

Goodwood Resource Management Tract Trail Plan

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Appendix 1: Goodwood Resource Management Tract Design Elements

Appendix 2: Goodwood RMT Trail Plan Implementation Budget

1. Introduction

Since the approval of the Duffins Creek Headwaters Management Plan in 2003, the Toronto and Region Conservation Authority's (TRCA) Goodwood Resource Management Tract (Goodwood RMT) has been identified as a key property of regional trail importance requiring an updated and dedicated Trail Plan. the Goodwood RMT represents a critical juncture within the larger regional trail landscape. With 2,104 hectares (ha) of new land added to Rouge National Urban Park (RNUP) in 2017, the Goodwood RMT is now located directly to the north of the northernmost tip of RNUP. Parks Canada is currently undertaking trail and welcome areas planning in this area of RNUP, and the development of a dedicated Goodwood RMT Trail Plan at this time allows for coordination with this ongoing work to create cohesive and mutually supportive trail experiences. The Oak Ridges Trail runs through the Goodwood RMT property and connects to the Trans Canada Trail and other major recreational greenspace destinations farther east.

To address this new context, a public planning process was undertaken for the Goodwood RMT from approximately October 2017 through November 2018, in partnership with Parks Canada, Green Durham Association (GDA), the Oak Ridges Trail Association (ORTA), and Trans Canada Trail Ontario (TCTO). The Ontario Trillium Foundation (OTF) provided funds to GDA to support this planning process. This planning process included data collection, the development of trail network alternatives, analysis of these alternatives and the determination of a preferred alignment, conceptual design of trail amenities and design features, and implementation costing and phasing. The planning process included input from TRCA technical staff, local trail and conservation organizations, key public interest groups and municipal staff through a Public Advisory Committee, and the general public.

The Goodwood RMT Trail Plan reflects the results of this public planning process. The Trail Plan describes the study area context and existing trail system, the planning process and engagement that was undertaken, and the engagement techniques employed as part of this process. The Trail Plan describes the design of the future Goodwood RMT trail network, including trail alignments, trail design standards, signage, amenities, and opportunities for design enhancements at feature areas throughout the site. Appendix: Goodwood Resource Management Tract Design Elements provides further detail on recommended opportunities for design enhancements to the trail system. Further detailed design and engineering studies will need to be undertaken to confirm and further articulate the concepts included within this Appendix. Finally, recommendations for the future management of the Goodwood RMT trail system and a proposed phased implementation budget are included.

2. Site and Management Plan Context

2.1 Goodwood Resource Management Tract

The Goodwood RMT property is 125 ha in size (309 acres), and is owned entirely by TRCA (see Map 1). The property is bounded by Concession 2 to the west, Concession 3 to the east, Webb Road to the south, and private property to the north. The Goodwood RMT is located on the Oak Ridges Moraine in the Duffins Creek watershed, within the Township of Uxbridge (Region of Durham) (See Figure 1). The property is not far from the communities of Stouffville and Goodwood, as well as the Lincolnville GO Station (see Map 2). The Goodwood RMT is uniquely positioned to provide a trail gateway between the regional Oak Ridges Trail network, the Trans Canada Trail, and the trail system within the northern RNUP lands that will eventually extend south through the park to Lake Ontario.

The Goodwood RMT is comprised entirely of natural cover and is located in an area that has been recognized as having a high conservation value for decades. The site's natural cover provides an important linkage to the extensive forest habitats that extend beyond the Study Area: east-west across the Oak Ridges Moraine, south down the West Duffins Creek and into RNUP; and north into the Lake Simcoe Watershed. As such the site fills an important function

in helping to maintain healthy populations of many fauna species of regional concern. The site includes extensive plantation forest, mixed deciduous forest, meadow, and wetland features. The West Duffins Creek and a number of headwater tributaries run through the property. The Goodwood RMT exhibits the rolling sloping topography that is typical of the Oak Ridges Moraine landscape (See Map 3). It includes portions of the Goodwood-Glasgow Provincially Significant Wetland (PSW); the North Glasgow and Brown-Shaw Environmentally Significant Areas (ESAs); and the candidate Duffins Headwaters Provincial Area of Natural and Scientific Interest (ANSI) (see Map 4). The site contains numerous highly sensitive plant and wildlife species, and contributes a diversity of high quality and sensitive habitats to the ecosystem functions of the surrounding region.

The Goodwood RMT was acquired by TRCA through seven separate acquisitions; five in 1967, one in 1968, and one small acquisition in 2007 which enabled a trail connection to Webb Road. While archaeological information specific to the Goodwood RMT site is limited, historical aerial photos and local knowledge of the area can help reveal some of the historic uses and cultural history of the site. During the early 20th century the Goodwood RMT and the surrounding area was characterized by farmland, cleared of its historic forest cover. The sandy soil of the Oak Ridges Moraine is prone to soil erosion, especially without surrounding vegetation to support soil stability and act as windbreak. After forest clearing during the early 20th century, soil erosion began to become an issue at the Goodwood RMT, degrading the fertility and stability of the landscape. From the mid-20th century the agricultural landscape of the Goodwood RMT was reforested with extensive conifer plantations (see Figures 2, 3, and 4) which would help stabilize and save the fertility of the soil from the damaging effects of soil erosion. These types of reforestation efforts were undertaken all over the Oak Ridges Moraine, often by local volunteers and conservation groups, and many have proved great examples of conservation success (Forests Ontario, 2016). At the Goodwood RMT now, work is being undertaken by TRCA to convert the plantations into more mixed, biodiverse forest (see Figure 5).

2.2 Duffins Creek Headwaters Management Plan for TRCA Properties

the <u>Duffins Creek Headwaters Management Plan for TRCA Properties</u> was endorsed in 2003. At Meeting #6-03 of the TRCA Board on July 25, 2003, RES # A158/03 was adopted as follows:

"THAT the Duffins Creek Headwaters Management Plan for TRCA Properties, dated June 2003, as attached, be approved;

THAT staff circulate the Duffins Creek Headwaters Management Plan for TRCA Properties to the Ontario Heritage Foundation, the Township of Uxbridge, and the City of Pickering for endorsement;

THAT staff send a letter of thanks to the members of the Duffins Creek Headwaters Advisory Committee for their dedicated assistance with the preparation of the Management Plan;

THAT copies of the Duffins Creek Headwaters Management Plan for TRCA Properties be circulated to the members of the Advisory Committee, the Township of Uxbridge, the City of Pickering, and other appropriate agencies, groups and individuals;

THAT staff work with the Township of Uxbridge staff to investigate options and develop a strategy to address limiting access on closed road allowances that are adjacent to TRCA owned land;

THAT staff prepare a report in fall of 2003 on Stewardship Management Plan implementation and the potential for integration with the Watershed Plan for Duffins Creek and Carruthers Creek;

AND FURTHER THAT staff be directed to utilize the Strategy for Public Use on Conservation Authority Lands (1995) when considering new public uses on the TRCA's Duffins Creek Headwater Properties."

The Management Plan was prepared to protect, conserve and restore significant lands located on the Oak Ridges Moraine and within the headwaters of the Duffins Creek Watershed (TRCA, 2003). The Management Plan covered the Goodwood RMT, Secord Forest and Wildlife Area, Clubine Agreement Forest, Walker Woods Tract, Glen Major Resource Management Tract, former Timber Brother Gravel Pit, and Claremont Field Centre.

Chapter Five of the Management Plan lays out concept plans and recommendations for each of the TRCA properties. The Goodwood RMT is grouped with the Secord Forest and Wildlife Area and the Clubine Agreement Forest:

"Essentially, the concept involves the preservation of natural areas, linkages, cultural heritage features and scenic landscapes with a focus of outdoor recreational activities being provided at the Secord property. The concept can be described as enhanced passive recreation, environmental protection and stewardship."

Chapter Six of the Management Plan lays out trail plans for each of the TRCA properties in question. The trail plan for the Goodwood RMT is described together with the Secord Forest and Wildlife Area and the Clubine Agreement Forest (see Figure 6). It describes recommendations for general trail construction techniques, signage, trail management, and maintenance. This chapter also describes general trail design standards for the Goodwood RMT, together with Secord Forest and Wildlife Area, Clubine Agreement Forest, and Claremont Field Centre (See Figure 7)

The Management Plan continues to provide a solid foundation for the management of the Goodwood RMT. However, the trail plan for the Goodwood RMT within the Management Plan is outdated, and does not reflect even the existing trail network. Also, new environmental data collected in 2017 provides insight into the site's high habitat quality and its sensitivity to disturbance. There has never been a dedicated trail plan for the Goodwood RMT. A dedicated, comprehensive, and updated Goodwood RMT Trail Plan is necessary to reflect the site's newly significant position within the regional trail landscape; managing the implications and capitalizing on the opportunities of this context.

3. Trail Planning Process

The public planning process for the Goodwood RMT Trail Plan was undertaken within an ecosystem framework and in consultation with TRCA staff, key public stakeholders, and the general public to ensure watershed health, public enjoyment and environmental sustainability. This public planning process, undertaken in partnership with Parks Canada, GDA, ORTA, OTF, and TCT brought together partners with valuable expertise in regional trail networks

3.1 Project Process

The planning process was undertaken in the three phases.

Phase 1 – Project Initiation and Study Inventory

- Inventoried physical environment, natural environment, land use context
- Inventoried existing trails and associated wayfinding and amenities (e.g. parking, bathrooms, seating, etc.)
- Established a TRCA staff Technical Advisory Committee (TAC), hosted meeting
- Established a Community Liaison Committee (CLC), hosted meeting
- Initiated on-line engagement (TRCA YourSay engagement website)
- Undertook Initial outreach to Indigenous partners

Phase 2: Trail Planning - Alternatives and Preferred

• Developed trail network objectives and options

- Generated options for trail amenities and programming, including parking, bathrooms, wayfinding, interpretive signage, etc.
- Generated design feature options to develop a trail gateway; acknowledging the connection between the RNUP, TRCA land, and regional trail connections (the Oak Ridges Trail and Trans Canada Trail)
- Finalized a Terrestrial Biological Inventory Report for the Goodwood RMT and surrounding area
- Held meetings with the TAC and CLC
- Hosted a Public Engagement Session
- Consulted with the Township of Uxbridge Accessibility Advisory Committee as part of AODA Integrated
 Accessibility Standards (Ontario Regulation 191/11) requirements on consultation with people with
 disabilities
- Identified a safe public crossing of Webb Road
- Evaluated trail network options and develop a preferred trail network alternative
- Refined trail amenities, wayfinding and programming opportunities
- Refined gateway design opportunities

Phase 3: Plan Finalization¹

- Developed management recommendations and a phased implementation plan
- Developed trail design standards and design concepts for trail signage, amenities, and feature areas, including gateway features
- Developed and finalize Goodwood RMT Trail Plan document
- Obtain TRCA Board of Directors approval of Goodwood RMT Trail Plan
- Obtain Parks Canada, GDA and ORTA support of the plan
- Fulfill OTF & TCT grant requirements for recognition and reporting²

3.2 Engagement and Consultation

Engagement with TRCA staff, external key interest groups, and the general public was critical to the success of the planning process for the Goodwood RMT Trail Plan.

3.2.1 TRCA Staff

A TAC was formed to gain input and feedback from TRCA staff. This TAC included representation from various departments including Archaeology, Development Planning and Regulation, Engineering Services, Environmental Assessment Planning, Planning Ecology, Policy and Planning, Restoration Projects, Resource Management Projects, Terrestrial Inventories and Monitoring, and Watershed Strategies.

The TAC convened formally three times during the course of the Goodwood RMT Trail Planning process to discuss site opportunities and constraints, the development of trail network options, feedback from the public, the evaluation of various trail network options, trail design standards, amenities, programming, gateway features, trail management roles, and Trail Plan implementation. Meetings of the full group were held on January 11, 2018, March

¹ Certain elements of Plan Finalization are still outstanding at the time of TRCA Board of Directors approval

² OTF TCTO grants were secured to help fund the project

5, 2018, and April 30, 2018. Input on specific issues was aslo sought more informally from TAC members, and additional meetings to discuss specific issues were held on March 19, 2018 and June 5, 2018. Key input from the group highlighted the critical need to protect the high ecological value and sensitivity of the site, manage the impacts of future trail users, develop sustainable trail infrastructure, and construct gateway and interpretation areas that reflect the sensitivity of the surrounding environment.

3.2.2 Formal Project Partners

Smaller meetings were held at key points in the project process with the formal Goodwood RMT Trail Plan project partners to build consensus on project strategy, discuss critical elements of the Trail Plan, and provide updates on major milestones. These partners included TRCA, GDA, ORTA, and Parks Canada. Meetings were held on December 11, 2018, January 29, 2018, and April 4, 2018.

3.2.3 Public

Public engagement was undertaken through a multidimensional approach. A smaller CLC sought focused input from key interest groups, and broader public engagement techniques enabled more general feedback from the broader community. On-line, traditional media, and face-to-face communication methods were employed to provide information about the project and seek relevant input.

3.2.3.1 Community Liaison Committee

A CLC was formed to gain input and feedback from key external interest groups. This group included representation from the Regional Municipality of Durham, the Township of Uxbridge, ORTA, GDA, Parks Canada, North Durham Nature, the Uxbridge Horseman's Association, and key local residents. The CLC convened three times over the course of the project to discuss site opportunities and constraints, the development of trail network options, feedback from the public, the evaluation of various trail network options, trail design, amenities, programming, gateway features, trail management roles, and Trail Plan implementation. Meetings of the group were held on January 19, 2018, March 7, 2018, and May 2, 2018. Key input provided by the CLC included the desire for trails to highlight scenic areas of the site, the trail user benefits provided by trail loops, the desire for trail connections from the east and west into RNUP, the importance of a safe crossing of Webb Road, and the importance of protecting the ecological integrity of the Goodwood RMT, including avoiding disturbance to sensitive wildlife species.

3.2.3.2 Online Engagement

An online web presence for the Goodwood RMT Trail Plan was launched on December 21, 2017. An engagement webpage was created through the TRCA YourSay platform, which could communicate key project dates, project updates, distribute supporting documents and photos, advertise upcoming events, and enable users to provide feedback on key elements of the trail plan though an online survey and online comment forms. Users could also subscribe to email updates about the project.

An online trail user survey for the Goodwood RMT was launched on December 21, 2017. The questions were intended to obtain a general sense of how trail users access the Goodwood RMT, how they are using the trails, when and how often they visit, the purpose of their visit, what they like and dislike about the trail system, etc. A total of 32 responses were collected between December 18, 2017 and September 18, 2018. Some key findings revealed:

- Most people access the Goodwood RMT by car,
- Webb Road and Concession 3 are the most popular access points,
- Most respondents visit for 1-2 hours on weekend afternoons,
- Most respondents engage in hiking, dog-walking, nature appreciation, horseback riding or cross-country skiing.

- Most respondents were long-term repeat visitors who visit the site less than 6 times per year
- Respondents rated their experience at an average of 8/10

3.2.3.3 Public Engagement Session

A Public Engagement Session was held on March 26, 2018, at the Goodwood Community Centre (268 Highway 47, Goodwood, ON). Materials presented to the public included the Goodwood RMT's regional context, mapping showing vegetation communities and environmental features present on the property, three trail network options, and ideas for trail infrastructure, amenities, programming, and gateway features. The materials were mounted on display boards and presented in an open house format, where attendees could circulate around the room and view the materials at their own pace. Large-format maps showing the three trail network options were laid out on tables for attendees to annotate with their comments. There were also informational booths set up by various trail and environmental organizations, including GDA, ORTA, the Uxbridge Trails Committee, TCTO, the East Duffins Headwaters Stewardship Committee, and the Oak Ridges Moraine Land Trust. A presentation and question and answer session led by TRCA provided further context and explanation of the project and the display materials. Project team members from TRCA were available to answer questions from the attendees in an informal manner. The presentations and meeting materials were made available on the YourSay page after the meeting so that those not able to attend could view the materials and provide comments to be included in the planning process.

The Public Engagement Session was advertised through both online and physical tactics. A flyer was distributed via Canada Post's neighbourhood mail to 2071 addresses. A newspaper advertisement promoting the Public Engagement Session was posted in the March 22, 2018 edition of the Uxbridge Cosmos and the March 22, 2018 edition of the Uxbridge Times-Journal. Advertising for the Public Engagement Session was posted on online events calendars for TRCA, the Township of Uxbridge, the Uxbridge Daily and Stouffville Snap'd. An email blast was sent out to promote the event through the East Duffins Headwaters Stewardship Committee email distribution list. The Public Engagement Session was promoted on Twitter via @TRCA_Trails and @ortahikes. Details on the Public Engagement Session were posted to the Goodwood RMT Trail Plan Project YourSay Engagement website, and many of the marketing tactics employed to promote the Session directed people of the YourSay website to find out more about the event and the Goodwood RMT Trail Plan Project generally.

It is estimated that approximately 80 people attended the session, including the Township of Uxbridge Mayor and several Councillors, area residents, and local trail and environmental organizations. CLC members were also in attendance. Feedback forms were distributed to Session attendees inviting them to provide feedback on each of the trail network options and describe what trail amenities, programming, and gateway features they would like to see. Key feedback from the public included the desire for trail loops, though this comment often included the caveat that any any new trails should not degrade the ecology of the site, and some attendees expressed that there should not be any new trail linkages because of these environmental concerns. Attendees expressed the desire to experience the scenic features of the site and the site's topogrpahy. There was also a noted desire for better connections to the GO station, to RNUP, and to the Goodwood community; to create a north-south gateway. Regarding amenities, attendees expressed desire for wayfinding sighage, interpretive signage, postmarkers, observation platforms, guided hikes, safe road crossings, more parking, viewpoints, separation between the heavy equestrian area and hikers, bike parking, kiosks, trail juncture signage (with trail ratings, nearby amenities, regional trail maps, etc.), archways, tick awareness programming, trail atlases, rest/meeting points, garbage/recycling containers, boardwalks, educational programming for children, horse-friendly access, and programs to prevent dogs-off-leash.

3.2.3.4 Township of Uxbridge Accessibility Advisory Committee

The Ontario Regulation 191/11: Integrated Accessibility Standards (under Accessibility for Ontarians with Disabilities Act (AODA), S.O. 2005, c.11), in "Section 80.8: Consultation, recreational trails", states:

- "(1) Obligated organizations shall consult on the following before they construct new or redevelop existing recreational trails:
- 1. The slope of the trail.
- 2. The need for, and location of, ramps on the trail.
- 3. The need for, location and design of,
 - i. rest areas,
 - ii. passing areas,
 - iii. viewing areas,
 - iv. amenities on the trail, and
 - v. any other pertinent feature. O. Reg. 413/12, s. 6.
- (2) Obligated organizations shall consult on the matters referred to in subsection (1) in the following manner:
- 1. Obligated organizations must consult with the public and persons with disabilities.
- 2. Municipalities must also consult with their municipal accessibility advisory committees, where one has been established in accordance with subsection 29 (1) or (2) of the Act. O. Reg. 413/12, s. 6."

In order to honour the AODA and obtain practical, locally applicable input from persons with disabilities, members of the project team attended a Township of Uxbridge Accessibility Advisory Committee meeting on May 4, 2018 to present the Goodwood RMT Trail Plan project and gain feedback from Committee members. The Committee expressed general support for the project. They noted the need for trail entrances to be accessible, noting that the 'step-over' entrance styles typically preferred by equestrians create barriers to accessibility. They supported the idea of a rope line along a section of the Goodwood RMT trail system to improve accessibility for persons with visual impairments, noting that it would be a good idea to include a secondary rope line at a lower height that would be suitable for children. Further ongoing engagement with the Township of Uxbridge Accessibility Advisory Committee will allow for refinement of these features as well as the identification of any additional specific accessibility enhancements.

3.2.3.5 Ryerson University/University of Toronto Student Outreach

During the Spring 2018 semester, Ryerson University and the University of Toronto administered a joint graduate studies course focusing on landscape architectural design, green infrastructure, and Indigenous placemaking. A TRCA staff member, Sheila Boudreau, acted as professor. Within Ryerson University the course was administered through the School of Urban and Regional Planning and within the University of Toronto the course was part of the Master of Landscape Architecture Program. Students worked in teams of five on a semester-long "Site Project" using real-life ongoing projects to explore course themes. The Goodwood RMT was assigned as a "Site Project," as the Trail Plan process was underway at the time. TRCA staff engaged with the student team to share knowledge of the site and give feedback on student ideas. First Story Toronto and the Native Canadian Centre of Canada acted as partners and resources for the course, and Indigenous youth and elders were invited to participate. The class, along with Elder

Whabagoon, her partner, and a few of the Indigenous youth participated in a site walk at the Goodwood RMT led by TRCA on February 14, 2018.

3.2.3.6 Indigenous Engagement

In December 2017, near the start of the Goodwood RMT Trail Plan process, TRCA sent out email invitations to First Nations to participate in the engagement for the Goodwood RMT Trail Plan. Invitations were sent to Alderville, Beausoleil, Curve Lake, Georgina Island, Hiawatha, Huron Wendat, Mississaugas of the New Credit, Metis Nation of Ontario, Rama, Scugog Island, and Six Nations of the Grand River First Nation. Responses expressing interest were received from Alderville and Scugog Island First Nation. Materials presented at the Public Engagement Session were sent to these First Nations in advance of the Session, inviting their feedback and input. TRCA will continue to liaise with these First Nations as the Trail Plan moves towards detailed design and implementation, especially relating to the Eagle's Rest Feature Area (see Section 5.4.3).

The Ryerson University - University of Toronto course discussed above in Section 3.2.2.5 provided additional opportunity for Indigenous engagement and relationship-building with Elder Whabagoon, her partner, and the Indigenous youth who participated in the course. Elder Whabagoon performed a water ceremony at the West Duffins Creek within the Goodwood RMT, and this ceremony has become the inspiration for the Eagle's Rest Feature Area (see Section 5.4.3). TRCA will continue to liaise with Elder Whabagoon as the Goodwood RMT Trail Plan is implemented, especially relating to this feature area.

