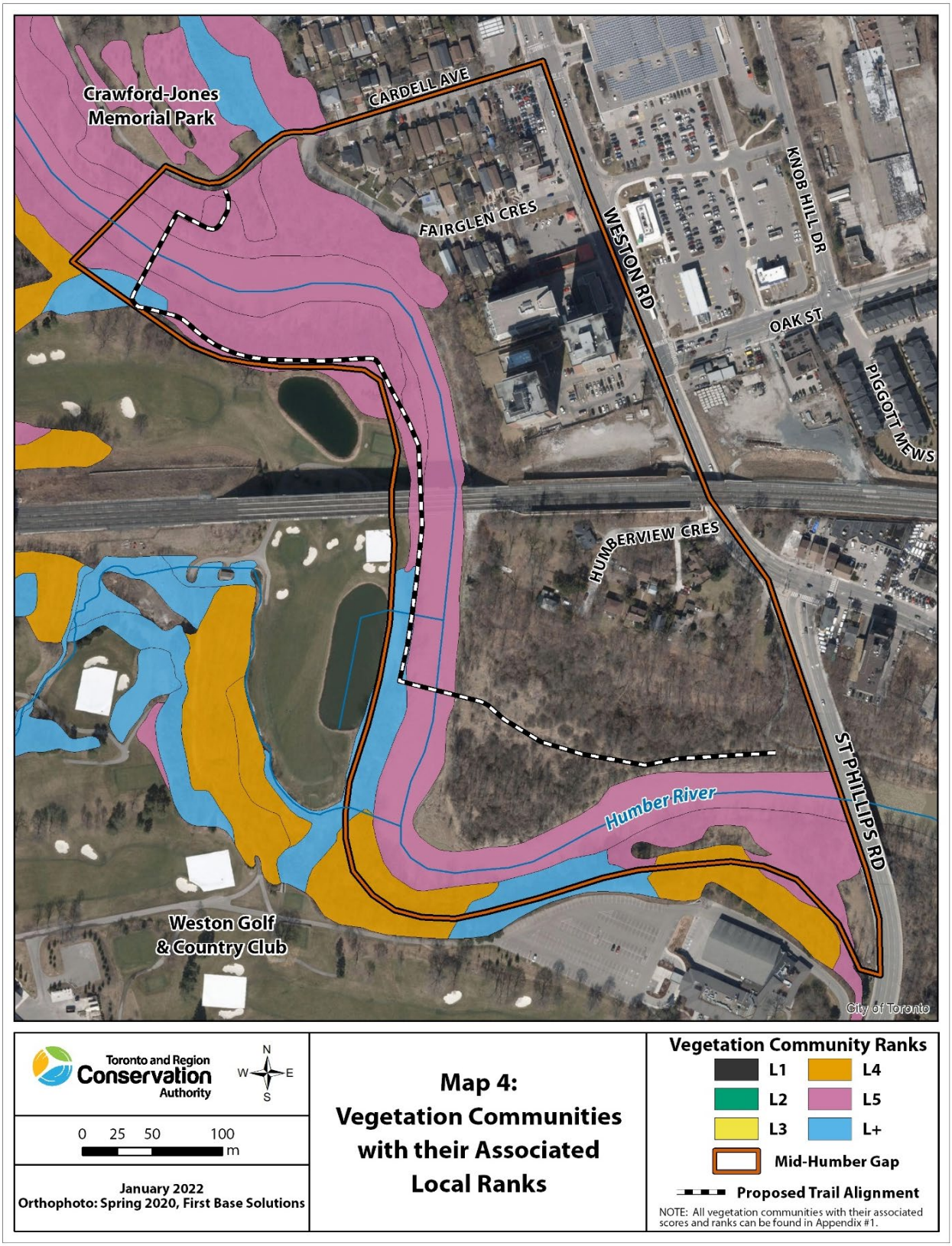

Figure 5-5: Map showing L+ (exotic; not native) and L5 (able to withstand disturbance) ranked vegetation within the immediate vicinity of the preferred trail alignment.

