



Toronto and Region
Conservation
Authority

COLONEL SAM SMITH SHORELINE MAJOR MAINTENANCE PROJECT

Construction Access Planning Summary

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1.0 INTRODUCTION

Toronto and Region Conservation Authority (TRCA) has a need to undertake major maintenance work along the shorelines of Colonel Samuel Smith Park in Etobicoke to update the existing erosion control and protect the park from future shoreline damage caused by wave action.

A coastal assessment was completed to determine the structure designs needed to protect the shoreline long term. The assessment indicated that if repairs are not completed, continued erosion may make the underlying land unstable and risk shoreline failures which would result in more costly repairs.

The work will be delivered in 2 Phases:

- Phase 1: Construction planned from Q4 2024 to Q4 2027
- Phase 2: Currently in planning stages. As design work progresses more detailed information will be available on the design and construction schedule.

This document summarizes the evaluation of alternate construction access routes to access the Phase 1 work area at the south end of the park and associated traffic control and environmental protection measures.

2.0 COMMUNITY ENGAGEMENT AND TECHNICAL ADVISORS

TRCA engaged with multiple community stakeholders and technical advisors throughout the planning process for this project and this section provides an overview of activities that informed the recommended project plans.

2.1.1 Lakeshore Grounds Coordinating Committee (LGCC)

LGCC meets quarterly, is coordinated by Humber College and includes representatives from the organizations listed below that discuss events and issues impacting the local community. TRCA presented project plans for feedback to the LGCC in October 2023.

- Humber College
- Concerned Citizens for the Future of the Etobicoke Waterfront (**CCFEW**)
- Friends of Sam Smith (**FOSS**), representing
- Lakeshore Lodge
- Lakeshore Grounds Interpretative Centre
- Lakeshore Campus
- City of Toronto
- Toronto and Region Conservation Authority

2.1.3 Turtle Protectors

Turtle Protectors is an “Indigenous-guided stewardship program that is supported by Indigenous Elders and community members”. Established in the High Park area, Turtle Protectors have recently developed a volunteer-based monitoring and protection program within Colonel Samuel Smith Park. They focus on the identification and protection of turtle nests and monitoring turtle movements within the park.

2.1.2 Aquatic Habitat Toronto (AHT)

AHT is a Technical Advisory Group coordinated by TRCA that meets monthly to provide ecological advice on shoreline initiatives and is responsible for the implementation of the [Toronto Waterfront Aquatic Habitat Restoration Strategy](#) (TWAHRS). AHT includes representatives from the organizations listed below. TRCA presented initial project scoping to AHT in November 2021.

- Fisheries and Oceans Canada (**DFO**)
- Environment and Climate Change Canada (**ECCC**)
- Ministry of Natural Resources (**MNR**)
- Ports Toronto
- City of Toronto
- Waterfront Toronto
- Toronto and Region Conservation Authority

2.1.2 Other Technical Advisors and Subject Matter Experts

- Councillor Morley’s Office
- Parks, Forestry and Recreation (Parks Supervisor)
- Urban Forestry (Tree Protection and Plan Review)
- Arborists, Coastal Engineers, Biologists, Aquatic Specialists