3.3 Terrestrial Biological Inventory and Assessment

In the 2017 field season TRCA conducted fauna and flora inventories of the Goodwood RMT and on adjacent lands in the concession block surrounding that TRCA property. These inventories were undertaken primarily to update existing information for the TRCA property so as to inform management decisions in regards to trails and trail-based activities, and to provide terrestrial biological context (TRCA, 2018). This terrestrial biological inventory and Assessment was compiled into a Terrestrial Biological Inventory and Assessment Report (the Report), which provided critical data and analysis to inform the Goodwood RMT Trail Plan throughout the planning process.

Formal fauna and flora inventories of the entire TRCA property had previously been conducted in 2005. The inventories conducted adhere to the TRCA's commitment to maintaining up-to-date data on vegetation communities, flora and fauna species across its jurisdiction. Hence, the information can be used for both local and regional natural heritage assessment and planning.

The following paragraphs provide highlights from the Report.

The site is located in the upper reaches of the West Duffins Creek in Durham Region. The site's natural cover provides an important linkage to the extensive forest habitats that extend beyond the Study Area: east-west across the Oak Ridges Moraine, south down the West Duffins Creek and into RNUP; and north into the Lake Simcoe Watershed. As such the site fills an important function in helping to maintain healthy populations of many fauna species of regional concern. The Goodwood RMT provides a large core area of relatively undisturbed forest greenspace. These large undisturbed habitat patches are scarce in TRCA's jurisdiction, and provide a haven for flora and fauna who cannot survive in forest edge environments.

Ninety-three vegetation types were observed, ranging from mature forest to shallow marsh and aquatic communities. The site includes 25 forest, 13 plantation, 12 successional, two meadow, 32 wetland, six aquatic and three barren community types. See Map 5 for a map of the various habitat types present on the site, and Map 6 for their levels of ecological sensitivity. This is a high community diversity given the size of the site and reflects historical and current land-use practices of the site and surrounding area. The Tamarack – White Cedar Fen complex in the

Goodwood RMT is of particularly very high quality. This community supports numerous flora species of concern, including one of the largest populations of showy lady's slipper in the TRCA jurisdiction. See Map 7 and Map 8 for the flora and fauna species inventoried on-site, with their associated levels of ecological sensitivity.

Recommendations from the Report underscore both the high ecological quality, diversity, and environmental sensitivity of the Goodwood RMT. The Report recommends that the first management priority should be to focus on maintaining conditions that allow existing communities or species of conservation concern to thrive. Efforts to protect the intactness of mature deciduous and mixed forest should be made. This can primarily be achieved by limiting access into wetlands and interior portions of the forests; thereby reducing the level of disturbance that would alter these communities. Native meadow communities can provide foraging opportunities for migrating monarch butterflies and migrant songbirds in the fall. These meadows should be protected and enhanced.

The Report also notes that visitor pressure is likely to increase in the future, and it is important that this increase in use does not impact sensitive habitat features such as the forest interior habitats that support most significant fauna communities. The Report recommends that some areas should be left with minimal or zero public access as pure refuges for flora and fauna. This issue is moot on private lands, which have more restricted access and often less intensive use than public lands. At the same time, there are large areas of the Goodwood RMT, including the high-quality fen complex, that currently have minimal public access. Such areas would function as havens for many species of concern. It is possible to manage public use proactively since the Goodwood RMT has a relatively low volume of trail users. Hikers and dog-walkers are currently having little impact on the site, with no evidence of negative effects on ground-nesting and low-nesting bird species. However, this will possibly need to be managed as recreational use of the Goodwood RMT increases.

3.4 Cultural Heritage Research

To gain insight on the history and cultural heritage of the Goodwood RMT, members of the Goodwood RMT Trail Plan project team reached out to the Uxbridge Historical Centre for any existing information on the history of the site. The Uxbridge Historical Centre is a community museum established to collect, preserve, and display artifacts, documents, and photographs related to the history of the Uxbridge area. This information could be highly valuable for incorporation into interpretive signage telling the story of the site and the surrounding area. The cultural heritage features at the Goodwood RMT provide an authentic link to the past and can help trail users meaningfully connect to the landscape and settler history of the site.

A remnant building foundation and water pump are clearly visible from the existing main Oak Ridges Trail near the northeast corner of the Goodwood RMT. Using maps of the Township of Uxbridge showing historical property ownership of the land parcels which form the Goodwood RMT, the Uxbridge Historical Centre was able to determine the names of those who may have built the foundation and water pump. Based on these records, the pump and northern foundation appear to have been constructed by a Yeoman named James Vanzant. Deeds from 1832 show the Vanzant family owning the northeast parcel where these structures are located. The Vanzant family were Yeomen, and owned three 100 acre plots between Concession 2 and Concession 3. Yeomen did not clear all of their land right away, instead only cultivating a small area. To live, they would have needed to build a pump running from the river just north of them, along with a house for shelter. The Vanzant family retained the parcel where the pump and building foundation are located through the 1860s, continuing to work as Yeomen. Maps show that the Vanzant estate would own the land until 1876, however a map of the Township of Uxbridge showed that by 1895, most of the Vanzants' property would be owned by the Morgason Family.

Another remnant building foundation lies nearby the existing Oak Ridges Side Trail, though this building foundation is very overgrown and not easy to either see or access from the trail. This building foundation was constructed by

Samuel Roach, who bought a small parcel of land in the late 1830s just south of the Vanzants. Samuel Roach was born in England in 1796. He moved to the United States with his wife Ann in the early 1800s and by the late 1830s, they had moved to Goodwood. The Roach family were Yeomen, cultivating a small parcel of his land where they built their house. Samuel Roach would also serve as an Uxbridge Township Pathmaster in 1850 serving division 5, meaning that it would have been his job to maintain the paths and roadways near his house and in his division.

The remaining parcels of land that make up the Goodwood RMT were initially settled by the Morgason Family. The Morgasons first arrived in Goodwood in 1834 when three brothers, Robert, Reynard and John, decided to emigrate from England. The Morgasons were farmers and would soon buy up most of the land around them. In 1877, when the Vanzants no longer owned their property, John II purchased the land to continue farming. He became a Path Master in 1850 serving division 5, and also became a Society Representative for the Methodist Church Goodwood Circuit in 1905. John II's farm would be hit hard by the Northwest Fever epidemic that swept through the Uxbridge Township from the 1880s to the late 1890s. He lost most of his workforce and in 1906 he travelled to Toronto to recruit employees for summer work. The Morgasons worked on the family farm until 1969, when it was bought by Revenue Properties Ltd.

4. Existing Trail System and Conditions

4.1 Existing Trails

In August 2016, the Goodwood RMT's trail network was inventoried for trail locations, trail length, presence of signage, surface type, infrastructure, etc. The current authorized trail system within the Goodwood RMT is comprised of a section of the Main Oak Ridges Trail (See Figure 8) and an Oak Ridges Side Trail (See Figure 9). Together, these two trails comprise approximately 5.35 kilometers (km) of authorized trail on the property Trail (See Map 9).

In December 2017 three trail counters were installed at each entrance to the Goodwood RMT trail system (Concession 2, Concession 3, and Webb Road). From December 2017 to April 2018, these trail counters recorded an average of 41 visitors per week. The most common day of the week that trail users visited the property was Sunday, and the most common times of day were mid-morning to early afternoon. From April 2018 to October 2018, these trail counters recorded an average of 43 visitors per week. These trail counters will continue to monitor visitor numbers over time to inform on-going management decisions for the Goodwood RMT.

The Goodwood RMT trail system is almost entirely natural surface, although small portions of the main Oak Ridges Trail are boardwalk (see Map 10). The watercourse closest to Concession 3 is the West Duffins Creek, and the boardwalks at that location flank a pedestrian bridge over the Creek (see Map 10). As per the direction of the Management Plan, both the Main Oak Ridges Trail and the Oak Ridges Side Trail tread width is approximately 0.5 m, and the clearing widths are approximately 1 m to 1.8 m. The Goodwood RMT trail system permits hiking, snowshoeing, cross-country skiing, and horseback riding. Beyond the authorized trail system, there are a number of unauthorized trail linkages on the property (see Map 9). For a break-down of the existing Goodwood RMT trail lengths see Table 1.

Table 1: Existing Goodwood RMT Trail Network Lengths

	Existing Goodwood RMT Trail Network (km)
Main Oak Ridges Trail	2.63

Oak Ridges Side Trail	2.72
Unauthorized Trails	1.07
Total	6.42

The total Oak Ridges Trail network comprises 367 km of trail extending across the Oak Ridges Moraine, including 280 km of Main Oak Ridges Trail and 87 km of Oak Ridges Side Trail. The broader Oak Ridges Trail network surrounding the Goodwood RMT can be seen on Map 2. The Oak Ridges Trail is managed in partnership with ORTA, a volunteer-based charitable hiking organization. ORTA's mandate is to build and maintain a public hiking trail system on the Oak Ridges Moraine, off-road where possible, and to protect the integrity of the moraine through trail development, maintenance, and increased awareness. ORTA is divided into 10 chapters, with each chapter responsible for a different area of the Oak Ridges Trail.

The Goodwood RMT is situated on the Oak Ridges Moraine, and the rolling, sloping topography of this natural landscape results in a trail network that must often contend with relatively steep slopes. Based on an analysis of the existing trail system using the High-Efficiency Trail Assessment Process (HETAP), the longitudinal slope characteristics of the existing trails can be seen on Map 11. The HETAP collects data as it relates to accessibility including slope, cross-slope, distance, surface type and trail width. Besides being important for trail planning, these five factors are essential to present on trailhead signage as well as trail guides/maps, as they inform users as to the accessibly factor of a particular trail. Figure 10 shows the HETAP equipment. The benefits of utilizing HETAP are automatic data recording, no paper copies, no station marking and fewer tools required to collect trail accessibility data, thereby speeding up the data collection process. The Goodwood RMT underwent two accessibility audits in 2018 in order to gather the data necessary to present on trailhead signage.

4.2 Existing Access and Amenities

There are currently three trail access points into the Goodwood RMT; from Concession 2, from Concession 3, and from Webb Road (see Map 9). Parking opportunities are limited for each of these access points. There is a pull-in space for approximately 1-2 vehicles at the Concession 3 trail access point, but otherwise vehicles must park along the road shoulder or utilize public parking lots at other nearby greenspaces. The closest parking lot on TRCA lands lies within Secord Forest and Wildlife Area (see Map 12), and the trails from this parking lot connect to the Goodwood RMT trail system.

There is currently very limited trail signage and amenities at the Goodwood RMT. The character of the trail system is highly natural, intended to blend into the surrounding environment. Wayfinding signage includes a few small ORTA signs affixed to trees within the property (see Figure 11), and ORTA wayfinding trail blazes painted onto trees. White blazes signify a section of the Main Oak Ridges Trail (see Figure 12), and blue blazes signify an Oak Ridges Side Trail (see Figure 13). There is currently no trailhead mapping at the Goodwood RMT property. A map is available within ORTA's guidebook. Finally, educational signs have been installed at the Goodwood RMT describing angling rules for the West Duffins Creek (see Figure 14).

5. Trail Plan

5.1 Trail Plan Objectives

Three overarching objectives guided the development of the Goodwood RMT Trail Plan. These objectives are informed by the Management Plan, TRCA's Living City Policies for Planning and Development in the Watersheds of

<u>Toronto and Region Conservation Authority</u> (LCP), <u>Building the Living City</u> (TRCA's 2013-2022 Strategic Plan), The <u>TRCA Trail Strategy</u> (Draft 2018), TRCA and public stakeholder engagement, and the property's current regional context. These objectives are described in Sections 5.1.1 through 5.1.3.

5.1.1 Protect an Ecological Sanctuary

The first and foremost trail planning objective is to protect the Goodwood RMT as an ecological sanctuary, minimizing impact to the integrity of the site's sensitive ecological and landscape features.

This objective is supported by the "Natural Heritage" and "Land Use" objectives of the Management Plan (TRCA, 2003);

"Natural Heritage- To protect, restore and regenerate the natural ecosystem by ensuring the health and diversity of native species, habitats, landscapes and ecological processes. Also, maximizing linkages and connectivity of the natural heritage features to one another and to adjacent areas; ...

Land Use- To ensure protection of the ecological integrity and cultural values of the land through innovative planning, management and appropriate conservation, recreation and other land uses;" (Page 22)

The <u>Terrestrial Biological Inventory and Assessment Report</u> (2018) describes the Goodwood RMT as characterized by regionally significant high-quality and sensitive habitat, which supports numerous flora and fauna species of conservation concern. During the engagement process undertaken for the Goodwood RMT Trail Plan, both TRCA staff and the public expressed the prime importance of environmental protection for this site. The site includes portions of larger regional environmental features such as the provincially-significant Goodwood – Glasgow PSW; the North Glasgow and Brown – Shaw ESA; and the candidate Duffins Headwaters Provincial ANSI. The Goodwood RMT is both a large, relatively undisturbed high-quality habitat patch and a key linkage of natural cover in the regional natural heritage landscape.

The Goodwood RMT Trail Plan can ensure the significant and sensitive environmental features of the site are protected by:

- Maintaining trail alignments outside areas of interior forest habitat and the central core habitat areas of the site
- Keeping trail alignments away from sensitive flora and fauna species
- Minimizing the trail length through wetlands and maintaining good distance from the rare fen community (Tamarack-White Cedar Fen)
- Keeping watercourse crossings to a minimum
- Designing trail enhancements and amenities in an environmentally sensitive way

TRCA has developed a set of policies to guide the implementation of many areas of its legislated mandate as a Conservation Authority. These policies, captured in the LCP document, are concerned mainly with TRCA's role as an approval authority in the planning and development approvals process. However, they also include policies related to TRCA programs, scientific research, and planning and development initiatives (TRCA, 2014).

Section 7.4.5 of the LCP provides policy direction for the siting, design, and operation of recreational uses. One of the overarching Objectives guiding the policies of this Section is:

"To promote and monitor the use and enjoyment of the Natural System for recreational use that minimizes impact to the natural environment by striving for a balance between conservation and appropriate public uses;" (Page 106)

The spirit of this LCP objective is mirrored within the "Protect an Ecological Sanctuary" trail planning objective for the Goodwood RMT Trail Plan. Taking care to site and design trails within the Goodwood RMT in a way that minimizes impact to the natural environment of the site, such as avoiding sensitive flora, fauna, and key environmental features recognizes the high conservation priority for this site.

Specific LCP policies further articulate the need to protect important ecological features:

"7.4.5.1 Policies for Recreational Use:

It is the policy of TRCA:

...

h) To recommend that trail alignments and other minor recreational uses as applicable:

i. be established conceptually as early in the planning and development process as possible in order for future residents to be aware of where public trails will be situated;

ii. follow existing linear disturbances (where ecologically appropriate) such as existing informal trails, sanitary easements, gas pipelines, and other infrastructure, rather than through undisturbed areas;

iii. avoid sensitive habitats, floral and/or faunal species; iv. avoid the riparian zone of watercourses;

v. not increase risk to public safety from natural hazards by avoiding active erosion zones, such as outside meander bends and valley walls where banks are eroding; and

vi. avoid incompatible topography, so that grading or filling is avoided or minimized." (Page 107)

These specific policies support the spirit of the "Protect an Ecological Sanctuary" trail planning objective, and also further articulate how this objective can be achieved to ensure minimal disturbance to the landscape of the Goodwood RMT site.

TRCA's Strategic Plan is aligned with the "Protect an Ecological Sanctuary" trail planning objective. Strategy 3, "rethink greenspace to maximize its value," outlines a desired outcome that:

"Our region's natural heritage system is protected to support, and where possible, enhance and maintain existing biodiversity and ecological functions." (Page 10)

Ensuring that the Goodwood RMT Trail Plan is guided by the need to protect the high-quality habitat and ecological integrity of the site will contribute to the health of the region's broader natural heritage system.

TRCA's <u>Trail Strategy</u> (Draft 2018) supports the "Protect an Ecological Sanctuary" trail planning objective, both through the Vision and Guiding Principles of the document and through the Action Plan to achieve this vision.

The "Steward" guiding principle states:

"Careful and collaborative planning is needed to make informed trail planning decisions that avoid sensitive habitats, species and natural hazards...We must continue to perform site planning and environmental study exercises and utilize best management practices that prioritize ecosystem health when planning, developing and maintaining trails." (Page 31)

The "Protect and Ecological Sanctuary" trail planning objective places the protection of the ecological health of the Goodwood RMT at the forefront of the Goodwood RMT Trail Plan exercise, based on the sound environmental data

provided by the <u>2018 Terrestrial Biological Inventory and Assessment Report</u> and collaborative input from TRCA technical staff.

The Trail Strategy Action Plan's Action A of Initiative 5.1 states:

"Plan, develop and maintain existing and proposed trails within TRCA-owned and regulated areas in a manner consistent with TRCA's The Living City Policies." (page 91)

The need to avoid sensitive habitats and protect ecological features is clearly stated within the LCP described above.

5.1.2 Develop a Regional Trail Gateway

The second objective for the Goodwood RMT Trail Plan is to create a gateway to celebrate the transition between RNUP and the regional trail networks and greenspace destinations of the surrounding landscape.

Support for this objective within the Management Plan lies within the "Management Principles;"

"Recognize, integrate, promote and enhance linkages between the Conservation properties, the Duffins Creek watershed, the Oak Ridges Moraine and other natural and cultural features." (Page 23)

Creating a regional trail gateway was identified early on as a key opportunity and objective for the future Goodwood RMT trail system because of the 2017 northern expansion of RNUP to include approximately 2100 hectares of former Transport Canada lands. The role of the site as a gateway was supported throughout the engagement process undertaken for the Goodwood RMT, and Parks Canada has been supportive of this gateway through their trail planning work within RNUP lands just south of the Goodwood RMT. With regional trail connections and the proximity to RNUP, the Goodwood RMT represents a critical juncture within the larger regional trail landscape. These trail linkages provide connectivity between RNUP and the larger recreational greenspace destinations to the east, particularly the East Duffins Headwaters complex. The property is also not far from the communities of Stouffville and Goodwood, as well as the Lincolnville GO Station. The role of the Goodwood RMT as an important trail gateway, connecting significant landscape features to each other through trails and promoting the diversity of engaging recreational experiences that these landscape features can provide, is an important driver of the Goodwood RMT trail planning process.

The trail network at the Goodwood RMT can be an important regional connector by bringing together:

- Trail links southwards to RNUP
- Trail links eastwards along the Oak Ridges Trail to the Trans Canada Trail and recreation destinations such as the East Duffins Headwaters complex
- Trail links westwards along the Oak Ridges Trail to the Lincolnville, Goodwood and Stouffville communities
- Designing trail enhancements and amenities to highlight the trail system's important gateway function.

As mentioned in the "Protect an Ecological Sanctuary" trail planning objective above, Section 7.4.5 of the LCP provides policy direction for the siting, design, and operation of recreational uses. The description of this Section 7.4.5 states:

"...TRCA Watershed Plans contain a vision for an integrated system of nature-based recreation areas and experiences, taking advantage of, and caring for, the unique landscapes throughout the watersheds. TRCA and its municipal partners own and manage trails and conservation areas and parks within communities, continuously linked along the river/ravine system, and ultimately linked with trails on the Lake Ontario shoreline...." (Page 106)

The process to develop the LCP included the completion of TRCA Watershed Plans, which guide TRCA's actions to manage, protect, and restore the environmental health of each of the nine watersheds within its jurisdiction. Their vision for an integrated system of nature-based recreation experiences extends to the trail system, and one of the management objectives contained within the Duffins Creek and Carruthers Creek Watershed Plan is to "Create continuous watershed trails in the greenspace system linking Lake Ontario and the Oak Ridges Moraine" (TRCA, 2003a). The direction for a more integrated trail system referenced within the LCP is reflected by the "Develop a Regional Trail Gateway" trail planning objective of the Goodwood RMT Trail Plan. The introduction of trail amenities and improvements that enhance the connection between RNUP and the regional trails which cross through the Goodwood RMT helps to promote the recreational experiences possible through both of these regionally important recreational assets, creating a more mutually supportive and integrated nature-based recreation system.

Specific LCP policies further articulate the need to promote coordination and connections between important open space recreational assets:

"7.4.5.1 Policies for Recreational Use:

It is the policy of TRCA:

a) To collaborate with municipal partners, private interests, community groups and the general public to realize a linked regional open space system, as identified in TRCA board-approved plans and strategies, which provides the basis for:

i. a coordinated network of landscape and nature-based accessible recreation areas;

ii. experiencing the distinctive natural and cultural heritage attributes of the watersheds;

...

vi. trail networks that connect communities, parks and greenspace through landscapes and landforms like the river valleys, the Lake Ontario waterfront and the Oak Ridges Moraine." (Page 106)

These specific policies support the spirit of the "Develop a Regional Trail Gateway" trail planning objective, highlighting the need for collaboration and partnerships in realizing linkages between important components of the regional open space system.

TRCA's Strategic Plan is aligned with the "Develop a Regional Trail Gateway" trail planning objective. Strategy 3, "rethink greenspace to maximize its value," outlines a desired outcome that:

"TRCA watershed communities benefit from a well-connected network of accessible greenspace." (Page 10)

Celebrating and enhancing the trail connectivity between the Goodwood RMT and RNUP trail systems contributes to a better-connected network of greenspaces. This trail gateway raises awareness among trail users as to the greenspace recreation opportunities that are accessible from the trail systems which connect to the Goodwood RMT.