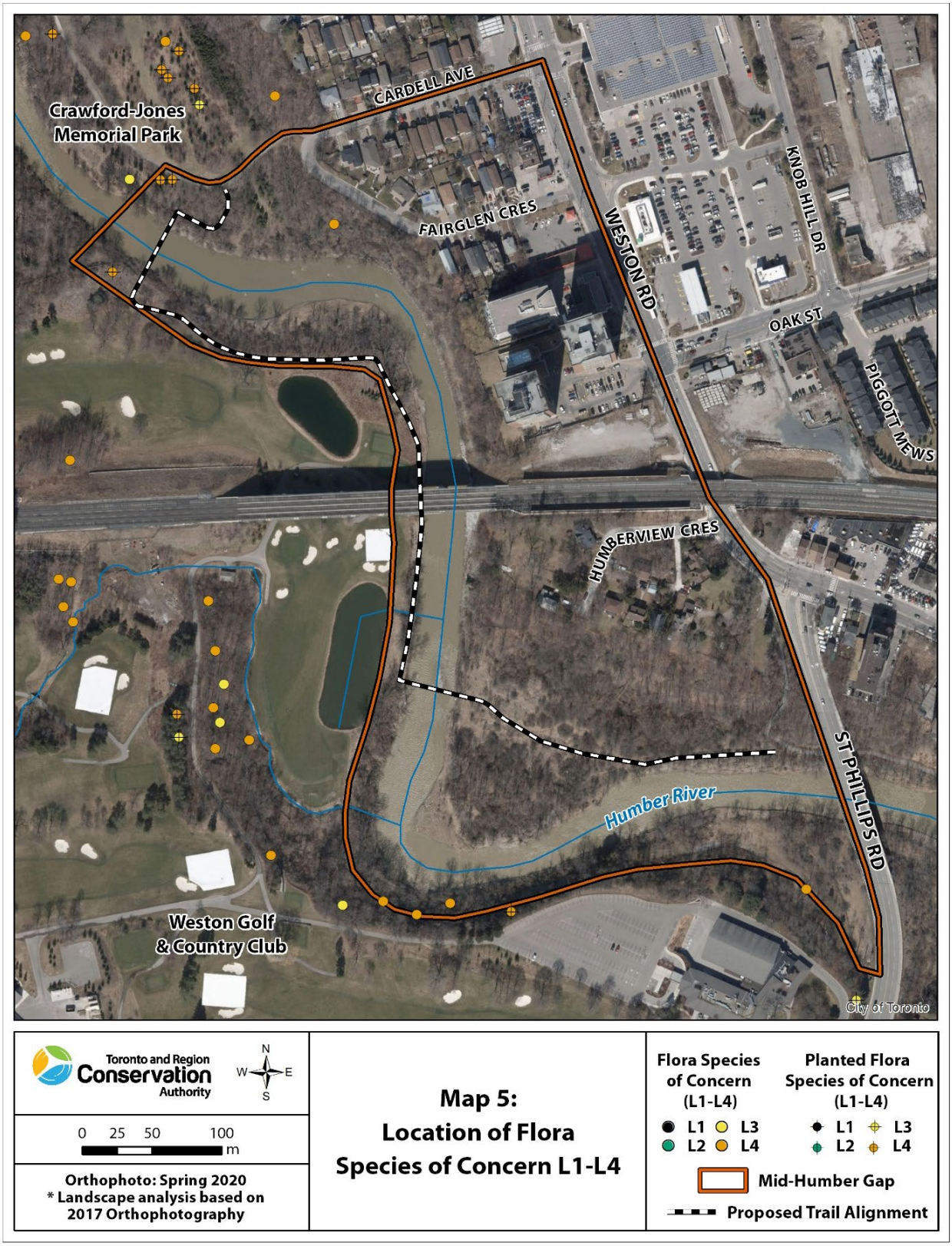

Figure 5-6: Map showing L4 (able to withstand some disturbance) flora species of concern within the study area and north end of the preferred trail alignment.