2.2 Summary of Past and Planned Engagement Activities

Date	Stakeholder Group	Summary
November 2021	AHT	Shared general project information with commitment to update once designs were further developed
February 2023	AHT	Shared conceptual designs for shoreline work and proposed aquatic habitat features
April 2023	Humber College	Preliminary meeting to prepare for Lakeshore Grounds Coordinating Committee updates
September 2023	AHT	Shared updates on concept designs and proposed aquatic habitat features based on additional shoreline study
October 2023	LGCC	Shared initial access route plans, scope of work for project, expected timelines, and proposed mitigation measures. Appreciation from stakeholders for avoiding Colonel Sam Smith Park Drive, requests to adjust timing of deliveries.
March 2024	LGCC	Shared access route plans, scope of work for project, updated timelines, and proposed mitigation measures. Feedback on turtle protection and consideration for other ongoing infrastructure projects like Water Treatment Plant updates and Humber College building renovations.
April 2024	Ward 3 Councillor's Office	Discuss updates to access route
July 2024	Ward 3 Councillor's Office	Prepare for public information session and plan for notice distribution
July 2024	Drop-In Public Information Session	Letters delivered to residents most impacted by updated access route, session advertised through TRCA's website and through Ward 3 Councillor Office updates. Drop-in session held in person on Humber College grounds from 5pm-7pm on Tuesday, July 30 2024 to share information on Phase 1.
September 2024	Signage installed on-site	Notice of Construction signage and Federal Funding signs installed on site, showing the access restrictions and directing people to TRCA's website for further information.
October 2024	Turtle Protectors	Pre-construction site walkthrough to discuss impacts to turtles and refine mitigation measures, including turtle exclusion fencing, staff training, and installation of alternate turtle nesting sites
October 2024	Ward 3 Fall Fest	Planned event to engage with the community and learn more about the project and TRCA's other work.
October 2024	LGCC	Provide update on access impacts, start date, and other project timelines to all members.
Late 2025 (future)	Drop-In Public Information Session	Planned event for details on the shoreline work for Phase 2, which will include approximate timelines, scope of work, and anticipated impacts.

3.0 ACCESS NEEDS AND ROUTE ALTERNATIVES

During Phase 1 work 4-8 construction vehicles (mostly flatbed and dump trucks) are expected to travel the construction access route per day to deliver materials to the shoreline work zone. Four different construction access routes were evaluated by TRCA and considered feedback from the community organizations and technical advisory groups summarized in **Section 2.0**. The alternative access routes evaluated are outlined below and **Table 1** summarizes the benefits and challenges associated with each route.