TRCA's <u>Trail Strategy</u> (Draft 2018) supports the "Develop a Regional Trail Gateway" trail planning objective. The Trail Strategy envisions RNUP as a key destination within TRCA's jurisdiction, offering a unique mosaic of natural, cultural, and agricultural landscapes in York and Durham Region and in the City of Toronto. Within the Trail Strategy Action Plan, Action A of Initiative 7.2 states:

"Partner with interested municipalities, communities, tourism agencies, private businesses and trail organizations to promote destinations." (Page 99)

Developing the Goodwood RMT as a gateway to RNUP through enhanced trail connections and design features promote RNUP itself, drawing trail users to this regionally important recreational asset. Partnerships with local trail organizations to manage this gateway site and provide input into design features will be an important way to build capacity for the promotion of the RNUP destination.

5.1.3 Create a Natural and Cultural Heritage Destination

The third objective for the Goodwood RMT Trail Plan is to allow the site to be a destination in itself, celebrating the scenic natural and cultural features of the site and providing engaging trail experiences.

This objective is supported by the "Education," "Stewardship," and "Public Use" objectives of the Management Plan;

"Education - To promote knowledge and understanding of the natural and cultural values of the land and water, their protection and management requirements, as well as their significance, sensitivities and interrelationships;

Stewardship - To promote and facilitate the ongoing public involvement towards a partnership that will foster sustainable living, and will accomplish watershed management objectives, as well as implement Management Plan recommendations;

Public Use - To provide opportunities for appropriate, accessible public uses, which are consistent with all other objectives." (Page 22)

This objective intends to bring together two critical considerations highlighted through the engagement process undertaken for the Goodwood RMT Trail Plan; the need to provide engaging trail experiences for trail users that showcase scenic features of the site while protecting the natural environment. The immersive wilderness character and remnant historic features are inherent assets of the site that help create engaging trail experiences, and so highlighting these features sustainably should be a main focus in drawing people to the site. Showcasing these features fosters a love of nature and furthers an ethic of environmental and cultural stewardship among trail users. Careful management of public access and the level of trail users to ensure the protection of the surrounding environment are important components of this objective. Taking a more systematic view of the suite of recreational experiences available within greenspaces in relative proximity to the Goodwood RMT, developing a passive natural and cultural heritage destination at the Goodwood RMT is an appropriate and complementary recreational experience.

The trail network at the Goodwood RMT can be a destination in itself, encouraging trail experiences within the property by:

- Providing a trail loop(s) and a connected internal trail network that accommodates multiple users
- Providing appropriate trail infrastructure upgrades (upgraded boardwalks, signage, etc.) and programming to improve visitor experience
- Providing trail alignments that highlight attractive and interesting features of the property, inspiring a
 passion for the environment and our cultural heritage
- Providing multiple trail access points
- Trail design enhancements and amenities that highlight unique and attractive areas of the site, including natural and cultural heritage features

As mentioned in the "Protect an Ecological Sanctuary" and "Develop a Regional Trail Gateway" trail planning objectives above, Section 7.4.5 of the LCP provides policy direction for the siting, design, and operation of recreational uses. Two of the overarching Objectives guiding the policies of this Section are:

- "To develop awareness and form partnerships among all stakeholders that will enhance stewardship of recreational use lands in or adjacent to the Natural System; and
- To promote the recognition and linkages between natural heritage and cultural heritage on recreational use lands in or adjacent to the Natural System." (Page 106)

The Goodwood RMT trail planning objective of "Create a Natural and Cultural Heritage Destination" supports both of these objectives. Enhancing visitor experience through trail upgrades and natural and cultural heritage interpretation opportunities encourages more people to recognize, value, and be inspired to protect the Goodwood RMT.

Specific LCP policies further articulate the need to promote environmental stewardship through TRCA programs:

"6.10.1 Environmental Education and Stewardship:

It is the policy of TRCA:

 a) To continue TRCA partnerships and programs in environmental education and stewardship that increase watershed awareness and encourage sustainable behaviours and stewardship among residents and neighbourhoods." (Page 56)

Trail enhancements which contribute to visitor experience and highlight the environmental features of the property promote further interest and awareness for the Goodwood RMT. Interest in the property and positive trail experiences can inspire users to value and protect the site, encouraging local stewardship and advocacy for TRCA and its programs.

TRCA's Strategic Plan is aligned with the "Create a Natural and Cultural Heritage" trail planning objective. Strategy 6, "Tell the story of the Toronto region," outlines the following desired outcomes:

"All community members celebrate the natural heritage, cultural heritage and diversity of the Toronto Region.

Additional engagement of indigenous communities and a broad range of diverse communities in the design of our education and stewardship programs.

Preservation and restoration of historic TRCA assets and the recognition and communication of their cultural significance." (Page 16)

Celebrating the natural and cultural heritage assets of the Goodwood RMT through interpretive and educational experiences will help tell the story of the site and the surrounding landscape for trail users. Cultural heritage features will include both Indigenous and settler perspectives, and further engagement with Indigenous communities will help inform the design of these features.

TRCA's <u>Trail Strategy</u> (Draft 2018) supports the "Create a Natural and Cultural Heritage Destination" trail planning objective. Speaking specifically to the promotion of cultural heritage, Action C of Initiative 5.3 states:

"Support event programming, storytelling and educational opportunities to engage all communities in celebration of our rich Indigenous and settler history." (Page 93)

The incorporation of design features and programming that highlight the cultural heritage assets of the Goodwood RMT will help to engage trail users in the history of the site and surrounding landscape. These design features will incorporate both Indigenous and settler history.

5.2 Goodwood RMT Trail Plan Network Master Plan

Maps 13, 14, 15, 15 and 16 form the Goodwood RMT Trail Network Master Plan. The authorized trail network will be approximately 6.48 km. Minor variations from these trail alignments may occur during further detailed design and trail construction based on on-site landscape barriers or opportunities for improvements in slope sustainability.

The Goodwood RMT Trail Network Master Plan fulfills the "Protect an Ecological Sanctuary" trail planning objective. Trail alignments are oriented away from the interior of the site, maintaining the large central core area of the site as undisturbed habitat. The trail alignments follow existing linear disturbances, namely existing formal and informal trails, and so there are no new major areas of disturbance to sensitive flora, fauna, and vegetation communities. The trail network also maintains adequate distance from the rare Tamarack-White Cedar Fen community. Minor trail realignments will be undertaken to mitigate unsustainable trail slopes which pose soil erosion risks. Recommendations for bridge and boardwalk replacement will allow for the implementation of more sustainable construction techniques.

The Goodwood RMT Trail Network Master Plan fulfills the "Develop a Regional Trail Gateway" trail planning objective. There are trail links southwards to RNUP, eastwards along the Oak Ridges Trail to recreation destinations such as the East Duffins Headwaters complex, and trail links westwards along the Oak Ridges Trail to the Lincolnville, Goodwood, and Stouffville communities. The Oak Ridges Side Trail is proposed to be co-designated as Trans Canada Trail, part of a larger proposal for a new Trans Canada Trail spur that connects the existing Trans Canada Trail alignment in the Regional Municipality of Durham to RNUP (See Map 2). The Webb Road trail access point to the Goodwood RMT will incorporate design features which highlight the gateway role of the property and celebrate the role that community partnerships have played in creating regional trail connections and access to greenspace.

The Goodwood RMT Trail Network Master Plan fulfills the "Create a Natural and Cultural Heritage Destination" trail planning objective. The trail alignments provide a connected system including a small loop. The system permits non-motorized uses, with a large part of the trail system designed for equestrians as well as hikers. The trail alignments cross through a wide variety of environments and highlight unique natural and cultural heritage features of the property. Trail upgrades and amenities improve user safety, wayfinding, and comfort. Interpretation features encourage trail users to learn about the significance of the property, its history, and its role as an ecological sanctuary for sensitive species. These interpretation features can foster meaningful connection between trail users and the landscape, inspiring local stewardship.

5.2.1 General Trail Experience

The Goodwood RMT trail network will pass through a variety of natural landscapes, from remnant plantation forests (Figure 15) to mixed-hardwood forests (Figure 16) to open meadows (Figure 17) and wetlands (Figure 18). The trail network will pass over a number of watercourses including the West Duffins Creek (Figure 19). Proximity to water, which is vitally important to Indigenous cultures, provides opportunities for interpretation and celebration of water along the Goodwood RMT trail system. Sections of the trail network will also pass beside active agricultural lands (Figure 20). There are a number of remnant cultural heritage features (Figure 21 and Figure 22) that can be seen from the trail that allude to the Goodwood RMT's agricultural history. The sloping trail system within the Goodwood RMT exemplifies the Oak Ridges Moraine topography which characterizes the site and surrounding area.

5.2.2 Property Ownership

Based on current land ownership arrangements, approximately 6.18km of trail is located on lands owned by TRCA, and approximately 258 metres (m) of trail is located on lands owned privately. Any trails located on lands owned privately are subject to agreements between TRCA and/or the local trail management group and the property owner. In the area where the trail meets Webb Road, an additional land acquisition and/or agreement is recommended to allow a minor trail re-route to the location of a safe pedestrian crossing of Webb Road. While a trail connection to Webb Road currently exists, a minor re-route would provide a more direct connection to the safe crossing location on publicly-secured land. This land securement is minor in nature, and will be pursued subject to negotiations with the landowner to the east of the trail (246 Webb Road).

5.2.3 Regional Trail Linkages

The trail sections at the Goodwood RMT currently designated as part of the Oak Ridges Trail network will continue to be designated as such; the east-west trail along the northern side of the property will be designated as part of the Oak Ridges Main Trail and the northeast-southwest trail will be designated as an Oak Ridges Side Trail.

The Oak Ridges Side Trail will also be incorporated into a newly designated Trans Canada Trail (or "The Great Trail") linkage, which extends from the main Trans Canada Trail within the East Duffins Headwaters properties to RNUP (see Map 2).

5.3 Trail Design

5.3.1 General Design Standards

Table 2 and Table 3 below represent typical trail design standards for the future Goodwood RMT trail network as described in the Map 13. Minor variations from these standards may occur due to on-site landscape barriers or environmental conditions. There will be approximately 6.44 km of authorized trails on-site.

Table 2: Goodwood RMT Trail Network Design Standards - Hiking Trail³

Trail Design Standards – Hiking Trail						
Trail Tread Width	0.5 m					
Trail Clearing Width	1 m					
Trail Clearing Height	2.5 m					
Trail Surfacing	Natural surface					

Approximately 3.52 km of the Goodwood RMT Trail Network will be Hiking Trail standard.

Table 3: Goodwood RMT Trail Network Design Standards - Equestrian Trail

Trail Design Standards – Equestrian Standards						
Trail Tread Width	0.5 m minimum					
Trail Clearing Width	1.8 m					
Trail Clearing Height	3.5 m					
Trail Surfacing	Natural surface					

³ Note that these trails are similar to Type 3 trails in Parks Canada's trail classification system

Approximately 2.92 km of the Goodwood RMT Trail Network will be Equestrian Trail standard. This trail is designed to accommodate hiking uses as well.

5.3.2 Trail Re-alignments

The Goodwood RMT trail network will include trail re-alignments to help mitigate problematically steep grades in certain areas of the existing trail system, minimize maintenance, or to avoid disturbance to the surrounding landscape as the trails are constructed to the planned design standards. A minor re-route is also recommended at the location where the trail connects to Webb Road, to better align the trail with the location of a safe pedestrian crossing of Webb Road.

5.3.3 Trail Surface Improvements

The Goodwood RMT trail network will include trail surface improvements such as additional grading and a culvert installation to improve trail sustainability and safety.

5.3.4 Bridges and Boardwalks

The existing watercourse crossings within the Goodwood RMT are in need of upgrading. The specific technical details of each new crossing will be developed during the future detailed design process. The technical details and level of infrastructure needed for each crossing will be confirmed by a qualified civil/structural engineer and based on appropriate geotechnical and geomorphic assessments.

The future Goodwood RMT Trail Network will incorporate a number of boardwalk sections, as identified on Map 13. The existing boardwalk sections are in need of upgrading, and there are wet areas within the existing trail network which frequently become muddy and would benefit from boardwalk infrastructure. Representative technical details for boardwalk options (1.2m and 1.8m wide) can be seen in Appendix: Section 7.6. These technical details and the appropriate boardwalk footings will be confirmed by a qualified civil/structural engineer and based on any appropriate geotechnical and geomorphic assessments.

5.4 Trail Feature Areas

The Goodwood RMT trail network will include design enhancements that highlight unique features of the property, improve visitor experience, and tell a story about the natural and cultural significance of the site. Many of these design features are clustered in specific areas to create special places along the trail system. See Map 14 for the locations of these feature areas.

5.4.1 Concession 3 Entrance (Maple Way)

The Concession 3 Entrance is intended to be the main entrance to the Goodwood RMT. It is therefore an important location to create a gathering space and rest area where visitors can meet and orient themselves. Currently this entrance is almost hidden from view. Signage and wayfinding elements will improve the visibility of the property. In this area the trail follows an old farm road allowance so the area is naturally open, and large mature maple trees provide a monumental scenic presence. See Appendix: Section 5.1 for the conceptual design of this area, to be confirmed through structural and geotechnical engineering review and approval of the design components.

5.4.2 Homestead

The 'Homestead' area will tell the story of early Uxbridge settlers by revealing the circa 1860 stone building foundation, hidden for years in the wild overgrowth just north of the Oak Ridges Main Trail. The history of the three 'Yeomen' who cultivated small areas of land for their families, their farming practices, and the importance of settling close to Duffins Creek, will be shared with interpretive signage installed in this reclaimed space. Designed as an outdoor room, with random flagstone paving (inspired by the fieldstone 'dry laid' stone wall), this location will become an educational destination for groups and people of all ages. Benches will provide a place for rest and an

opportunity to sit together to talk. Heritage shrub species will be planted that signify a 'settler presence' in the landscape. See Appendix: Section 5.2 for the conceptual design of this area, to be confirmed through structural and geotechnical review and approval of the design components.

5.4.3 Eagle's Rest

The history of early Ontario relating to Indigenous First Nations peoples includes the trading of commodities, formal agreements, and shared and evolving understandings. This area has been designed with a wood deck look-out over Duffins Creek, inspired by the silhouette of an eagle wing. Revered and sacred to most North American Indigenous peoples, the eagle feather is a symbol of deep respect and honour. This place is a gesture to honour the Indigenous communities that lived in and continue to live in the Uxbridge area. The conceptual design for this special place was inspired by an impromptu water ceremony performed by an Indigenous elder at this location, and will be further refined with input from First Nations through future engagement. The space will allow for communities to gather for ceremony, and will include seating for resting and teachings, as well as interpretive signage to share the important history of the Indigenous peoples of the local area. Appropriate engineering studies must be completed to ensure the Eagle's Rest deck structure is sited with appropriate setbacks from the West Duffins Creek, to avoid future hardening of the watercourse and ensure the structural longevity of the deck. See Appendix: Section 5.3 for the conceptual design of this area, to be confirmed through relevant engineering studies and structural review and approval of the design components.

5.4.4 The Green Door (Webb Road Entrance Area)

This access point is almost directly across from the most northern boundary of RNUP, allowing the important interregional trails that pass through the Goodwood RMT to connect to RNUP and vice versa. A gateway structure in this area would celebrate this important connection and the collaboration between the trail partners who made it possible. There is a small open area which provides space for this structure as well as seating and wayfinding elements. The story of the "Green Door" is an inspiring example of the grassroots citizen activism and conservation achievement that contributed to the extension of RNUP from Lake Ontario to the Oak Ridges Moraine. Interpretive signage incorporated into the gateway structure (or freestanding) should explain this noteworthy stewardship success story. TRCA will continue to coordinate with Parks Canada to coordinate signage and welcome messaging between the Goodwood RMT and RNUP. See Appendix: Section 5.7 for the conceptual design of this area. The design of this structure shall be further refined through the input of TRCA's trail partners and through structural review and approval of the design components.

The Webb Road entrance area will include a minor trail re-route to better align the trail with the location of a safe pedestrian crossing of Webb Road. The recommended pedestrian crossing location is approximately 208 m east of 230 Webb Road (center of the driveway), as determined through a site selection study and detailed design completed by Dillon Consulting Ltd (Dillon Consulting, 2018). This study utilized a sightline assessment along with vehicle speed and traffic volume data to determine appropriate crossing locations. A recommended crossing location was chosen. At this location, the appropriate crossing facility type was determined and the detailed design of this crossing was completed. The construction of this pedestrian crossing will encourage trail connectivity between the Goodwood RMT and RNUP by safely and efficiently connecting trail users to the two trail networks within each of these properties on either side of Webb Road. A safe crossing of Webb Road is crucial to facilitate a connected trail gateway experience. This re-route will eliminate the need for trail users to back-track from the existing trail

connection to Webb Road to reach the recommended pedestrian crossing location, which increases the risk of trail users crossing at unsafe locations⁴.

5.4.5 Water Pump Garden

The Water Pump Garden is a rest spot beside a heritage tree, and is an opportunity for an interpretive focal point. The design includes a circular space formed by a frame of random flagstone paving and a curved bench (similar to that used in the Homestead), and will remind visitors of the vital importance of clean water to early settler life.

5.4.6 West Duffins Ridge Lookout

An old farm road follows a ridge overlooking the West Duffins Creek. Breaks in the trees provide a view of the Creek, and a small seating and interpretation area takes advantage of this viewpoint. See Appendix: Section 5.6 for the conceptual design of this area.

5.4.7 Moraine Lookout

A grassy open area at the top of a kame provides excellent internal views of the surrounding rolling landscape, including lush forest and wetland. A small seating area allows visitors to take in these views. See Appendix: Section 5.5 for the conceptual design of this area.

5.5 Wayfinding

Wayfinding elements are essential for visitor safety and orientation. A suite of wayfinding elements will be incorporated into the Goodwood RMT trail system, both within the feature areas (See Section 5.4) and spread out on the site (See Map 15). This suite of wayfinding elements is outlined below, described in further detail within the Appendix. The design of elements not constructed previously by TRCA will be confirmed through structural engineering and graphic branding reviews.

5.5.1 Primary Trailhead Kiosk

A primary trailhead kiosk will be located at the Concession 3 Entrance Feature Area. This kiosk will be used to display trail mapping, permitted uses, etiquette, and accessibility information. Appendix: Section 6.3 provides design options for this kiosk. Option 1 is the preferred design option. It should be noted that all information posted on the kiosk will also be made available on-line on the TRCA website and possibly through other communication products such as print trail guides or digital trail applications.

5.5.2 Main Entry Sign

A large sign identifying the Goodwood RMT shall be located at the main trail entrance, namely the Concession 3 entrance area. This sign should be visible from the road, if possible within the Concession 3 road right-of-way. See Appendix: Section 6.1 for the conceptual design of this signage.

5.5.3 Secondary Trailhead Map

Secondary Trailhead Maps will be located at secondary trail entrances, namely the Webb Road entrance and the Concession 2 entrance. These secondary trailhead maps will display the same information as the primary trailhead kiosk, including trail mapping, permitted uses, etiquette, and accessibility information See Appendix: Section 6.2 for the conceptual design of this signage.

⁴ If the pedestrian crossing of Webb Road is constructed in advance of the trail re-route, additional trail wayfinding signage should be installed to direct trail users from the location where the existing trail meets Webb Road to the safe pedestrian crossing location. This is an interim solution until the re-route is completed.

5.5.4 Postmarkers

Numbered postmarkers spread out along the Goodwood RMT trail network provide a simple wayfinding and trail identification system. They also help provide refined location points of reference for those unfamiliar with the property and trail system in the case of an emergency. See Appendix: Section 6.4 for the conceptual design of this signage.

5.6 Amenities

Trail amenities provide improvements to visitor comfort, accessibility, and engagement with the site. A suite of trail amenities will be incorporated into the Goodwood RMT trail system, both within the feature areas (See Section 5.4) and spread out on the site (see Map 16). The design of elements not constructed previously by TRCA will be confirmed through structural engineering and graphic branding reviews.

The suite of recommended trail amenities is outlined below, described further within the Appendix.

5.6.1 Benches

Benches are spread out along the Goodwood RMT trail network at scenic locations to improve visitor comfort and accessibility. Metal panels can be incorporated into the bench depicting sensitive or distinctive wildlife species found on the property, thereby enhancing the visitor experience with passive learning opportunities. Appendix: Section 7.3 provides design options for benches.

5.6.2 Interpretive Signage

Interpretive signage will be incorporated into certain feature areas to tell the story of the natural and cultural heritage of the site and the surrounding region. Providing this information will encourage visitors to connect with the site in new ways and foster local stewardship. See Appendix: Section 7.1 and Appendix: Section 7.2 for the conceptual design of this signage.

5.6.3 Future Parking and Transit Linkage Opportunities

Based on ongoing visitor and trail use monitoring, the need for on-site washrooms and increased parking will be evaluated in coordination with Parks Canada's RNUP trail and welcome areas planning. Existing on-site parking is limited to road shoulders and a pull-off parking area for 1-2 cars at the Concession 3 entrance. Other parking locations in the area and especially the existing parking lot at Secord Forest and Wildlife Area (located approximately 1.5 km from the Concession 3 entrance) provide indirect service to the Goodwood RMT.

Future transit linkages and active transportation infrastructure from Lincolnville GO Station to the Goodwood RMT will be explored in coordination with Parks Canada's RNUP trails and welcome areas planning. Engagement with Metrolinx, the Regional Municipality of Durham, and the Township of Uxbridge will provide key necessary input for this work. Ongoing visitor and trail use monitoring data will also help determine appropriate types of services and infrastructure.