5.3.8 Flora Species of Concern

There is one naturally occurring vascular plant species of Regional Conservation Concern and no regionally rare species or species at risk (SAR) identified within the project area as shown in Table 5-4 below.

Table 5-4: L Ranks of flora species in the project area.

Species by L-Rank	No. of naturally occurring species	No. of planted species	Total no. of species
L1-L3	1	-	1
L3	1	-	1
L4	5	1	6
L5	36	-	36
Exotic/non-native	44	3	47
Total no. of species	**86**	**4**	**90**

5.3.9 Fauna

The number of fauna species in the Mid Humber Gap project area is 27. Table 5-5 below summarizes the species count over the period of 2020 – 2021. All TRCA data referred to in this report is from the 2021 study, however additional records have been pulled from the online iNaturalist database (Canadian Wildlife Federation, 2021). Any species recorded outside of the project area have not been included in the fauna list. No records are present for the project area before 2020 (TRCA, 2022).

Table 5-5: Fauna species counts in the project area between 2020-2021.

Group	Species Count	Count of Species Ranked
Birds	24	7
Herpetofauna	1	1
Mammals	2	1
Count of Species Ranked L1 – L4	**27**	**9**

5.3.10 Fauna Species of Concern

The 2021 fauna survey recorded 7 bird and 1 mammal Species of Regional and Urban Concern (L4). A single confirmed record from iNaturalist (2020) for an Eastern red-backed Salamander (*Plethodon cinereus*) has been included in Table 5-5 as part of the fauna ranked species count. Although not seen during the 2021 inventory, it is believed it may possibly have been at the site.

The following six bird species were observed within the vicinity of the project during the 2021 biological field survey:

- Eastern Kingbird *(Tyrannus tyrannus);*
- Great Crested Flycatcher *(Myiarchus crinitus);*
- Grey Catbird *(Dumetella carolinensis);*
- Indigo Bunting *(Passerina cyanea);*
- Northern Flicker *(Colaptes auratus); and*
- Spotted Sandpiper *(Actitis macularius).*

Barn Swallows were observed foraging near the Metrolinx rail bridge during the fauna inventory. Barn Swallows are listed as a Threatened Species at Risk at both the Provincial and Federal levels. It is believed that the structures under the bridge provide opportunities for Barn Swallow to construct their nests. Confirmation of a Cliff Swallow nesting colony under the bridge, a species that also builds mud nests on bridges, supports this belief (TRCA, 2022).

5.3.11 Fish and Aquatic Habitat

There are no Species at Risk, sensitive fish species/habitats known to exist within the project limits. No direct aquatic impacts are anticipated with the proposed works, given that there is no requirement for in-water work (TRCA, 2022).

5.4 Migratory Bird Convention Act

Seasonally Canada is home to approximately 450 species of native birds, the majority of which are protected under the Migratory Bird Convention Act (1994). The Act provides for the protection of migratory birds within nesting zones by using nesting calendars to identify breeding windows in specific areas.

Toronto falls in Nesting Zone C2 – Lower Great Lakes/St. Lawrence Plain and the breeding bird window occurs annually from early April to late August. During this time, anyone destroying or disrupting habitat conditions can affect breeding bird activity, and birds may abandon nests or choose not to nest in the area.

Construction activities will occur outside of the breeding bird window within a localized area in the valley corridor. It is expected the proposed works will result in temporary impacts to habitat through the removal of select canopy trees.

5.5 PSW, ANSI and ESAs

There are no designated Provincially Significant Wetlands (PSW), provincial Areas of Natural and Scientific Interest (ANSI) or Environmental Sensitive Areas (ESA) within the Mid Humber Gap project area.