Option A – Colonel Sam Smith Park Drive, onto park trails

Option B – Colonel Sam Smith Park Laneway (Gatehouse), onto park trails

Option C – Thirteenth Street, east onto Lake Shore Drive, onto park trails

Option D – Twenty Third Street, onto park trails

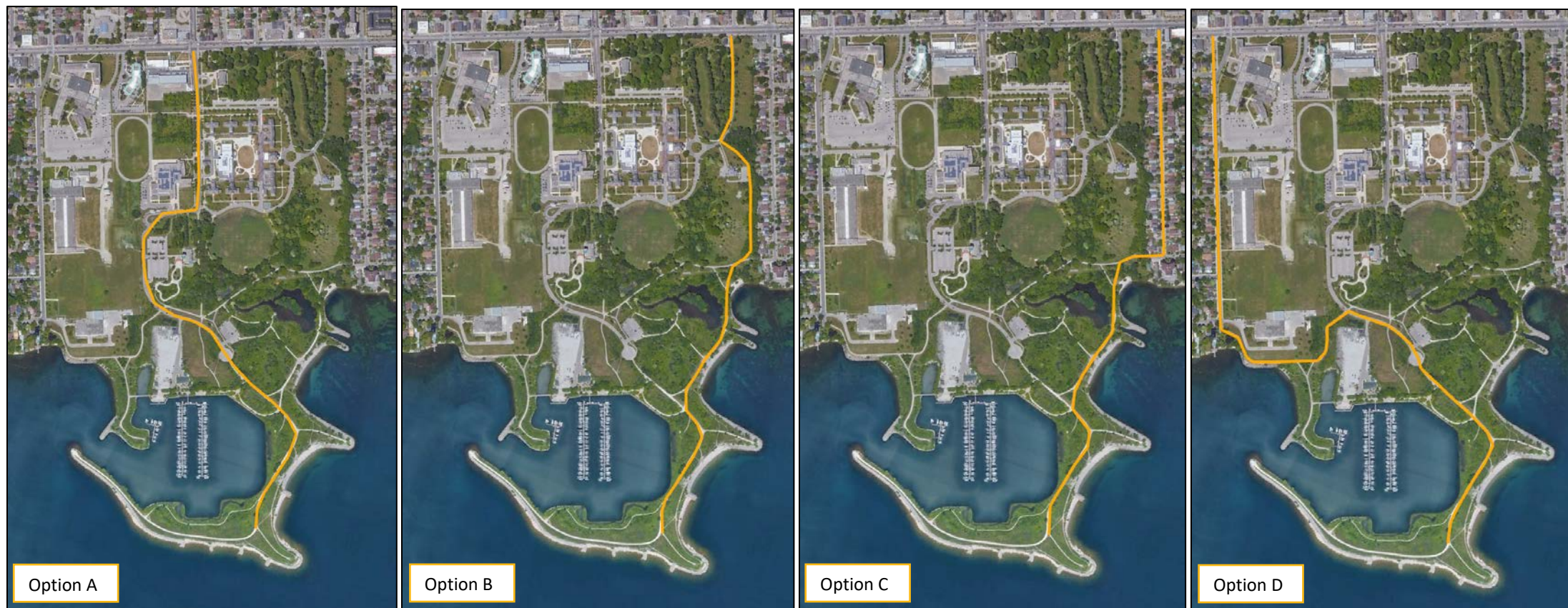


Figure 1. Access Route Options for Colonel Samuel Smith Park. Orange line shows truck access route. *Source: TRCA, 2024.*

Table 1. Summary of Access Options A through D. *Source: TRCA, 2024.*

Criteria	Option A: Colonel Sam Smith Park Drive	Option B: Colonel Sam Smith Park Laneway	Option C: Thirteenth Street	Option D: Twenty Third Street
Park & Trails				
Waterfront Trail (WF Trail)	<ul style="list-style-type: none"> No impacts to WF Trail. Stop sign to cross Colonel Sam Smith Park Drive. 	<ul style="list-style-type: none"> Low impact to WF Trail. Humber College and Morrison Avenue detours available. WF Trail is continuous on evenings and weekends. 	<ul style="list-style-type: none"> Moderate impact to WF Trail. Humber College and Morrison Avenue detours available. WF Trail detour overlaps with uncontrolled trucking access route 	<ul style="list-style-type: none"> High Impact to waterfront trail. Requires substantial cycling detour for WF Trail along trucking route, crossing Colonel Samuel Smith Park Drive at busy Humber Campus, and/or cycling across Lakeshore Boulevard Detour still in effect on evenings and weekends
Trail Access	<ul style="list-style-type: none"> Lowest length of trail access restrictions 	<ul style="list-style-type: none"> Greatest length of weekday trail closures 	<ul style="list-style-type: none"> Allows access to 300m walking trail west of Thirteenth Street 	<ul style="list-style-type: none"> 400m full-time trail closure on west side of park Allows greater trail access along east end
Park Access	<ul style="list-style-type: none"> Some weekday limitations to accessing east side of park. 	<ul style="list-style-type: none"> Moderate weekday limitations to accessing east side of park 	<ul style="list-style-type: none"> Substantial weekday limitations to accessing east side of park 	<ul style="list-style-type: none"> Some weekday limitations to accessing east side of park.
Beach Access	<ul style="list-style-type: none"> Allows full-time access to two northeast beaches Allows evening and weekend access to all beaches 	<ul style="list-style-type: none"> Allows weekday access to first northeast beach Allows evening and weekend access to all beaches 	<ul style="list-style-type: none"> Does not allow weekday access to any beaches Allows evening and weekend access to all beaches 	<ul style="list-style-type: none"> Allows full-time access to two northeast beaches Allows evening and weekend access to all beaches
Roads, Road Users & Access				
Community Safety Zone	<ul style="list-style-type: none"> Uses designated Community Safety Zone on Colonel Sam Smith Park Drive. Highest volumes of pedestrians, cyclists, transit use and pick/up drop-off activity associated with the 3 schools located in this zone. 	<ul style="list-style-type: none"> Avoids designated Community Safety Zone 	<ul style="list-style-type: none"> Avoids designated Community Safety Zone 	<ul style="list-style-type: none"> Avoids designated Community Safety Zone