5.7 Accessibility

TRCA is committed to improving accessibility for persons with disabilities. It is anticipated that the Goodwood RMT trail network will be able to fulfill almost all of the accessibility standards for recreational trails set out by Regulation 191/11: Integrated Accessibility Standards, under the Accessibility for Ontarians with Disabilities Act (AODA) (2005). Along certain trail sections, site constraints and natural and cultural heritage impacts may limit realizing selected accessibility standards. Beyond the AODA standards, TRCA will implement design enhancements to the trail system to improve accessibility for persons with visual impairments. The design of these features, as well as any additional specific accessibility enhancements, will be refined through further engagement with the Uxbridge Accessibility Advisory Committee and/or other people with disabilities. These enhanced accessibility features will help the

Goodwood RMT trail system fulfill the spirit of the AODA and provide engaging trail experiences to a wider variety of abilities.

A section of the Oak Ridges Main Trail from the Concession 3 Entrance to the West Duffins Creek is proposed to incorporate a rope line feature to enhance accessibility for persons with visual impairments (see Map 16). This section of trail was originally chosen as the current trail alignment's longitudinal slope is mostly within the standards provided in the Integrated Accessibility Standards Regulation O. Reg. 191/11, and can likely be redeveloped to meet these standards. This rope line will be installed along one side of the trail to guide trail users along the path. Certain indicators along the rope line could denote a stopping point or interpretation area. Unique natural and cultural heritage feature areas are located along this section of trail, including the Homestead (see Section 5.4.2) and the Eagle's Rest (see Section 5.4.3). Any interpretive signage incorporated along the rope line should include text in braille or in relief. The installation of this feature will be subject to future TRCA needs for vehicular access for property and resource management programs. For more details about this feature please see Appendix: Section 7.4.

At the Concession 3 Entrance, an interpretive 3D topographical model is proposed so that visitors can see and feel the undulating landscape of the site. This model could be valuable to enhance accessibility for persons with visual impairments, as they will be able to feel the topography of the property. The rolling landscape of the Oak Ridges Moraine is an important part of the natural and cultural heritage of the region, as this unique landform has shaped the local landscape and settlement patterns of the surrounding area for generations. Providing a tactile experience with the 3D topographical model allows persons with visual impairments to achieve a meaningful sense of this important landscape context. For more details about this feature please see Appendix: Section 7.1.

The Goodwood RMT is an ecological sanctuary whose regional significance and biological richness is documented within the <u>Terrestrial Biological Inventory and Assessment Report</u>. The ecological sensitivity of the Goodwood RMT affects the application of the typical AODA standards to the trail system on this property. However TRCA will work with the Township of Uxbridge Accessibility Advisory Committee and/or other people with disabilities to incorporate features to enhance accessibility while ensuring the protection natural and cultural heritage features beyond the AODA standards.

To honour the AODA signage requirements included in 80.9(1) paragraph 8, a chart and mapping will be presented on both signs at primary and secondary trailheads. This information will be provided to allow trail users with disabilities to prepare for a trail experience that suits them and determine for themselves which sections of trail they are able to experience. All the signage information required to meet accessibility requirements will be posted online on the TRCA website and possibly through other communication means, along with trail mapping, permitted uses, etiquette, and amenity locations. This will allow people to better prepare for their trail experience at the Goodwood RMT.

The chart below is indicative of how certain technical accessibility information will be presented for the Goodwood RMT trail system.

Trail Name	Length (km)	Surface Type	Average Width (cm)	Min Width (cm)	Average Slope (%)	Max Slope (%)	Average Cross Slope (%)	Max Cross Slope (%)
Oak Ridges Main Trail	2.56	Natural Surface with	144	60	3.1	21.1	6.2	33

		Boardwalk Sections						
Oak Ridges Side Trail/Trans Canada Trail	3.34	Natural Surface	114.9	66	10.1	43.9	5.9	22.4
Equestrian Loop	0.47	Natural Surface						

Note: The Equestrian Loop includes a major re-alignment, and HETAP will be undertaken for this trail to collect the missing information once the re-alignment has been completed.

6. Trail System Management

The existing Goodwood RMT trail system is managed and maintained by ORTA, through an agreement with TRCA. Based on this agreement, ORTA is responsible for the maintenance, repair, operation, and oversight of the Oak Ridges Trail system. During the spring and fall trail inspection reports are completed by ORTA members and submitted to TRCA, however ORTA is required to report any trail safety hazards to TRCA in a timely manner. Hazard tree assessment and management is completed by TRCA staff and is not part of the responsibility of ORTA under the existing agreement. This agreement is renewed on an annual basis subject to the approval of both TRCA and ORTA.

A trail maintenance agreement was signed between TRCA and GDA in May 2018 to allow GDA volunteers to undertake trail maintenance along certain authorized trails on TRCA property until May 2019. The Oak Ridges Side Trail/proposed Trans Canada Trail within the Goodwood RMT property is included within this agreement. This current agreement is set for a period of one year, with both TRCA and GDA having expressed interest in having this be a long-standing arrangement.

The Goodwood RMT trail system will continue to be maintained and managed through partnerships with local organizations, including ORTA and/or GDA. Any maintenance and management activities by these local organizations shall be authorized through agreements with TRCA.

7. Trail Plan Implementation Budget & Phasing

The development of a budget and implementation schedule was included as part of this planning process to provide a cursory outline of the further work and investment needed to realize the Goodwood RMT Trail Plan. The estimates developed as part of this plan are considered rough order of magnitude estimates that used a number of different methods to arrive at total estimated cost for each component of the Trail Plan. As additional technical studies and detailed construction drawings are completed, these estimates will be refined to more accurately represent the expected cost of each component of the Trail Plan. Please note that \$913,000 of this estimate overlaps with the Trans Canada Trail – East Duffins Headwaters to RNUP project.

The Trail Plan implementation has been broken down into three phases over nine years in order to balance the needs of the site and is established under the assumption of all funds for implementation being available during the corresponding phases. Phase 1 is years one through three, Phase 2 is years four through six, and Phase 3 is years seven through nine. The schedule seeks to balance the need for improving existing and failing infrastructure and growing the profile of Goodwood RMT by improving visitor safety and experience. The phasing of Parks Canada's

RNUP trail planning and implementation efforts will also be a factor in this phasing schedule. TRCA will continue to work with Parks Canada to further the development of the Webb Road pedestrian crossing, and continue to collaborate with Parks Canada regarding signage, trail design, and future parking opportunities to ensure alignment with RNUP trail planning work. The timely and successful implementation of the Goodwood RMT Trail Plan will require the cooperation of TRCA, municipal partners, the local community and both existing and new partnerships to dedicate financial and human resources to the project's implementation.

Table 4 below provides a summary of the major elements of work needed to implement the Goodwood RMT Trail Plan with their associated phasing and cost estimates. It also outlines the planned funding sources for each element. A detailed implementation budget is provided in the Appendix.

Table 4: Implementation Budget and Planned Funding Sources

Item	Planned Funding Source	Phase	Anticipated Cost
Additional Studies & Land Acquisitions	Grants, Municipal Partnerships, & Local Trail Volunteer Organizations	1	\$133,000
General Trail Improvements	Grants & Local Trail Volunteer Organizations	1	\$653,000
System-Wide Wayfinding	Grants & Local Trail Volunteer Organizations	1	\$6,000
System-Wide Amenities	Grants & Local Trail Volunteer Organizations	1 & 3	\$8,000
Feature Area: Concession 3 Entrance (Maple Way)	Grants, Municipal Partnerships & Local Trail Volunteer Organizations	1 & 2	\$115,000
Feature Area: Homestead	Grants, Municipal Partnerships & Local Trail Volunteer Organizations	2	\$73,000
Feature Area: Water Pump Garden	Grants, Municipal Partnerships & Local Trail Volunteer Organizations	2 & 3	\$16,000
Feature Area: Green Door	Grants and Local Trail Volunteer Organizations	2	\$41,000
Feature Area: Moraine Lookout	Grants & Local Trail Volunteer Organizations	1 & 3	\$9,000
Feature Area: West Duffins Ridge Lookout	Grants & Local Trail Volunteer Organizations	1 & 3	\$11,000
Feature Area: Eagle's Rest	Grants & Local Trail Volunteer Organizations	3	\$365,000
Rope Line Accessibility Feature	Grants & Local Trail Volunteer Organizations	3	\$57,000
Total Goodwood RMT Trail Plan Cost			\$1,488,000

Please note that these estimates are adjusted for inflation from 2018 \$CAD cost estimates.

8. References

Dillon Consulting Ltd. 2018. Webb Road Trail Crossing – Detailed Design

Forests Ontario. 2016. Focus on Forests – Oak Ridges Moraine.

Toronto and Region Conservation Authority (TRCA). 2018 Draft. Trail Strategy for the Greater Toronto Region.

Toronto and Region Conservation Authority (TRCA). 2018 Draft. Five Year Update to Building The Living City, the TRCA 2013-2022 Strategic Plan

Toronto and Region Conservation Authority (TRCA). 2018. *Goodwood Resource Management Tract and Surrounding Area Terrestrial Biological Inventory and Assessment.*

Toronto and Region Conservation Authority (TRCA). November 28, 2014. *The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority*.

Toronto and Region Conservation Authority (TRCA). 2003. *Duffins Creek Headwaters Management Plan for TRCA Properties*.

Toronto and Region Conservation Authority (TRCA). 2003a. A Watershed Plan for Duffins Creek and Carruthers Creek.



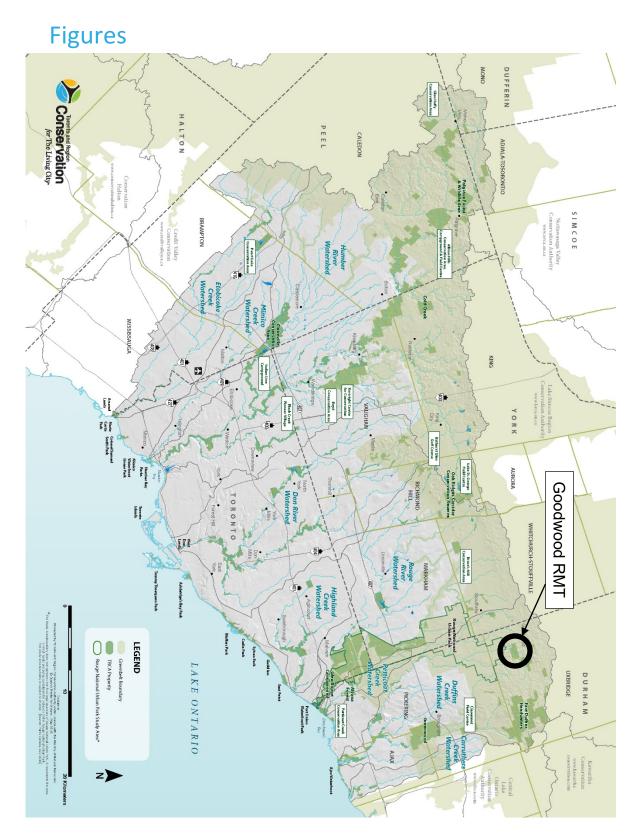


Figure 1: Goodwood Resource Management Tract Location



Figure 2: Goodwood RMT 1946 Aerial Photograph

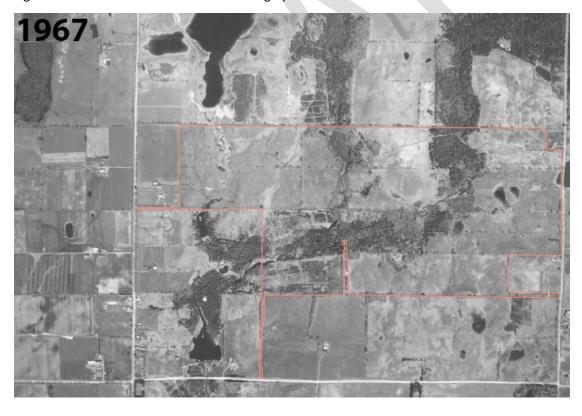


Figure 3: Goodwood RMT 1967 Aerial Photograph



Figure 4: Goodwood RMT 1988 Aerial Photograph



Figure 5: Goodwood RMT 2017 Aerial Photograph

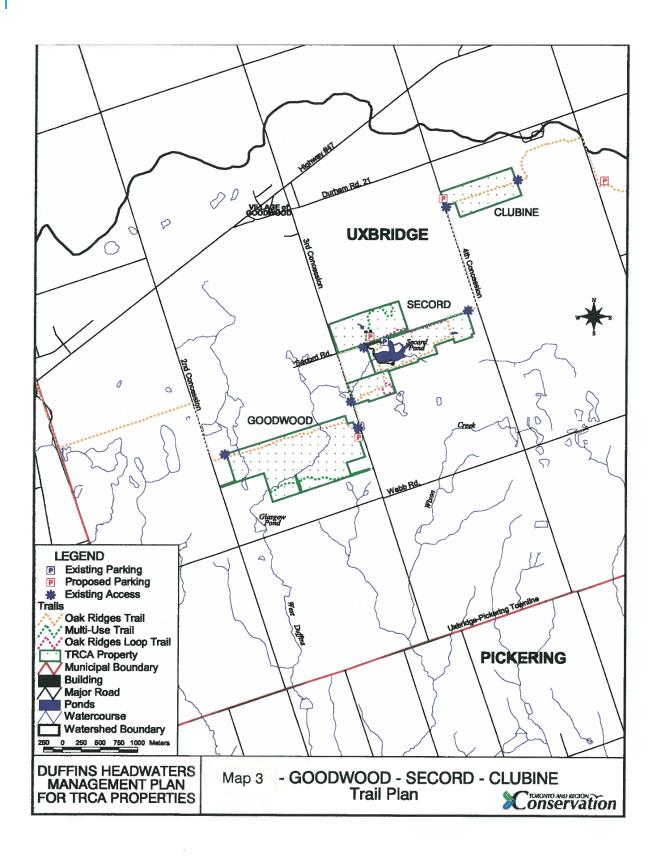


Figure 6: Duffins Creek Headwaters Management Plan for TRCA Properties - Trail Plan

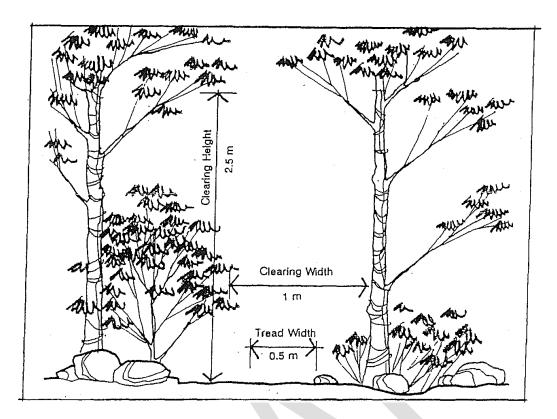


Figure 7: Duffins Creek Headwaters Management Plan for TRCA Properties - Trail Design Standards