Criteria	Option A: Colonel Sam Smith Park Drive	Option B: Colonel Sam Smith Park Laneway	Option C: Thirteenth Street	Option D: Twenty Third Street
Residential Streets	<ul style="list-style-type: none"> Does not use smaller local residential streets. 	<ul style="list-style-type: none"> Does not use smaller local residential streets. 	<ul style="list-style-type: none"> Uses residential road with street parking, waste pick-up and snow removal activity. May result in increased need for reversing truck movements to navigate, which substantially increases safety risks. Frequent residential driveways on both sides for which access/egress may be temporarily impacted during delivery windows. 	<ul style="list-style-type: none"> Uses residential road with street parking, waste pick-up and snow removal activity. May result in increased need for reversing truck movements to navigate, which substantially increases safety risks. Frequent residential driveways on west side for which access/egress may be temporarily impacted during delivery windows.
Parking				
Parking Restrictions	<ul style="list-style-type: none"> Minimal impacts to parking. 	<ul style="list-style-type: none"> Minor impacts side street parking along laneway (~150m) Impacts can be mitigated by TRCA staff assisting truck navigation 	<ul style="list-style-type: none"> Minor impacts to side street parking along residential street (~1000m). 	<ul style="list-style-type: none"> Minor impacts to side street parking along residential street (~650m).
Safety and Site Operations				
Safety and Site Operations	<ul style="list-style-type: none"> Least control in managing construction traffic and potential conflicts Multiple pedestrians crossing points and desire lines across the access route difficult for TRCA to manage 	<ul style="list-style-type: none"> Highest control in managing construction traffic and potential conflicts with park and road users High ability for TRCA staff to manage pedestrian activity at site entrance on laneway with lower vehicle speeds and volumes. 	<ul style="list-style-type: none"> Moderate control in managing construction traffic and potential conflicts with park and road users Potential for construction staff to flag turn movements Potential for pedestrians midblock crossing the access route difficult for TRCA to manage 	<ul style="list-style-type: none"> Moderate control in managing construction traffic and potential conflicts with park and road users Pedestrian crossings along less busy residential street Partially controlled pedestrian crossing for trucks entering work site (combination of stop-sign traffic controls and TRCA staff traffic controls)
Environmental / Infrastructure				
Tree Impacts	<ul style="list-style-type: none"> 3 tree removals and 6 stem removals within work area 	<ul style="list-style-type: none"> 3 tree removals and 6 stem removals within work area 	<ul style="list-style-type: none"> 3 tree removals and 6 stem removals within work area 	<ul style="list-style-type: none"> 3 tree removals and 6 stem removals within work area

Criteria	Option A: Colonel Sam Smith Park Drive	Option B: Colonel Sam Smith Park Laneway	Option C: Thirteenth Street	Option D: Twenty Third Street
		<ul style="list-style-type: none"> • Less than 20 tree injuries near wetland from installing turtle fencing 	<ul style="list-style-type: none"> • Less than 20 tree injuries near wetland from installing turtle fencing 	
Wildlife	<ul style="list-style-type: none"> • Minimal impacts to wildlife 	<ul style="list-style-type: none"> • Some impacts to turtles, mitigated by turtle exclusion fencing and culvert crossing 	<ul style="list-style-type: none"> • Some impacts to turtles and potential turtle nesting areas, partially mitigated by turtle exclusion fencing 	<ul style="list-style-type: none"> • Minimal impacts to wildlife
Trail Repaving	<ul style="list-style-type: none"> • Lowest amount of repaving required 	<ul style="list-style-type: none"> • Moderate repaving for asphalt trail 	<ul style="list-style-type: none"> • Moderate repaving for asphalt trail and Thirteenth Street 	<ul style="list-style-type: none"> • Significant repaving for Waterfront Trail between Twenty Third Street and Colonel Samuel Smith Park Drive
Trail Widening	<ul style="list-style-type: none"> • No trail widening required 	<ul style="list-style-type: none"> • Some trail widening required outside of Tree Protection Zones 	<ul style="list-style-type: none"> • Some trail widening required outside of Tree Protection Zones 	<ul style="list-style-type: none"> • Some trail widening required, potentially inside Tree Protection Zones
Resident Homes	<ul style="list-style-type: none"> • Minimal impacts to residential homes. 	<ul style="list-style-type: none"> • Potential increased noise during working hours 	<ul style="list-style-type: none"> • Increased truck traffic outside of homes during work hours 	<ul style="list-style-type: none"> • Increased truck traffic outside of homes during work hours
Summary	Highest potential for conflicts with vulnerable road and park users. Lowest environmental and social impact.	Lowest potential for conflicts with vulnerable road and park users. Moderate environmental and social impact that can be mitigated.	Moderate potential for conflicts with vulnerable road and park users. Highest environmental and social impacts.	Moderate potential for conflicts with vulnerable road and park users. Moderate impact to environmental and social impacts.