Figure 8: Goodwood RMT Existing Oak Ridges Main Trail



Figure 9: Goodwood RMT Existing Oak Ridges Side Trail



Figure 10: High Efficiency Trail Assessment Process Equipment



Figure 11: Oak Ridges Trail Association Sign

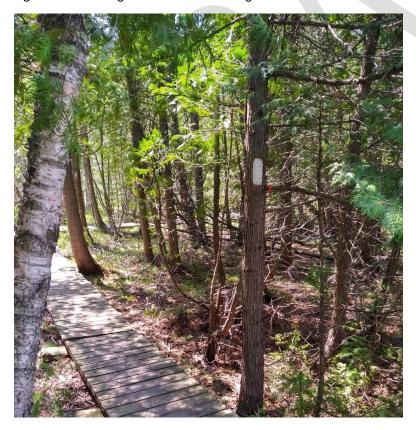


Figure 12: Main Oak Ridges Trail - White Blaze



Figure 13: Oak Ridges Side Trail - Blue Blaze



Figure 14: Angling Rules Sign



Figure 15: Goodwood RMT Trail Experience - Plantation Forest



Figure 16: Goodwood RMT Trail Experience - Mixed Hardwood Forest



Figure 17: Goodwood RMT Trail Experience - Meadow



Figure 18: Goodwood RMT Trail Experience - Wetland

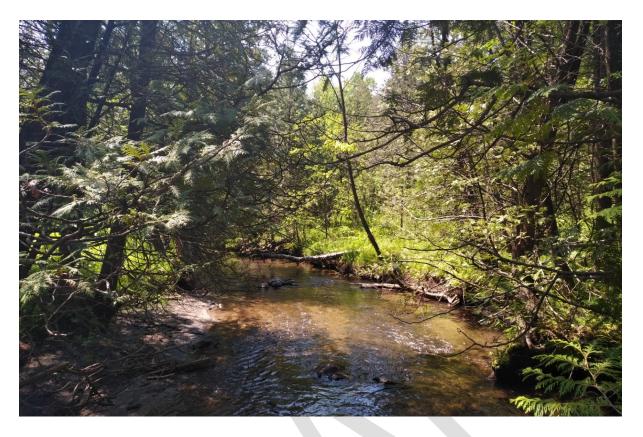


Figure 19: Goodwood RMT Trail Experience - West Duffins Creek



Figure 20: Goodwood RMT Trail Experience - Agricultural Field



Figure 21: Remnant Homestead

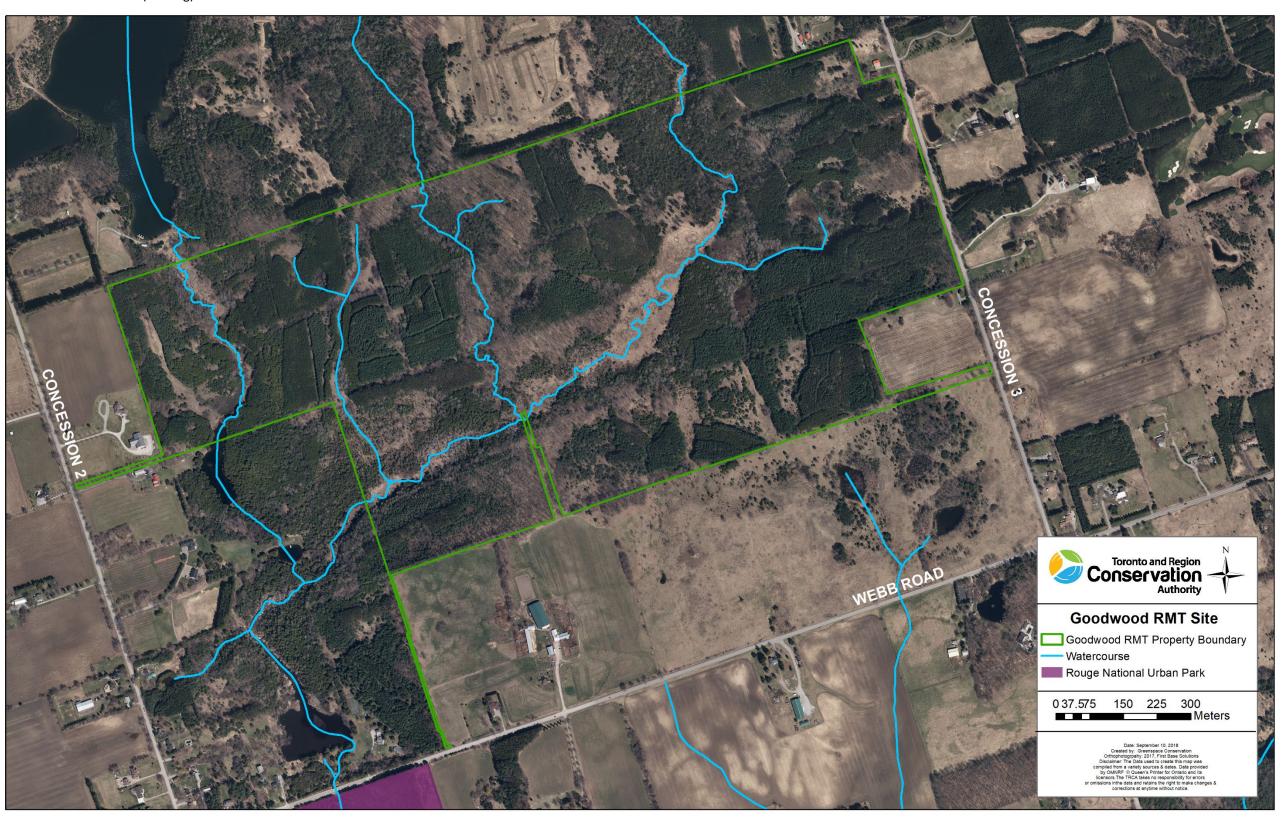


Figure 22: Remnant Water Pump

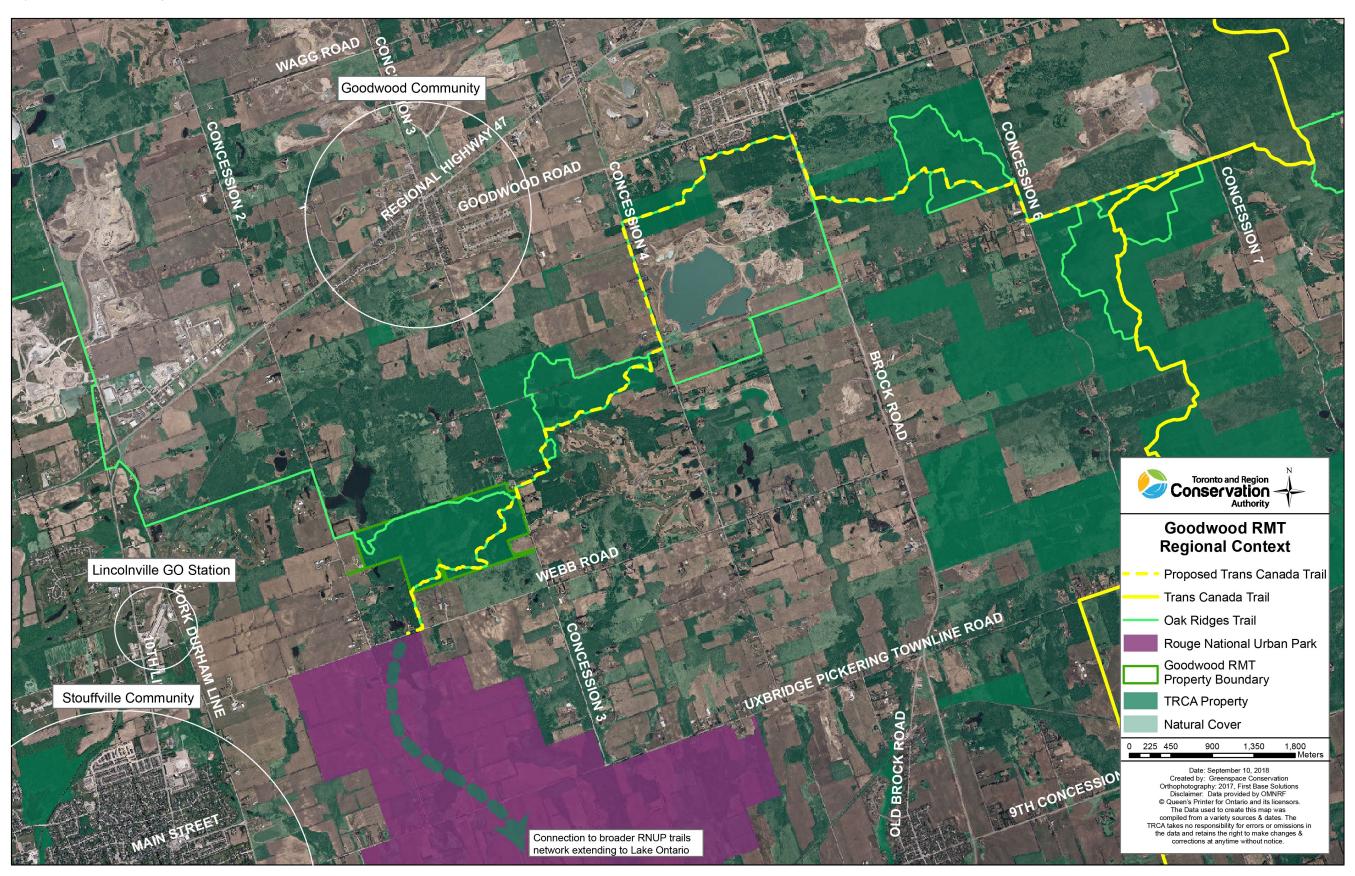


Maps

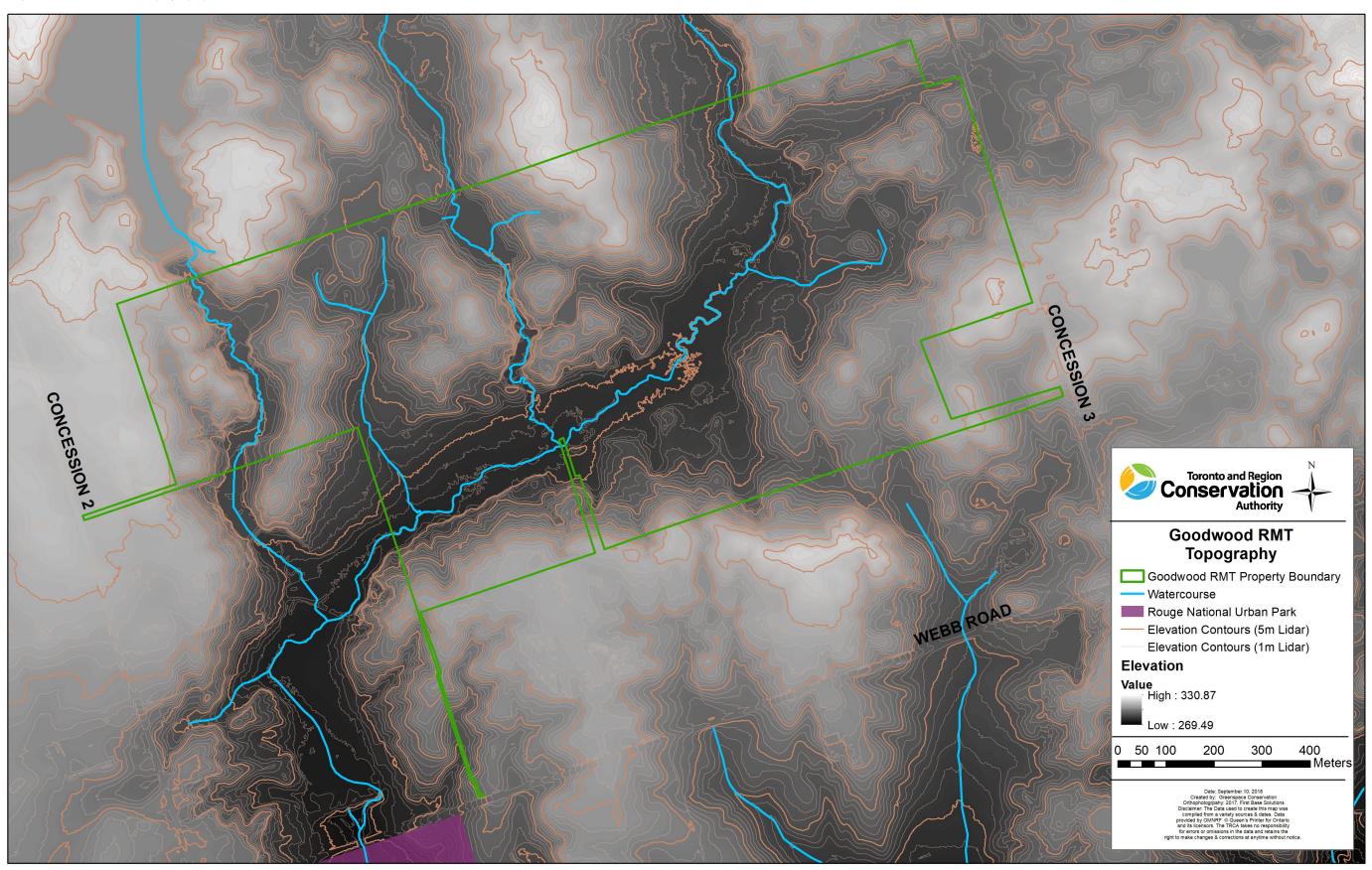
Map 1: Goodwood RMT Site (Existing)



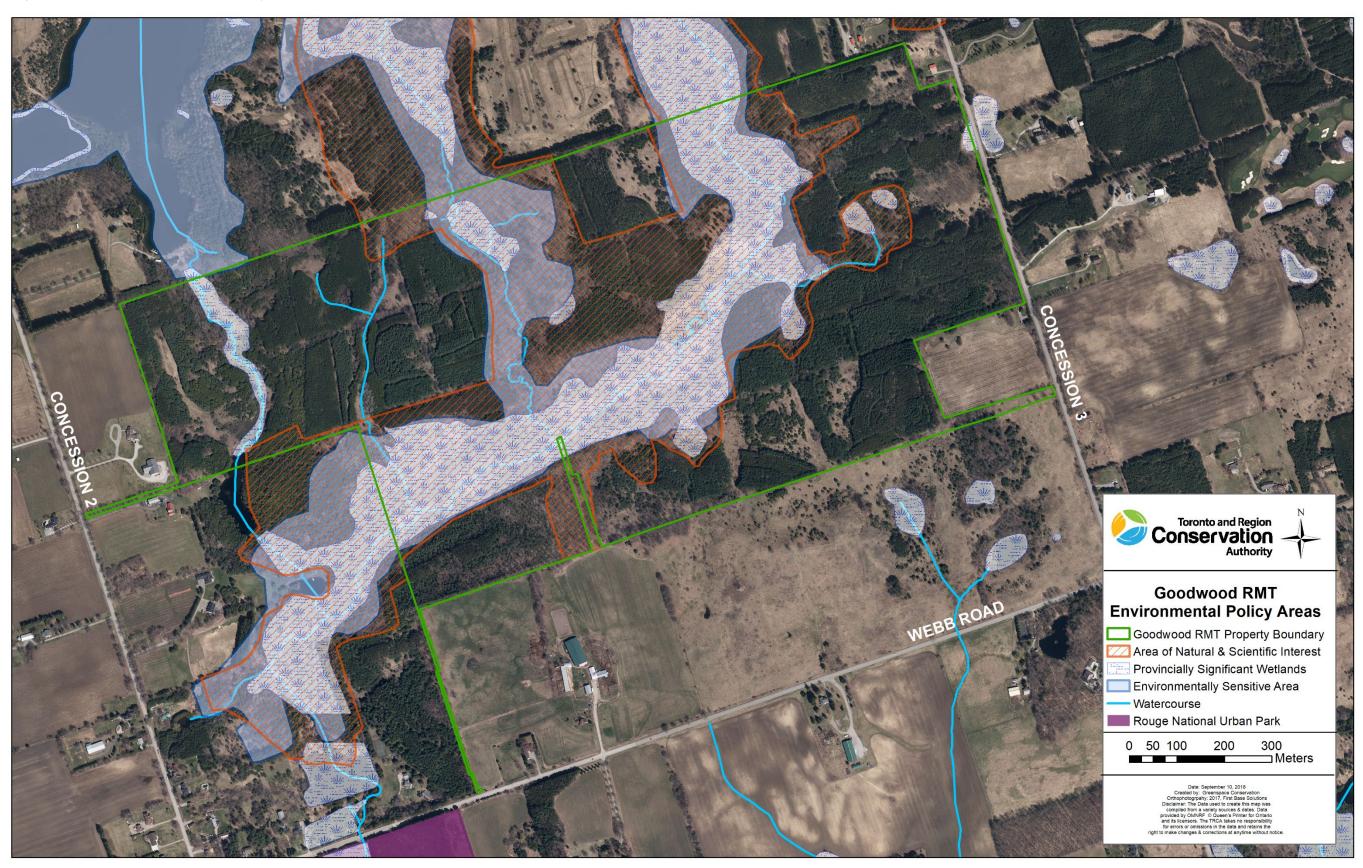
Map 2: Goodwood RMT Regional Context



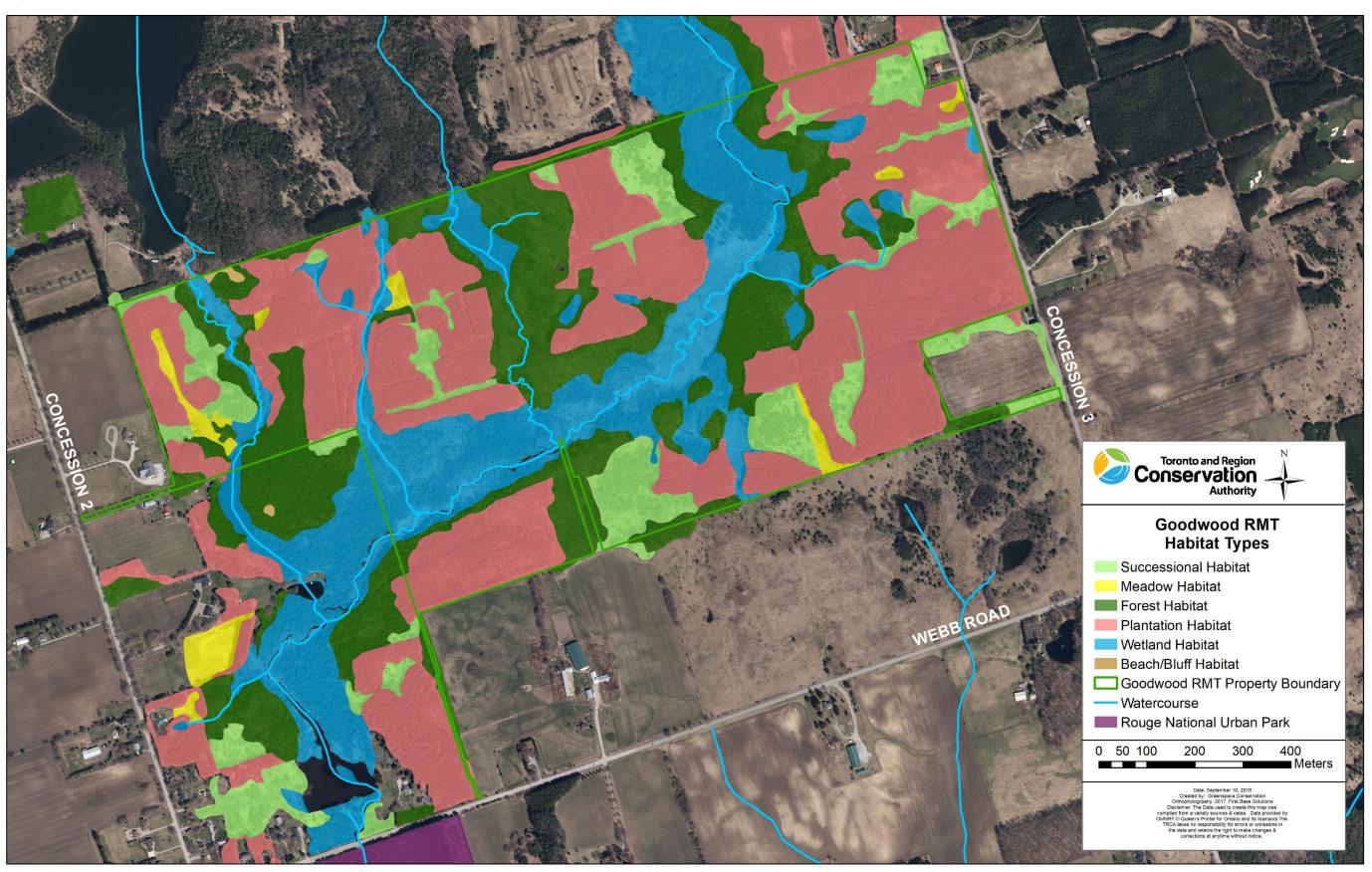
Map 3: Goodwood RMT Topography



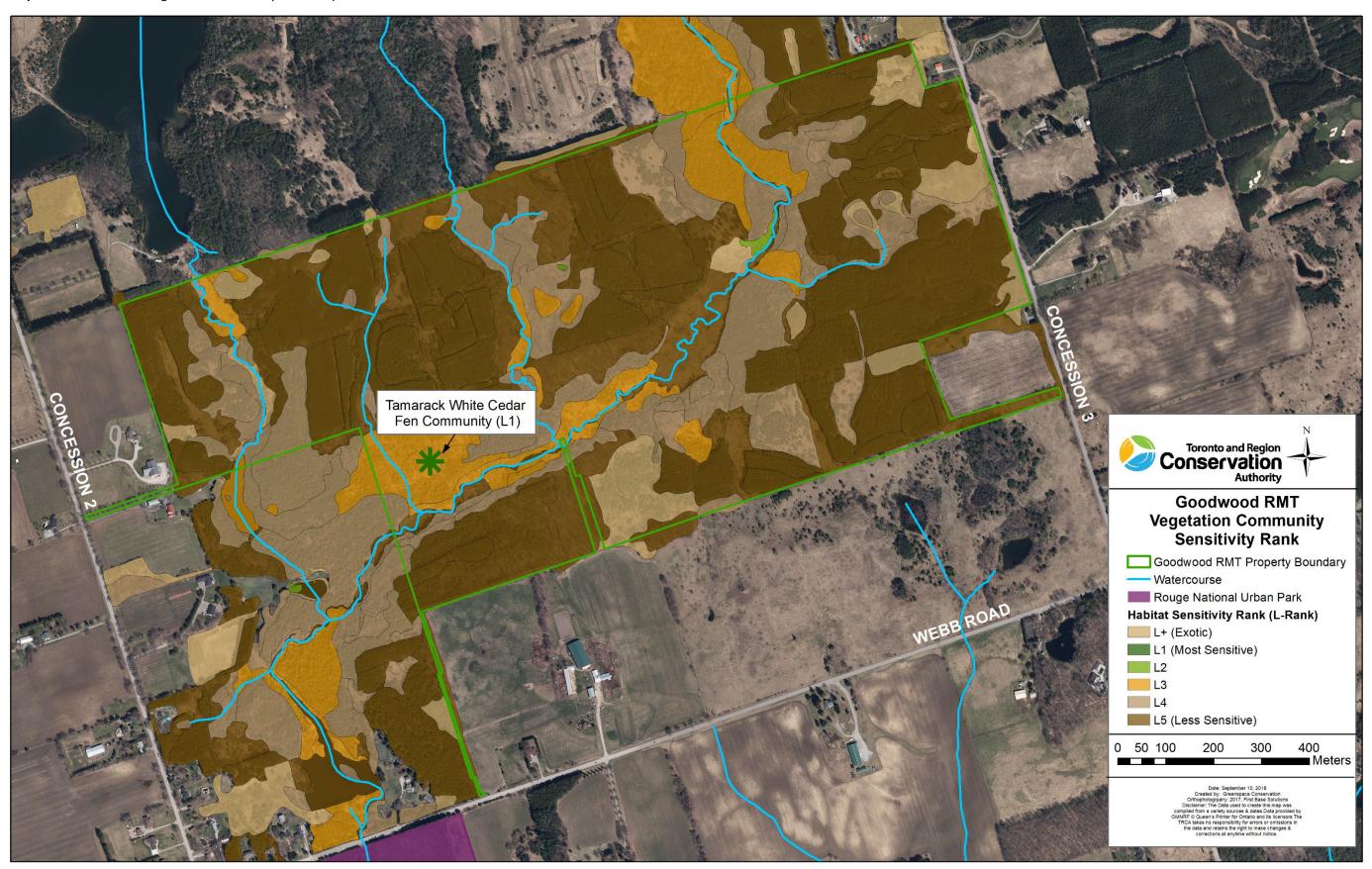
Map 4: Goodwood RMT Environmental Policy Areas



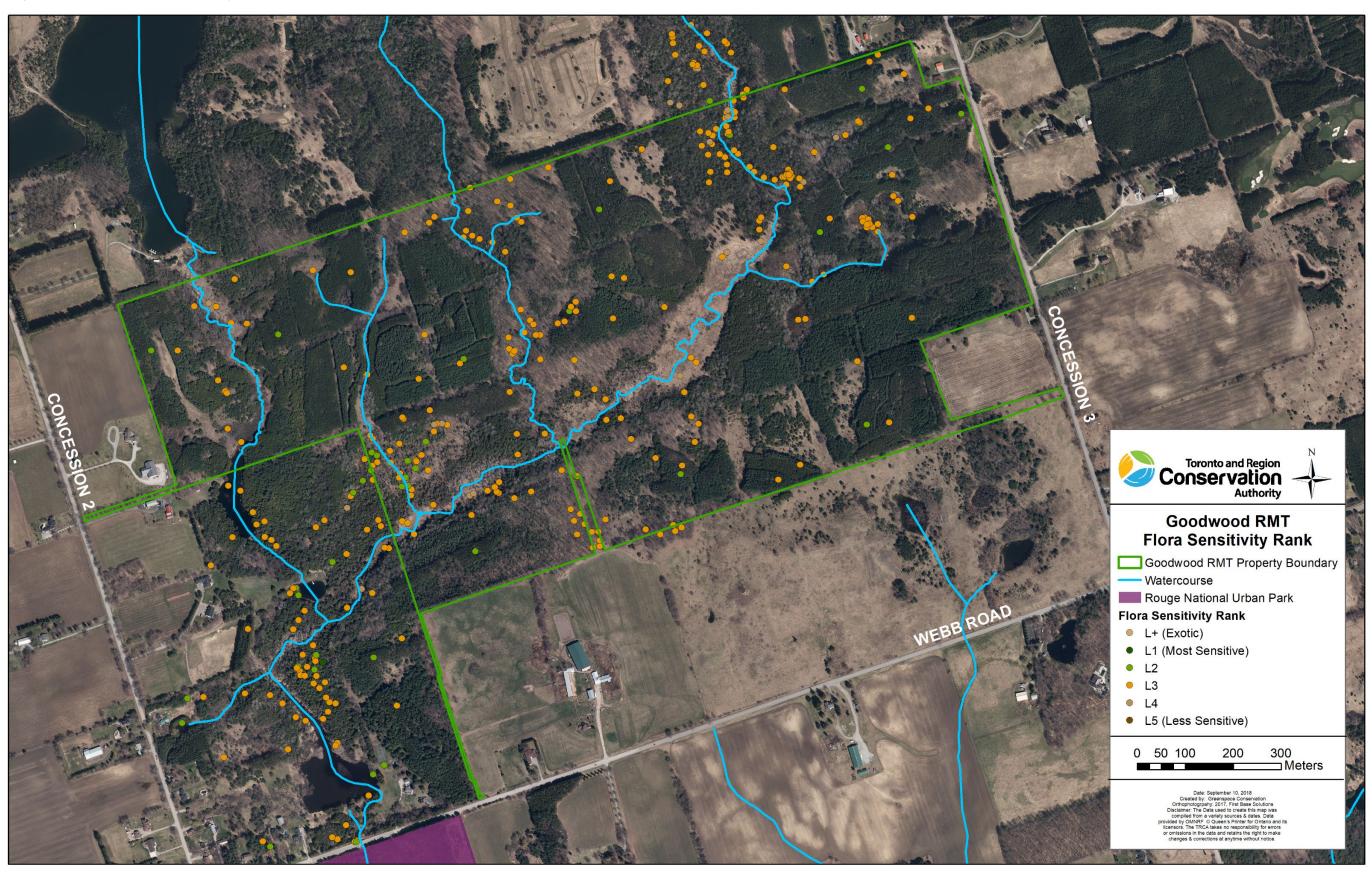
Map 5: Goodwood RMT Habitat Types



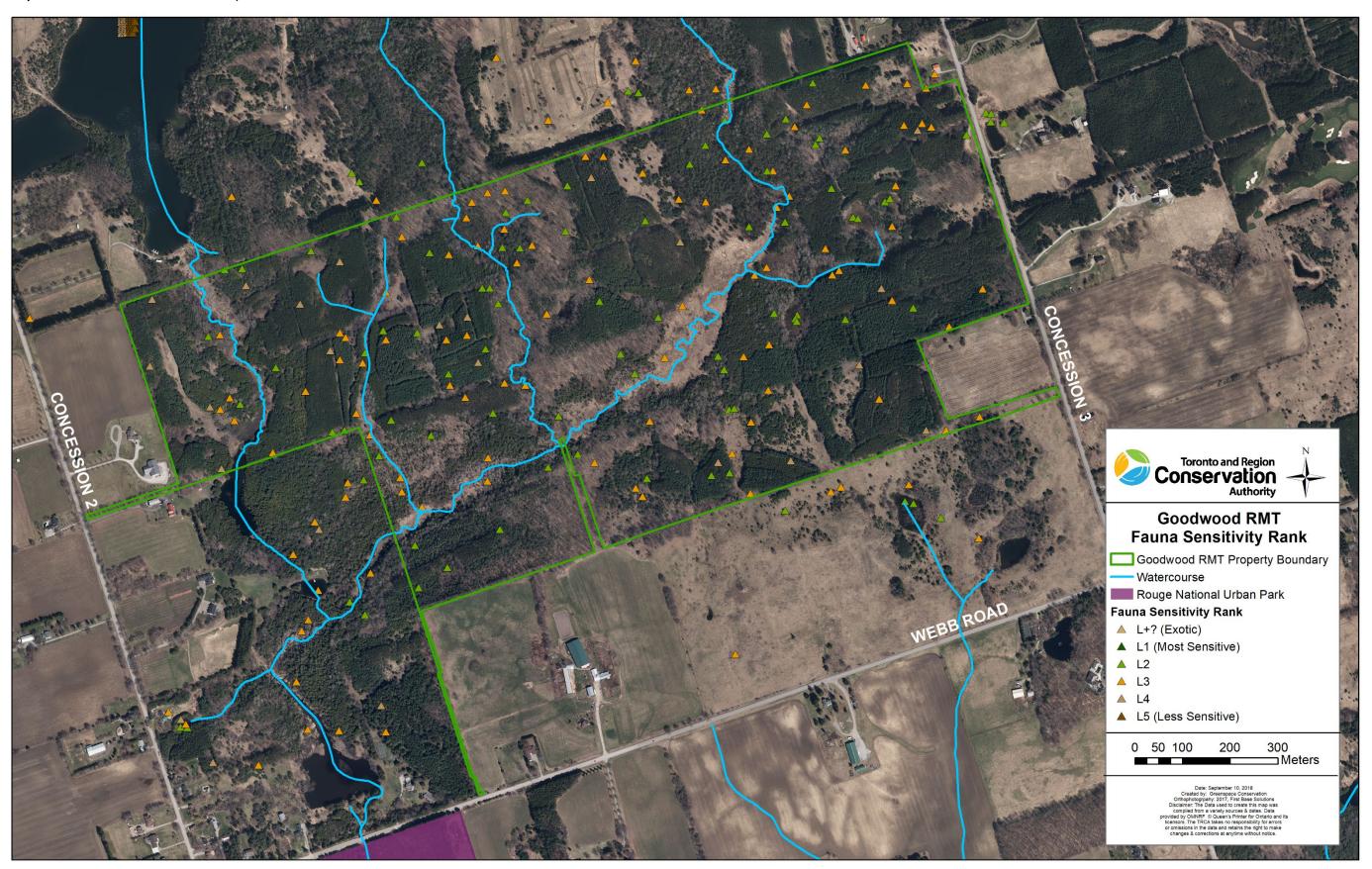
Map 6: Goodwood RMT Vegetation Community Sensitivity



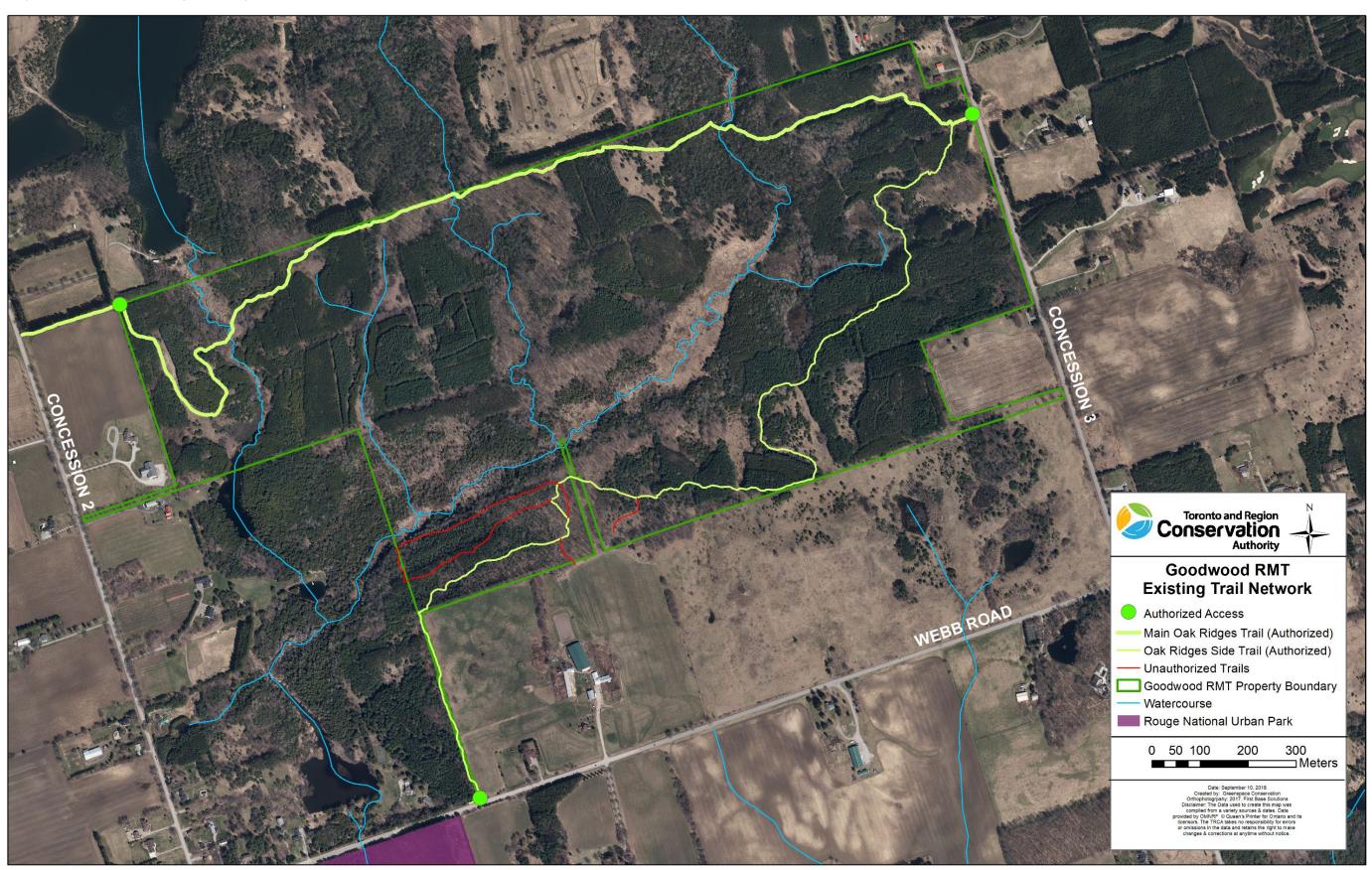
Map 7: Goodwood RMT Flora Sensitivity Rank



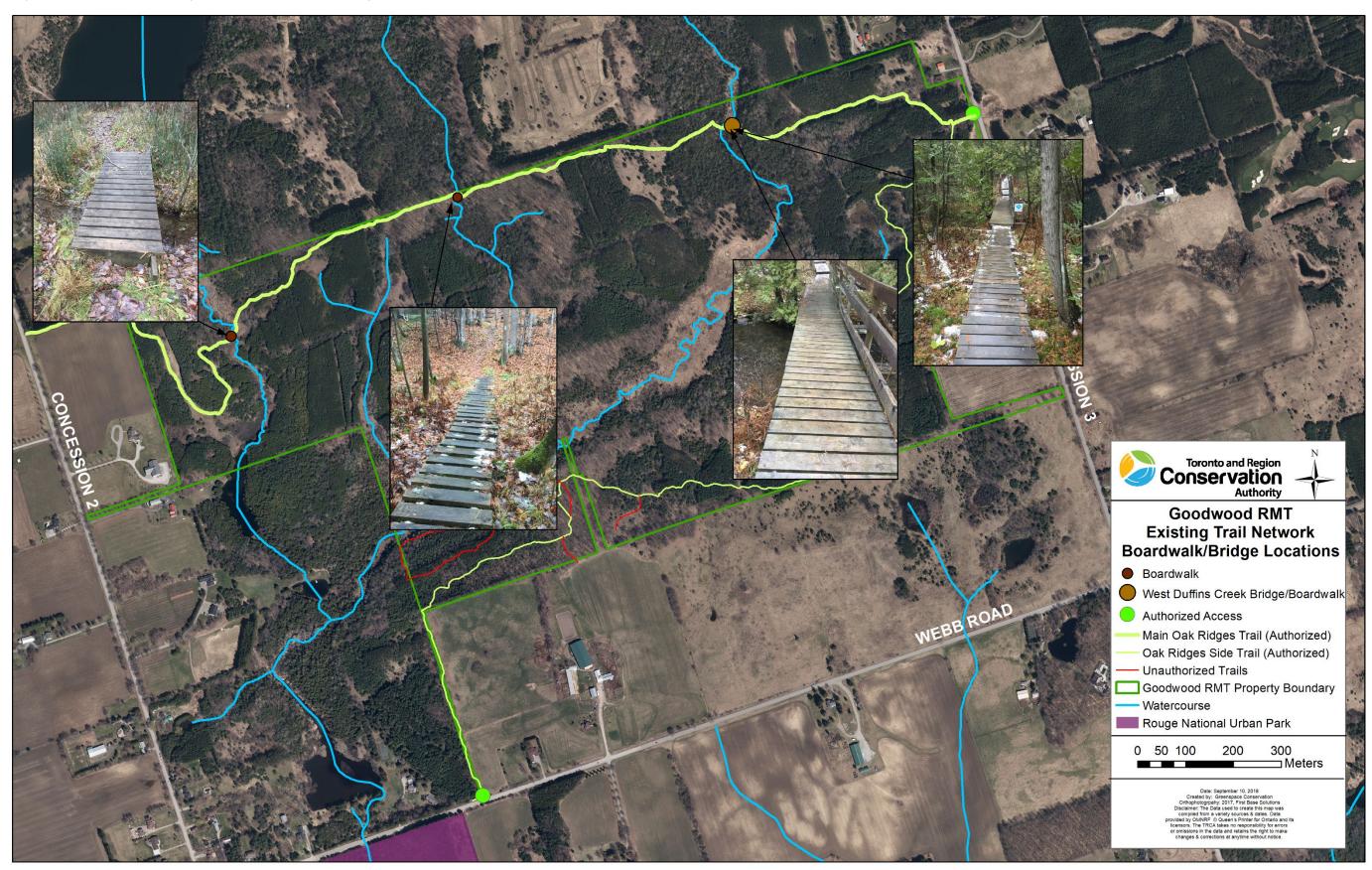
Map 8: Goodwood RMT Fauna Sensitivity Rank



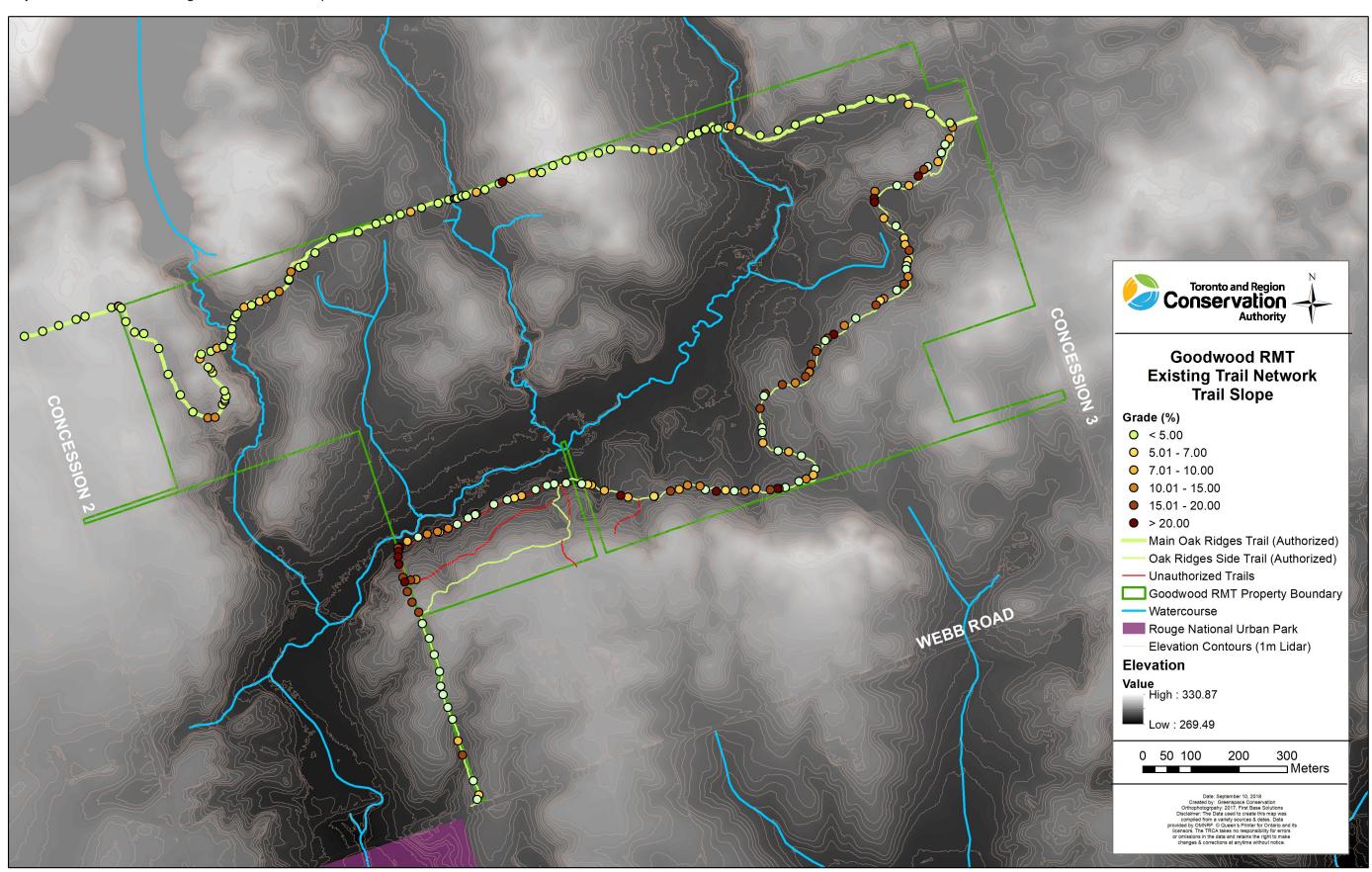
Map 9: Goodwood RMT Existing Trail Designations



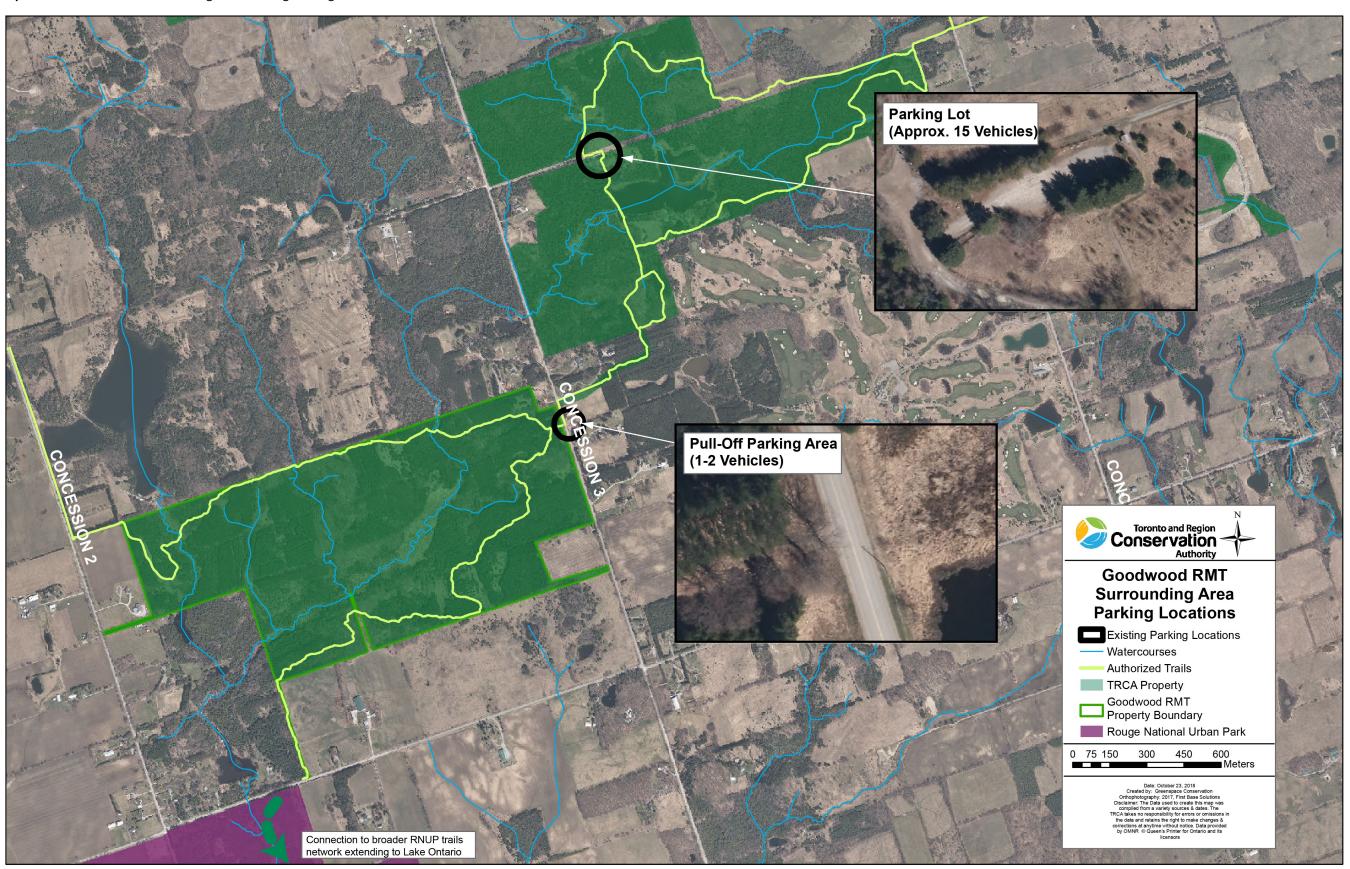
Map 10: Goodwood RMT Existing Trail Network Boardwalk/Bridge Locations



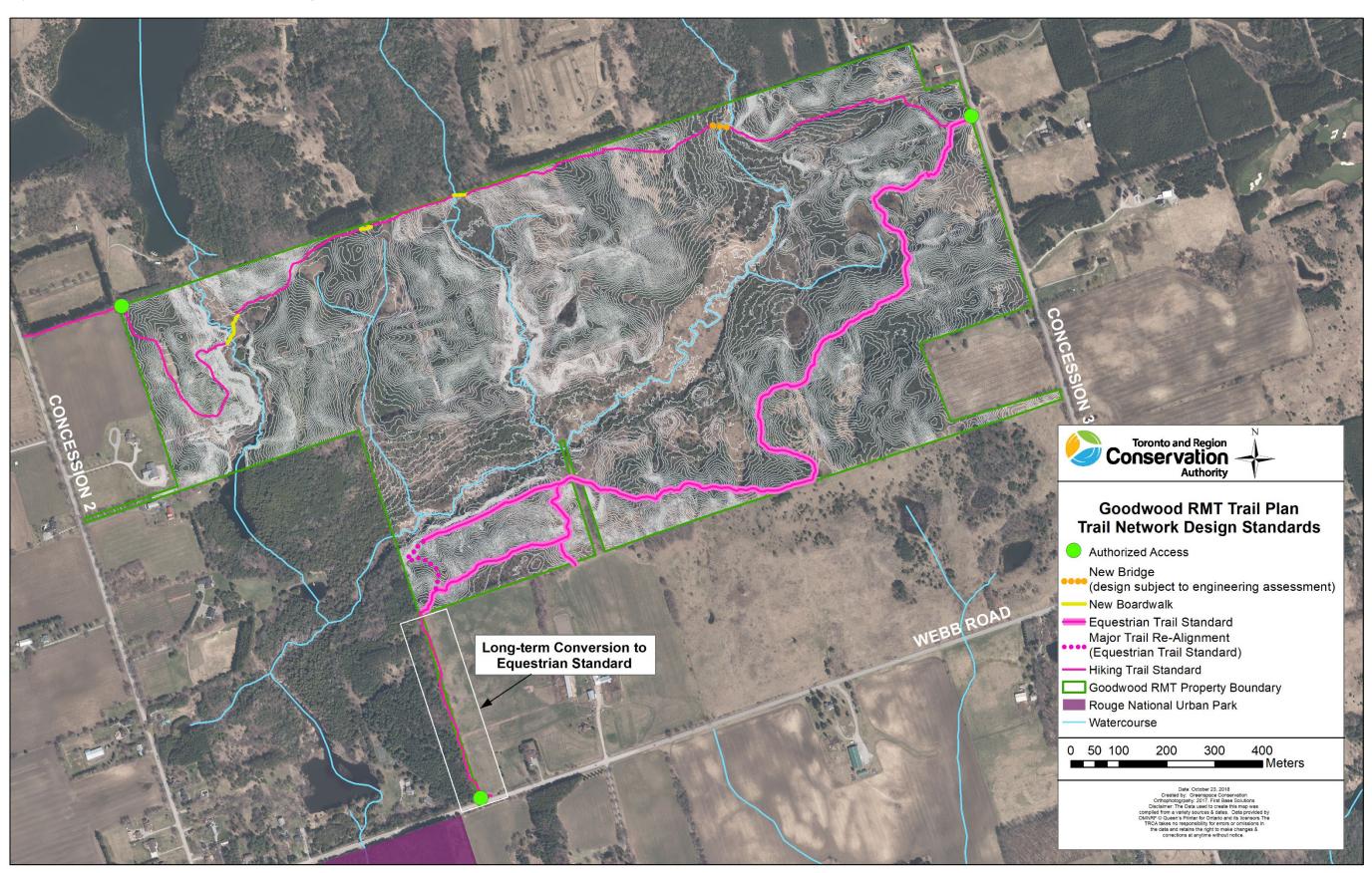
Map 11: Goodwood RMT Existing Trail Network Trail Slope