Option B: Colonel Sam Smith Park Laneway was selected as the preferred access route because:

1. It avoids the Community Safety Zone, school areas and residential streets
 - I. Many stakeholders expressed concern about safety and disruption, especially during pick-up/drop-off times
2. It has a lower impact to recreational trails and park accessibility than Option C (limits access to east beach) and Option D (removes access from west side)
3. It has moderate environmental impacts which can be mitigated through various methods, including:
 - I. installing tree protection
 - II. installing erosion and sediment protection
 - III. adding turtle exclusion fencing
 - IV. daily site and access route inspections

4.0 MITIGATION MEASURES

TRCA recognizes that all of the access route alternatives have impacts on the neighborhood, park users, and the environment. TRCA has used feedback the community and technical advisors to develop plans to minimize negative impacts of the recommended access route described in **Section 3.0**.

4.1 Public Safety

Public safety is a key consideration of access route and project construction planning. Mitigation measures include:

- Dedicated staff escort of construction vehicles along the access route, including along shared routes;
- Sidewalk decals and construction staff assistance at major turning points to manage pedestrian and vehicle traffic;
- Fencing to isolate truck traffic from the public and prevent accidental unsafe public access along the route;
- Implementation of strict speed limits for trucks and other construction vehicles; and
- Extensive signage to identify cycling and pedestrian detour routes, as well as information on when trails are accessible.

4.2 Tree Impacts

To limit tree impacts and removals due to access and construction activities, TRCA consults with multiple review teams in order to protect trees and compensate for any unavoidable removals. Tree impact mitigation includes working with our dedicated Survey, Forestry and Ecology Review teams, who:

- Tagged and catalogued **384 trees** greater than 10 centimetre diameter at breast height (**DBH**) along the access route and within the project area;
- Completed a detailed health assessment for each tagged tree which records:
 - Tag number
 - Species ID (common and scientific)
 - DBH
 - Tree Protection Zone (**TPZ**) area based on DBH
 - Percent overlap into TPZ to determine level of impact (none, injury or removal)
 - Trunk Integrity
 - Canopy Structure
 - Canopy Structure
 - By-Law Tree Category
 - Level of Impact
 - Reason for Impact
- Reviewed and approved TPZs on the Tree Protection Plan;
- Identified total number of removals (currently **3 trees and 6 stems**) and total number of injuries (currently estimates at **13 trees total**) based on the scope of work
 - A Tree Injury is a tree that will be negatively impacted within its TPZ but not impacted enough to warrant removal; typically this is impactful work within the outer 25% of the TPZ
 - Projected 13 injuries due to installation of turtle fencing (trenching, adding stakes), of which only 3 are greater than 20cm DBH
 - No injuries along access route widening
 - All injuries overlap TPZs by less than 25%

- Prepared an Arborist Report which summarizes the health information and recommended protection measures for trees on site based on the scope of work; and
- Reviewed counts, species, and placement of compensation plantings (currently **27**) to ensure compliance with Urban Forestry and to maximize planting survival.

TRCA regularly uses existing park infrastructure (e.g. trails) to avoid or mitigate impacts to trees and tree roots as they:

- Are regularly pruned by City maintenance staff for emergency vehicle and maintenance vehicle access;
- Have some amount of subbase material which has less space for tree roots to infiltrate and does not compress like undisturbed ground;
- Provide more tree protection than installing horizontal hoarding (e.g. wooden mats), which is a common mitigation measure recommended by Urban Forestry;
- Provide an existing base for additional mitigation measures, e.g. wood mats; and
- Do not impact potential archaeological resources by impacting undisturbed ground.

TRCA is currently working with Urban Forestry to confirm the total number of impacts, however currently only 3 trees greater than 10 centimetre DBH are proposed for removal. These trees are not along the access route, and are within the construction area at the south end of the park, as shown in **Figure 2**.



Figure 2: Proposed Tree Removals (3) to Accommodate Construction, Circled. *Source: TRCA, 2024*

Potential injuries are still being confirmed by Urban Forestry, however TRCA is proposing adding wooden mats at strategic locations along the access route for additional protection above and beyond Urban Forestry requirements.