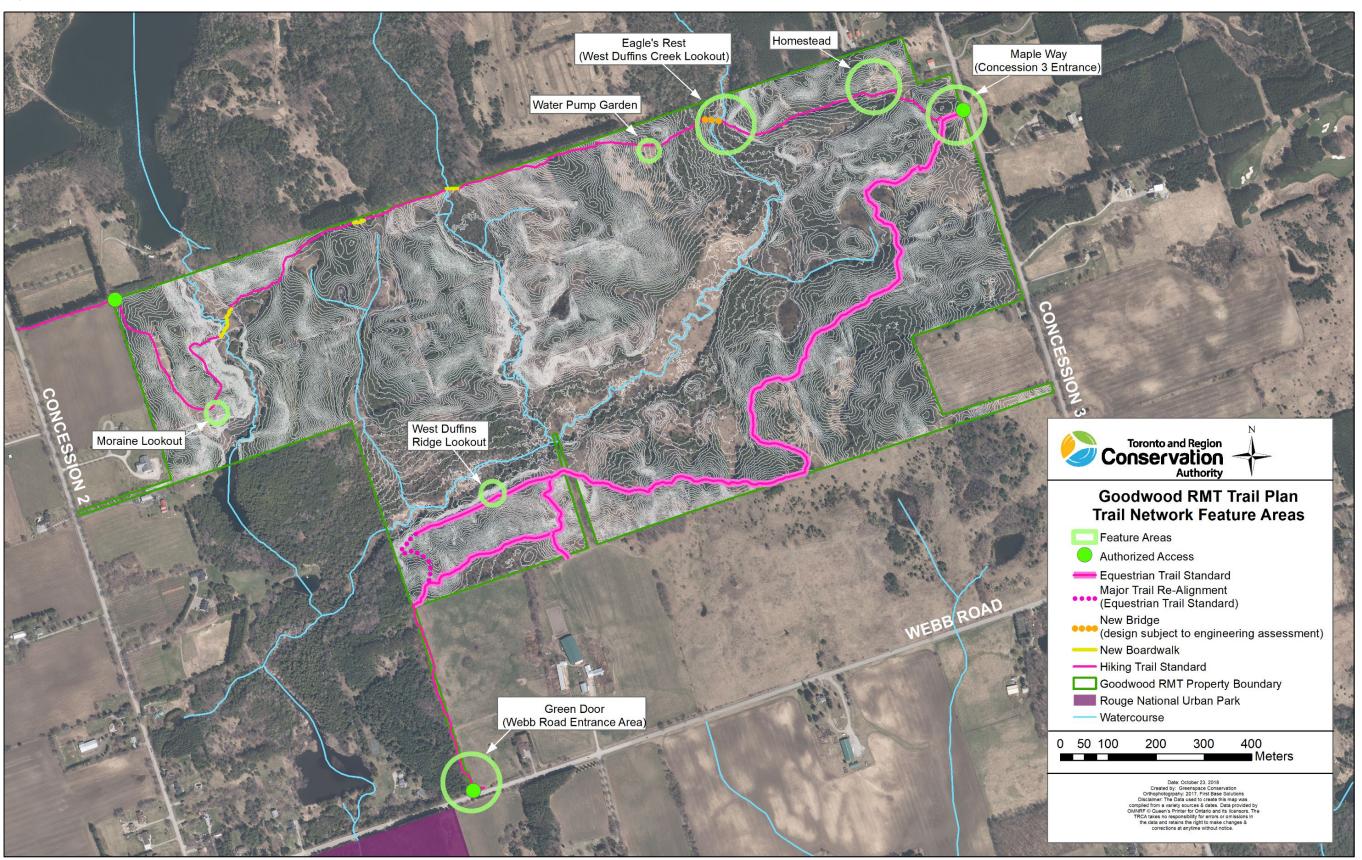
Map 12: Goodwood RMT Surrounding Area Existing Parking Locations



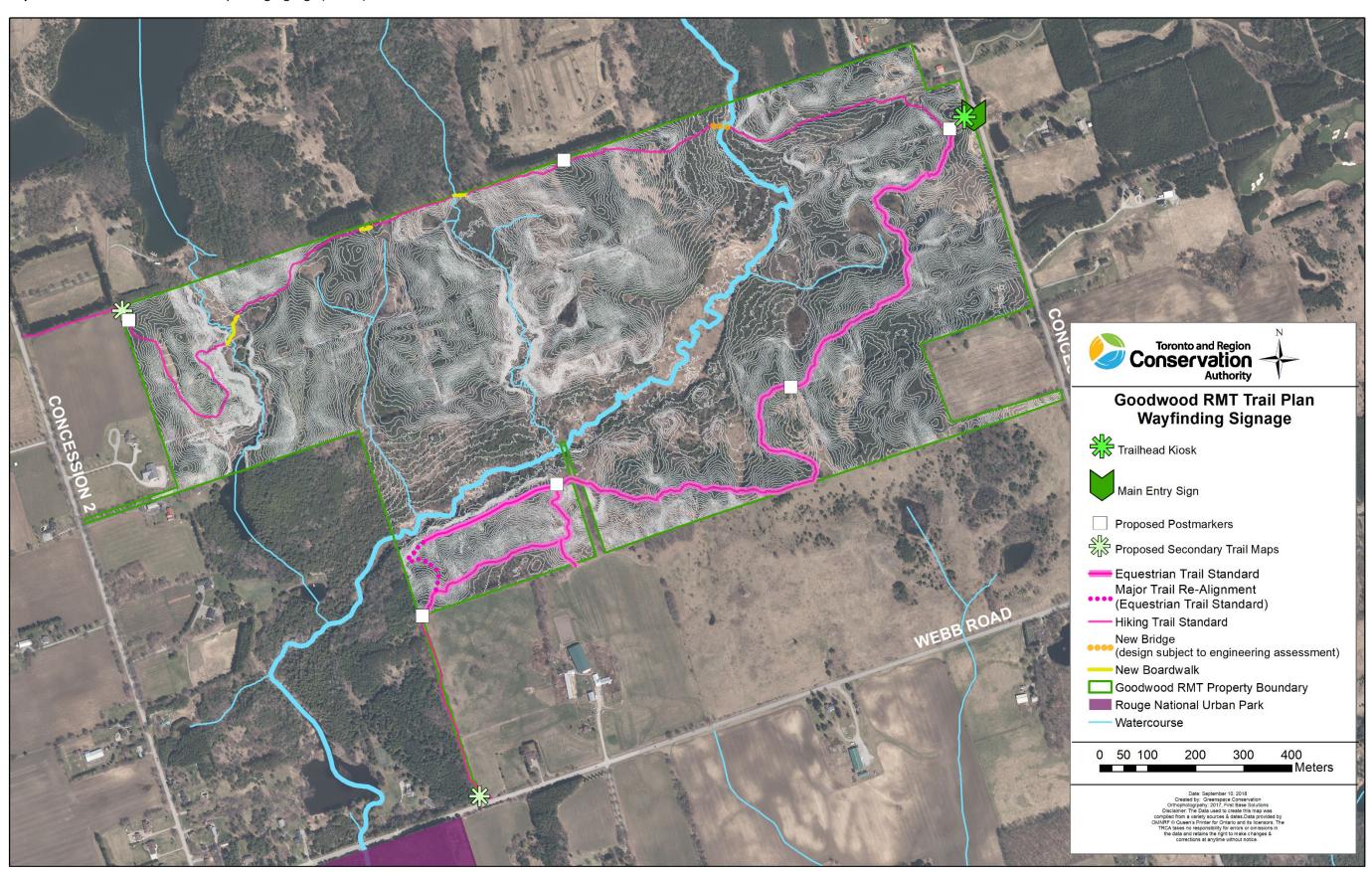
Map 13: Goodwood RMT Trail Plan Trail Network Design Standards (Future)



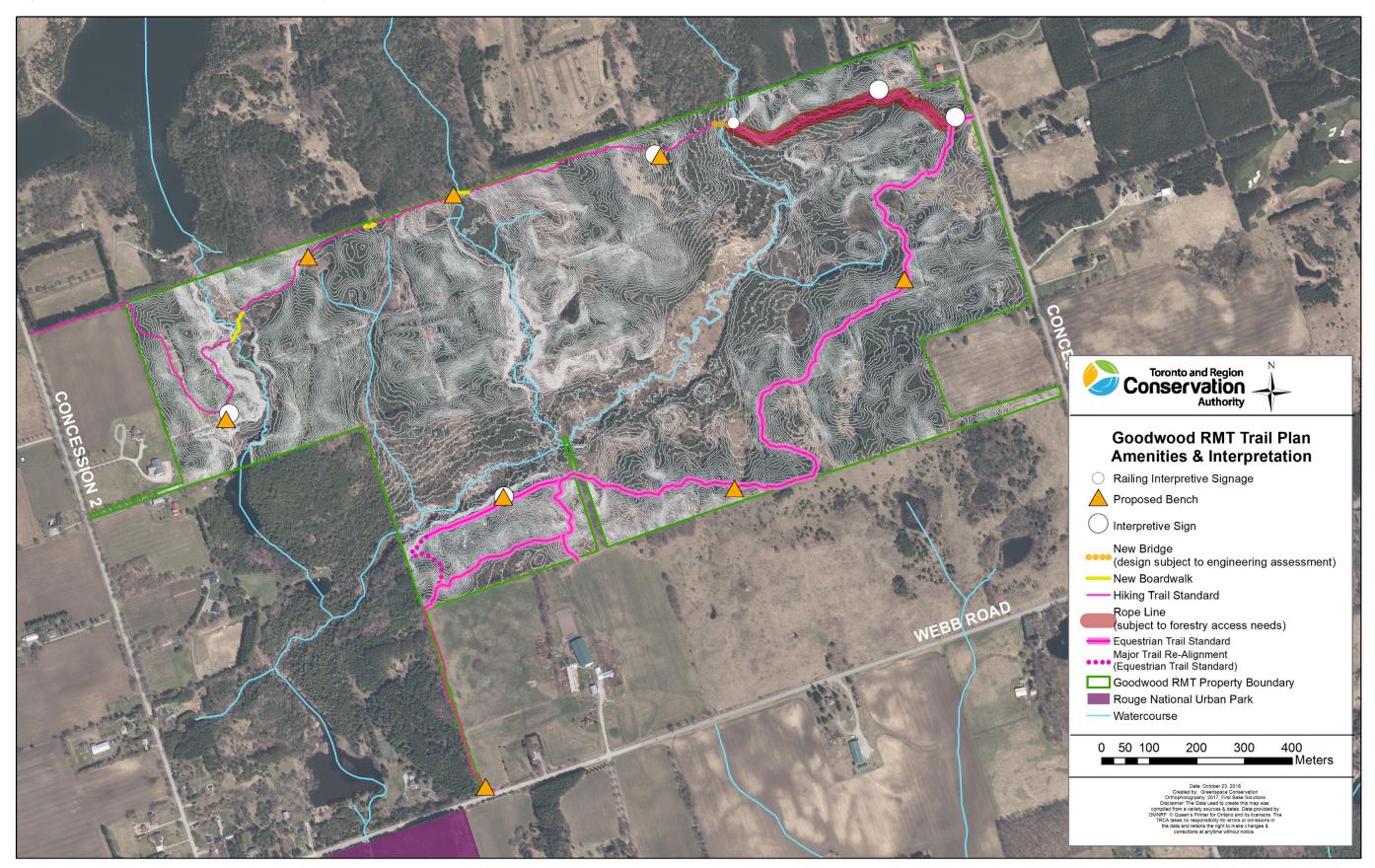
Map 14: Goodwood RMT Trail Plan Trail Network Feature Areas (Future)



Map 15: Goodwood RMT Trail Plan Wayfinding Signage (Future)



Map 16: Goodwood RMT Trail Plan Amenities and Interpretation (Future)



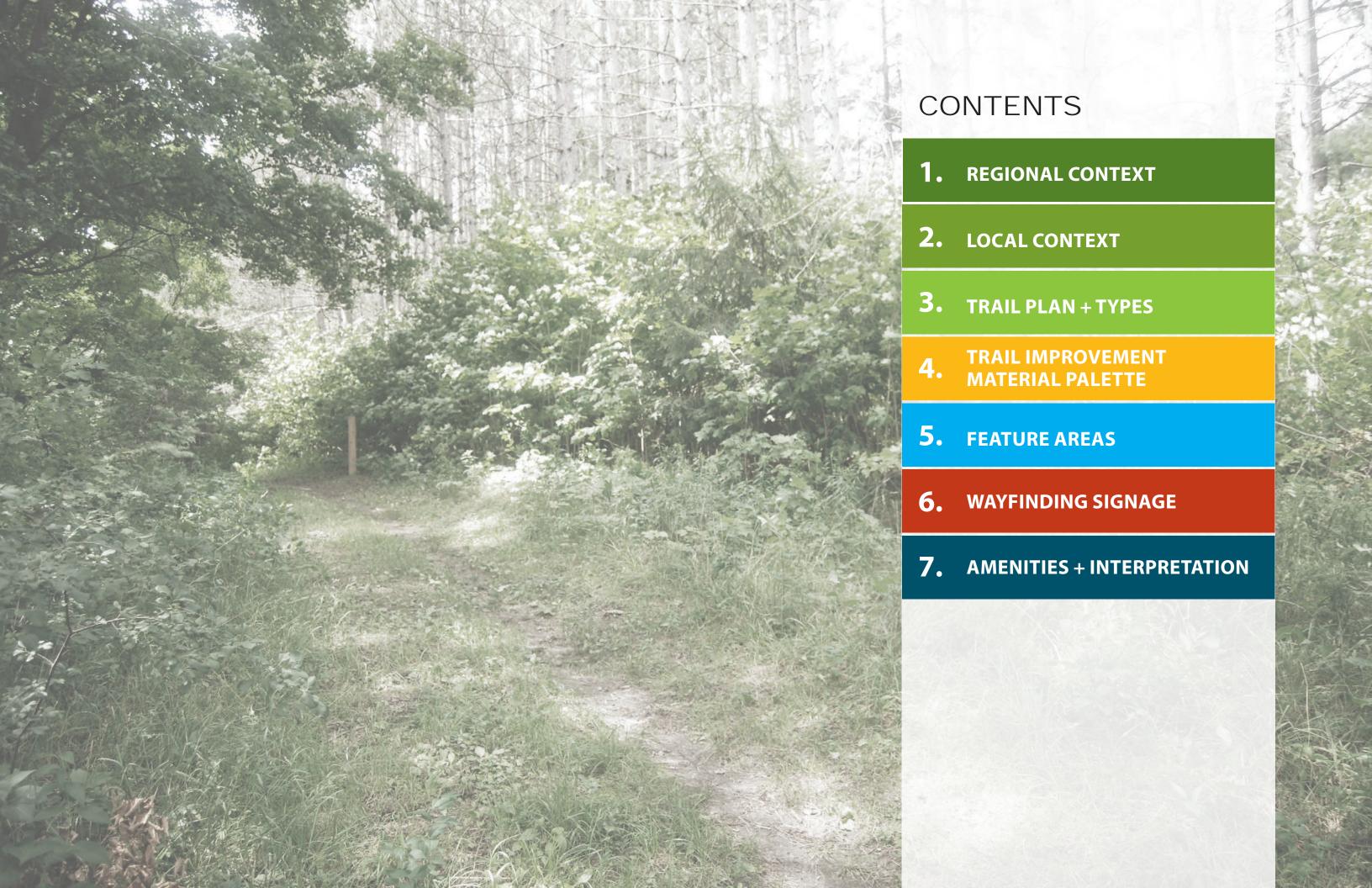






CGOOODWOOOD RESOURCE MANAGEMENT TRACT TRAIL DESIGN ELEMENTS

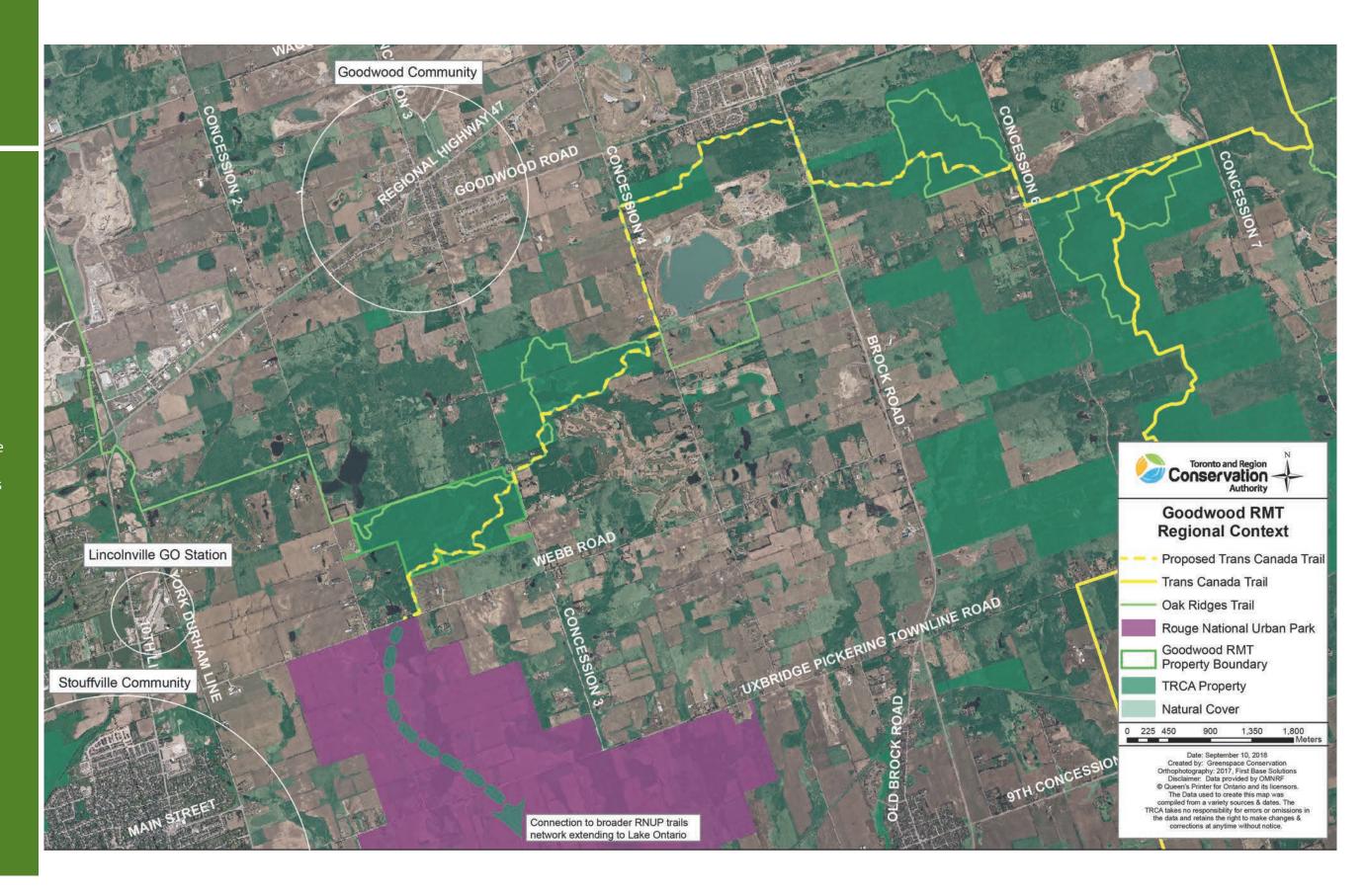




REGIONAL CONTEXT

The Goodwood Resource Management Tract (RMT) property is 125 hectares (ha) in size (309 acres), and is owned entirely by Toronto and Region Conservation Authority (TRCA). The property is bounded by Concession 2 to the west, Concession 3 to the east, Webb Road to the south, and private property to the north. The Goodwood RMT is located on the Oak Ridges Moraine in the Duffins Creek watershed, within the Township of Uxbridge (Regional Municipality of Durham). The Goodwood RMT is located directly to the north of the northernmost tip of Rouge National Urban Park (RNUP).

The Goodwood RMT Trail Plan will guide the development of a trail system that preserves the ecological value of the property while creating a trail gateway to the RNUP through improved regional trail connections and enhancements to visitor experience.