The images below show the portions of the trail that need to be widened to accommodate turning trucks. Please note that all images are approximate mark-ups, and actual TPZs will be identified on-site during set up using TRCA’s ground survey equipment.

TRCA is remaining outside of TPZs wherever possible. Some trees will be impacted through installation of the turtle fencing, and TRCA is proposing to use low-impact trenching methods (e.g. hand or air tool) to limit injuries to tree roots.

Note that absolutely no trail widening or trenching is proposed within the TPZs of the mature trees located behind the properties along Thirteenth Street, and it is anticipated that trail widening will occur completely outside of TPZs for all trees.



Figure 3: Proposed Trail Widening - Gatehouse Laneway to Paved Trail. *Source: TRCA, 2024.*



Figure 4: Proposed Trail Widening - Paved Trail to Gravel Trail. Source: TRCA, 2024.



Figure 5: Proposed Trail Widening - Paved Trail to Gravel Trail. Source: TRCA, 2024.

4.3 Park Access

Colonel Samuel Smith Park is used by many members of the public in multiple ways. Typical users include (but are not limited to):

- Daily park users for walking, cycling and exercise;
- Commuters using the Waterfront Trail;
- Dog walkers through the park and within the off-leash dog park;
- Attendees for large, organized events (e.g. Toronto Bird Festival);
- Birders and turtle watchers;
- People looking to fish; and
- Kite surfers, etc.

While public safety remains a key concern for the work, TRCA also recognizes the high use of the park and has worked with our internal construction crews, the Parks Supervisor, the Ward 3 Councillor’s Office, Waterfront Regeneration Trust (for the Waterfront Trail), and LGCC members like CCFEW and FOSS to come up with the following ways to limit the impacts to park users:

- Opening portions of the trail on evenings and weekends when trucks are finished for the day;
- Signing detour options for pedestrians to access the eastern beaches and southwest side of the park;
- Signing detour options for pedestrians entering from Thirteenth Street to access the western side of the park;
- Signing detour routes for cyclists using the Waterfront Trail that avoid Lake Shore Boulevard;
- Phasing construction such that no work will be completed on the headland (Whimbrel Point) during the Whimbrel stopover migration, and increasing public access to the headland where safe; and
- Working with the Parks Supervisor to keep up to date on park events.

4.4 Terrestrial Habitat, Turtles and Birds

TRCA completed a terrestrial inventory update during the planning process to identify important flora and fauna.

Keeping construction access within the existing trail system wherever possible reduces the impact to terrestrial habitat.

The most critical habitat is located within the park interior, particularly around the wetland areas. TRCA is adding Erosion and Sediment Control (**ESC**) measures throughout the access and work areas, including woodchip-filled ‘socks’ lining the route, and construction fabric along fencing to prevent dust and sediment going into wetland areas. The shoreline work will continue to protect the local habitat from wave action, and the ESC measures will mitigate impacts to the sensitive areas during the shoreline repair.

Colonel Samuel Smith Park is actively used by multiple turtle and bird species as migration layovers, breeding habitat, and nesting. TRCA has involved our internal terrestrial monitoring and habitat restoration staff in developing mitigating measures to reduce impact to these species, which include:

- Starting work in the winter while turtle and bird activity is reduced;
- Maintaining a continuous presence on-site to prevent birds from nesting within the work area; should a prolonged absence occur, the work area will be assessed by a biologist for nesting birds;
- Avoiding work on the headland (Whimbrel Point) during predicted Whimbrel migration periods;
- Avoiding known turtle nesting areas;

- Installing turtle fence near wetland area to redirect turtles to promote crossing through the large culvert between wetland and lake;
- Installing gravel and sand mounds to promote safer turtle nesting areas; and
- Regular monitoring for turtles, turtle nests, and bird nests within the work area.

TRCA will continue to work with the Turtle Protectors and habitat restoration staff throughout the project to ensure continued protection of these species. **Figure 6** below shows the approximate limits of protective turtle fencing along the access route.



Figure 6: Approximate Turtle Fencing Limits. *Source: TRCA, 2024*

4.6 Aquatic Habitat

TRCA has worked with **DFO** and **AHT** throughout this project to minimize impacts to fish and to design appropriate compensation measures to help create more aquatic habitat.

TRCA is working on the outer shoreline of the park, which is an open coast environment that does not provide quality habitat for fish and other marine wildlife. To compensate for the shoreline work, TRCA will install additional habitat features within the interior of the park where it is more useful for breeding and resting. The goal of the proposed restoration work is to create three distinct coastal habitat types within this existing area from a wet meadow feature:

- Expanded sheltered backshore area: remove or adjust existing brick-and-block rubble in embayment and replace with native species along the shoreline and into the shallow areas of the embayment. This may include adjusting the bed contours to make a larger ‘emergent zone’ (area where underwater vegetation can grow above the water line) and create deep pockets for resting areas.
- Focus on the nearshore habitat (area between the shoreline and the established terrestrial habitat) by planting native riparian and emergent vegetation and adding embedded logs and rocky vanes.
- Implementation of a sunken forest feature in deeper areas to improve habitat conditions in the offshore zone, away from the shoreline. This involves adding larger vegetation (e.g. logs) to allow hiding and rest spaces, and makes the environment more varied which is more appealing to fish.

The location of the proposed aquatic habitat creation plan is shown in **Figure 7**.

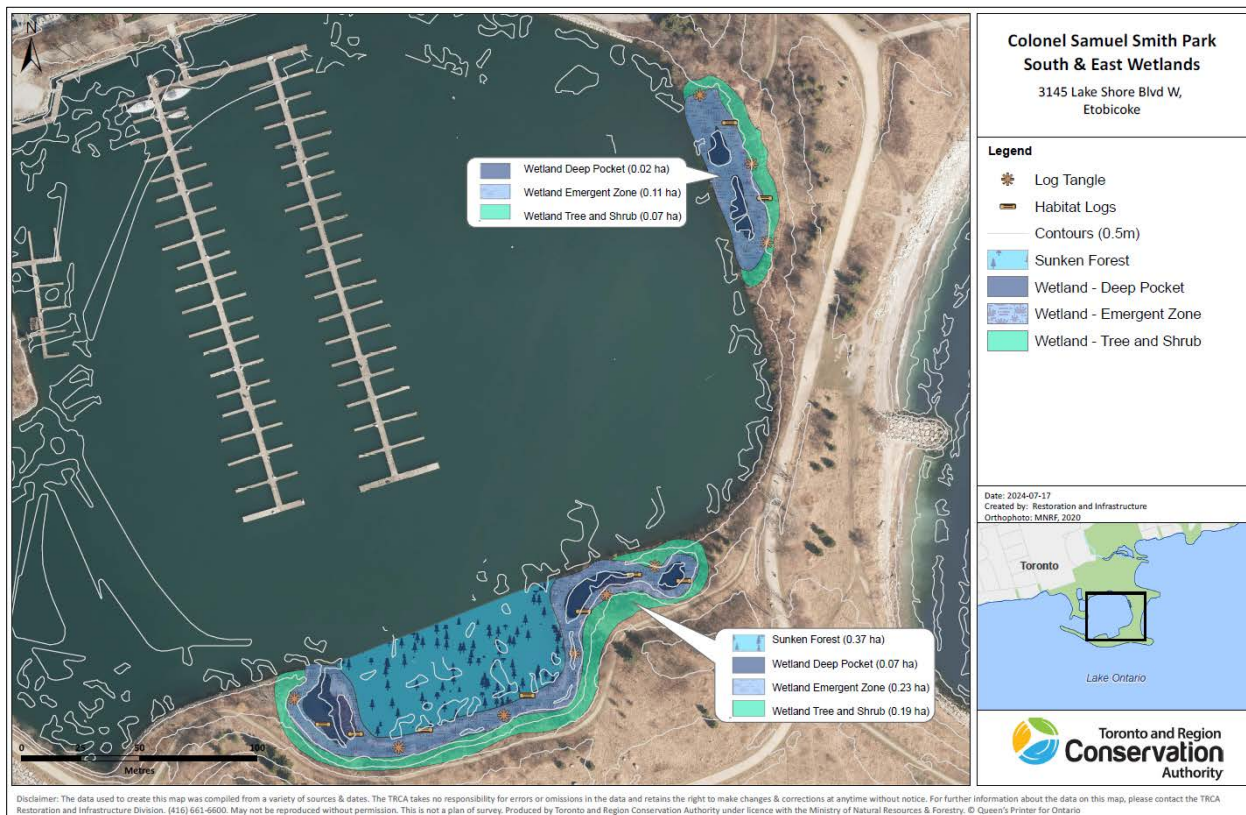


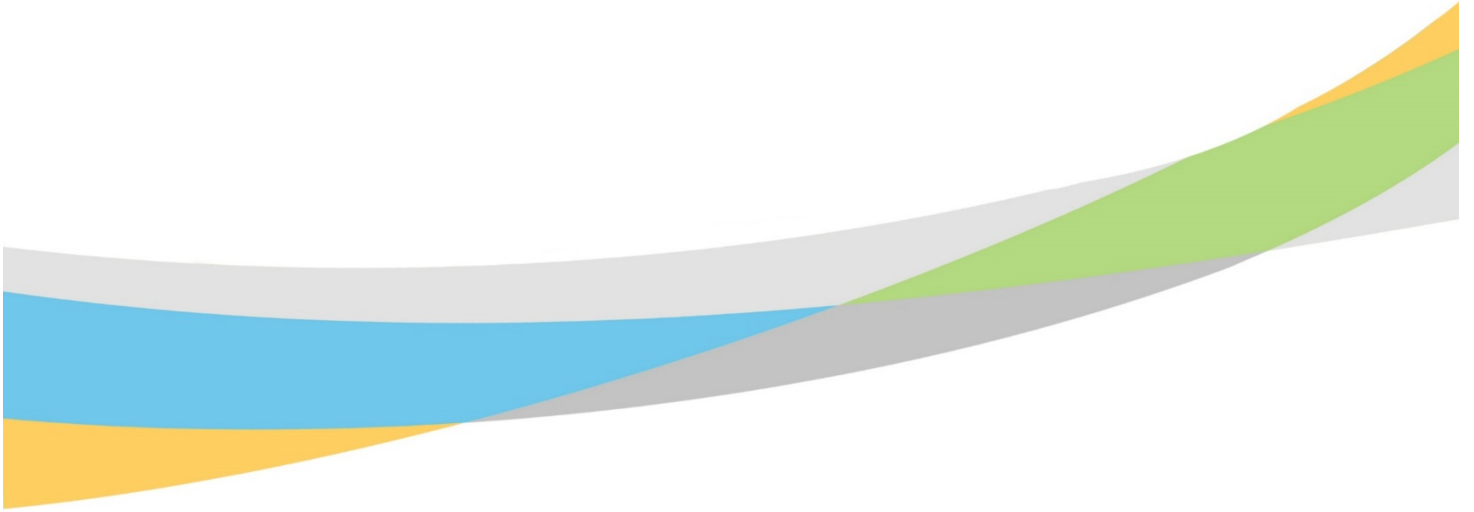
Figure 7. Colonel Samuel Smith Park South and East Wetlands. *Source: TRCA, 2024.*

5.0 SUMMARY

Recognizing the impacts of this project on local residents, park users, and the environment TRCA ensured to engage early and often with key stakeholders near the work area. In addition to TRCA's internal range of expertise, several external stakeholders were consulted, including environmental focused groups (Turtle Protectors and FOSS), those familiar with park and community use needs (Ward 3 Councillor's Office, LGCC, Waterfront Regeneration Trust, CCFEW, Parks Supervisor, local residents through Public Information Session), and environmental subject matter experts and regulatory bodies (DFO, ECCC, MNR, Urban Forestry).

The feedback received was considered in determining an access route that addressed concerns related to safety, environmental impact, and disruptions to local residents and park users. Many stakeholders expressed concerns safety and disruption concerns regarding construction vehicle using the community safety zone near the schools and local residential streets. This route gives TRCA the best control in managing and preventing any potential safety and access conflicts with construction vehicles. Environmental impacts are being mitigated in multiple ways to protect mature trees, turtles, birds, and their habitat. Park user impacts are being mitigated by adding detour routes and opening pedestrian crossings during evenings and weekends to allow access to the south and east ends of the park during peak times.

The shoreline work will provide the additional protection required to preserve Colonel Samuel Smith Park for future generations to enjoy.



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