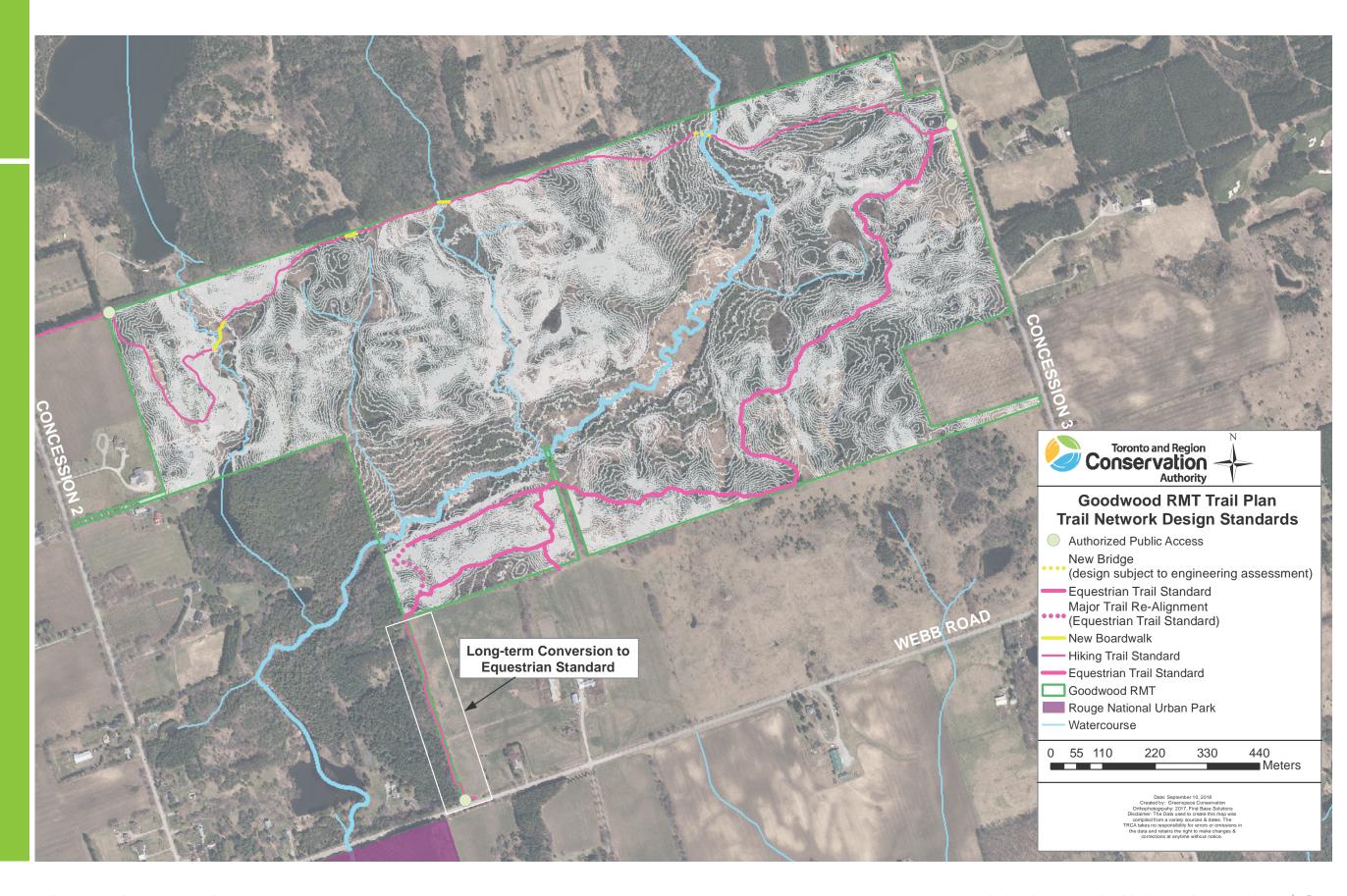
LOCAL CONTEXT

The Goodwood RMT is comprised entirely of natural cover, and is located in an area that has been recognized as having a high conservation value for decades. The site includes extensive plantation forest, mixed deciduous forest, meadow, and wetland features. The West Duffins Creek and a number of headwater tributaries run through the property. The Goodwood RMT exhibits the rolling sloping topography that is typical of the Oak Ridges Moraine. The site contains numerous highly sensitive plant and wildlife species, and contributes a diversity of high quality and sensitive habitats to the ecosystem functions of the surrounding region.

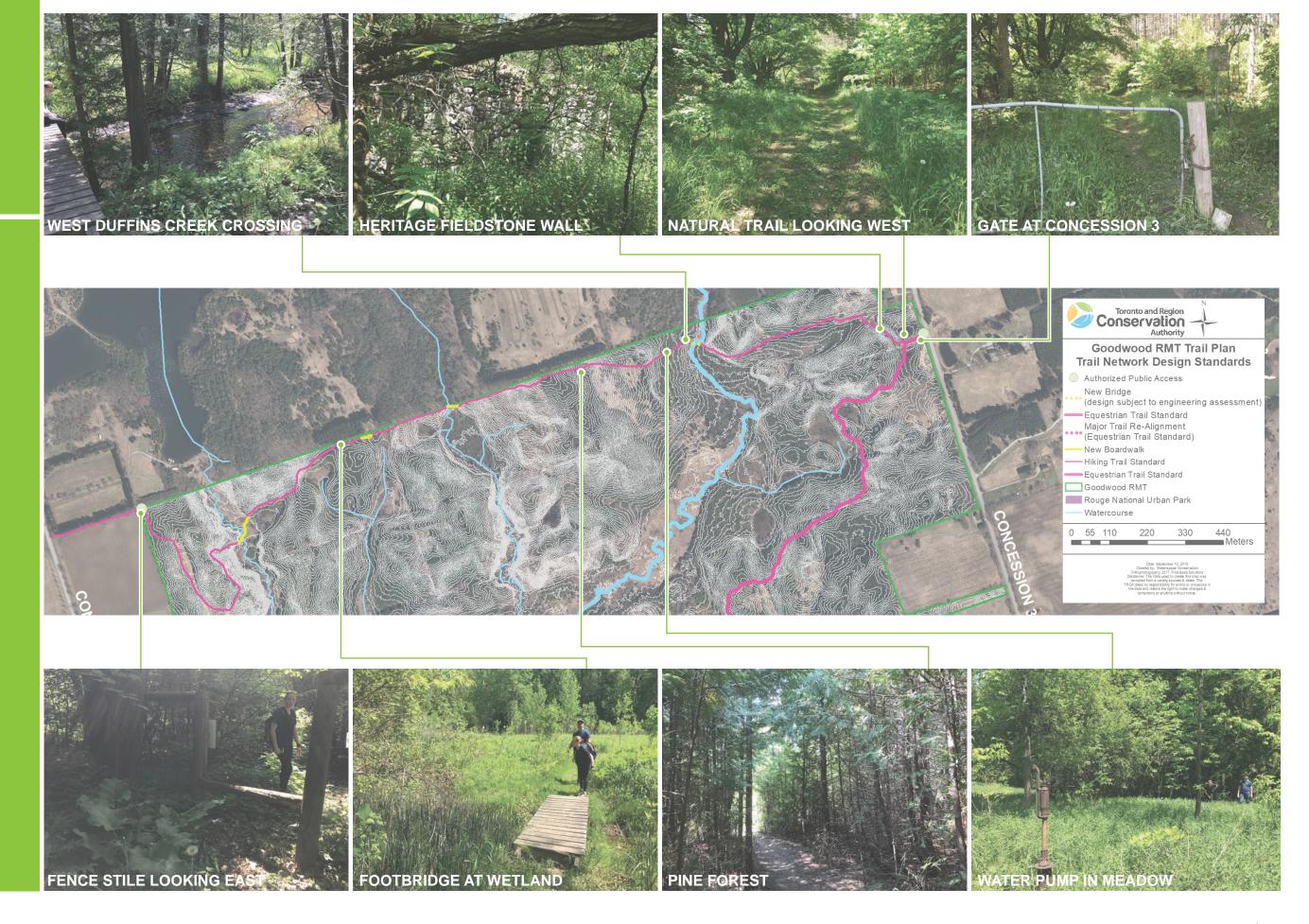
The current authorized trail system within Goodwood is comprised of a section of the Main Oak Ridges Trail and an Oak Ridges Side Trail. Together, these two trails comprise approx. 5.4 kilometers (km) of authorized trail on the property.



TRAIL PLAN



3.1 **HIKING TRAIL EXISTING CONDITIONS**



3.2 **HIKING TRAIL IMPROVEMENT** TYPICAL SECTION

HIKING TRAIL

Tread Width: 0.5 m (1 m Clearing width)

Total Length: 3.52 km

CLEARING 2.5m CLEARING HEIGHT 0.5m TREAD WIDTH NOTE: EXISTING VEGETATION SHOWN CONCEPTUALLY

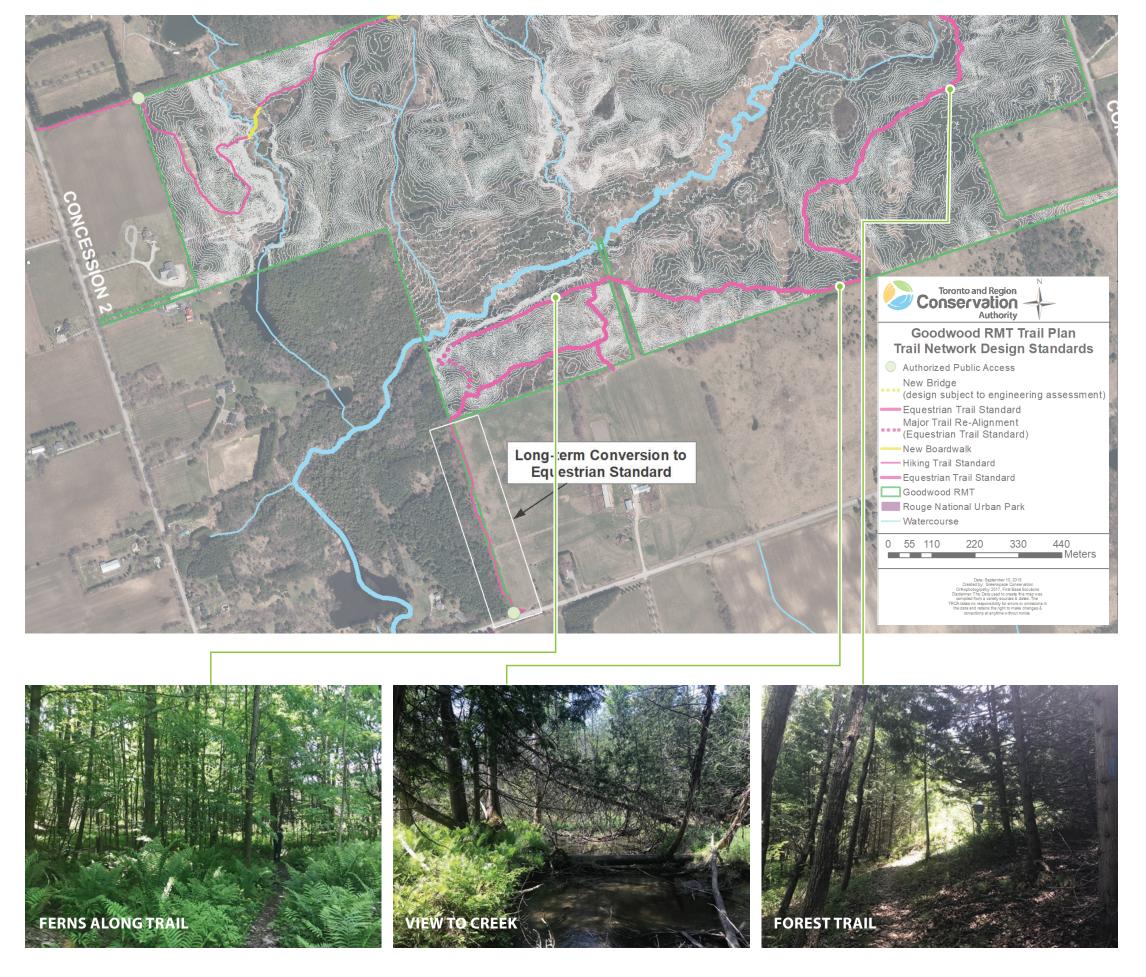
EXISTING NATURAL TRAILS







3.3 **EQUESTRIAN** TRAIL **EXISTING CONDITIONS**



3.4 **EQUESTRIAN TRAIL IMPROVEMENT TYPICAL SECTION**

EQUESTRIAN TRAIL

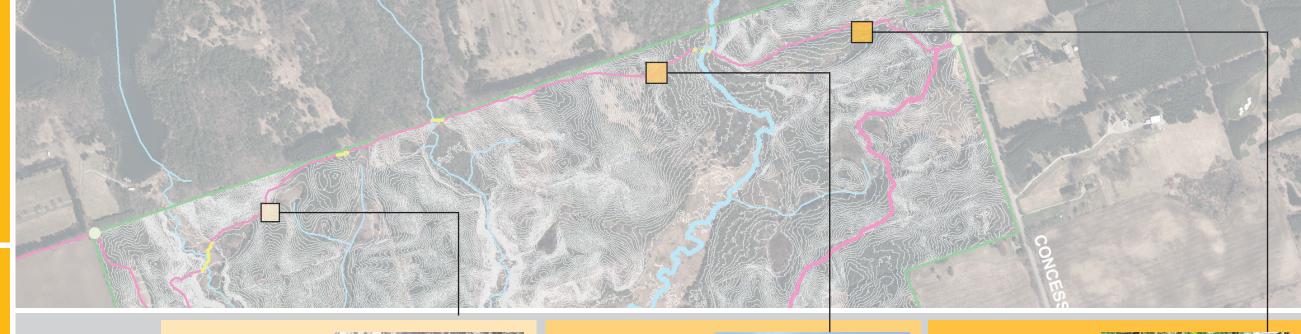
Tread Width: 0.5 m (1.8 m Clearing width)

Total Length: 2.92 km



TRAIL IMPROVEMENT MATERIAL PALETTE

Inspired by the rich natural and cultural background of the Goodwood RMT, the design material palette consists of directional signage and trail



EXISTING TRAIL FEATURES

PINE FOREST



AGED STEEL



HERITAGE FIELDSTONE WALL



MATERIAL INSPIRATIONS



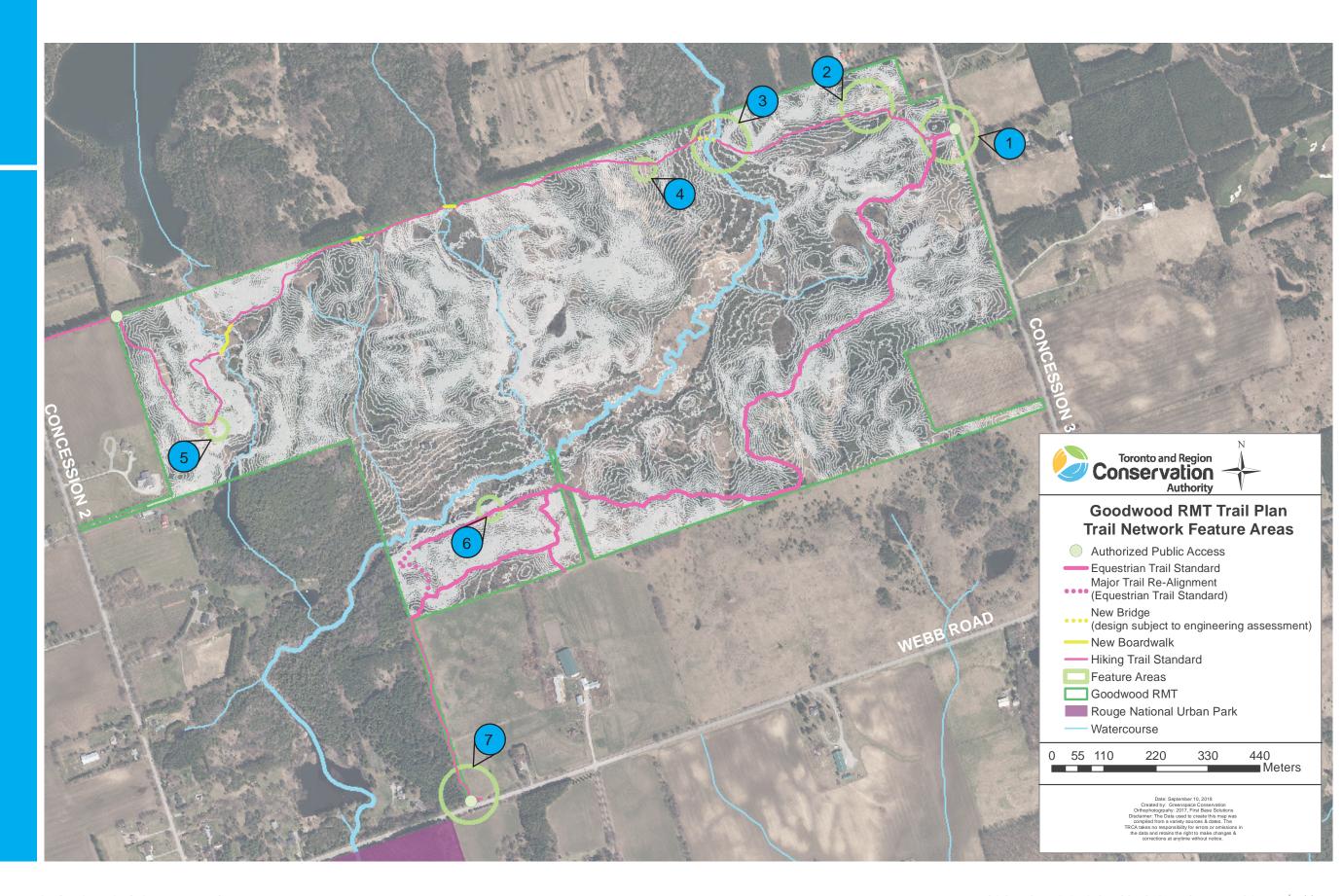






FEATURE AREAS

- 1. MAPLE WAY (Concession 3 Entrance)
- 2. HOMESTEAD
- 3. EAGLE'S REST (West Duffins Creek Lookout)
- 4. WATER PUMP GARDEN
- 5. MORAINE LOOKOUT
- 6. WEST DUFFINS RIDGE LOOKOUT
- 7. THE GREEN DOOR (Webb Road Entrance Area)

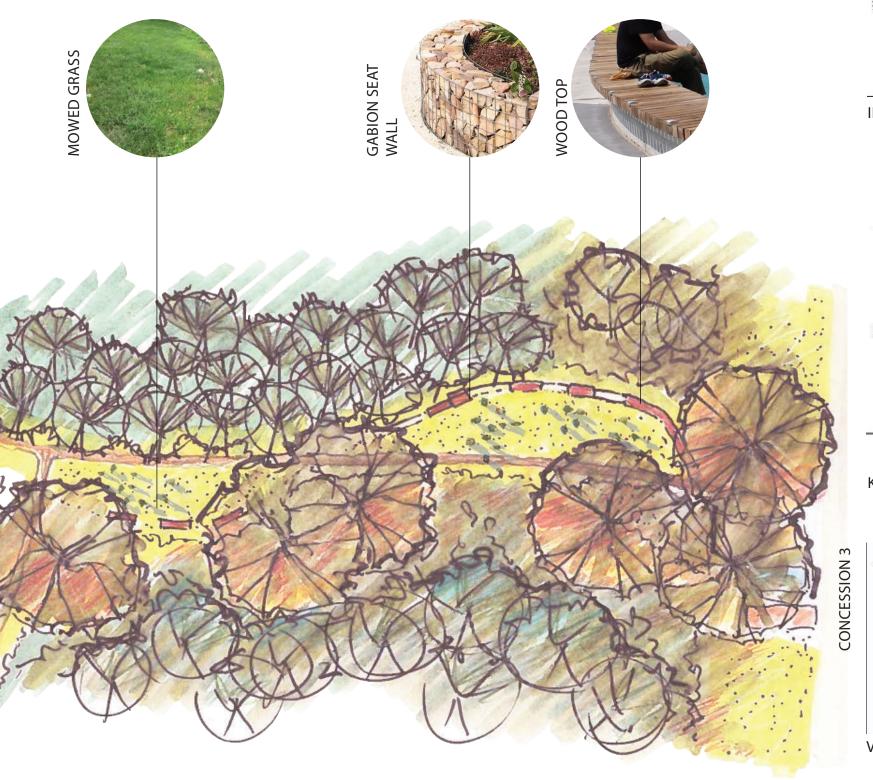


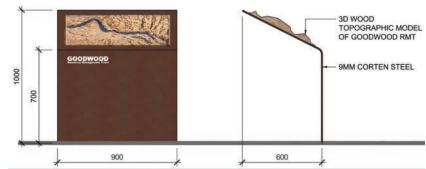
MAPLE WAY

(Concession 3 Entrance)

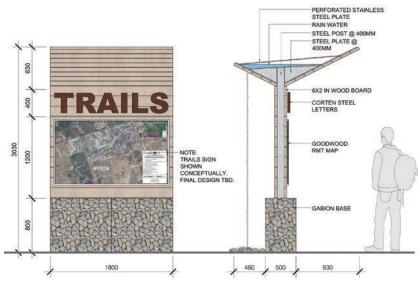




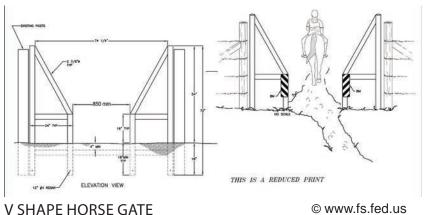




INTERPRETIVE SIGN



KIOSK



V SHAPE HORSE GATE

CONCEPT SKETCH

5.1 MAPLE WAY

(Concession 3 Entrance)



KEY PLAN



GABION SEAT WALL



WOOD TOP

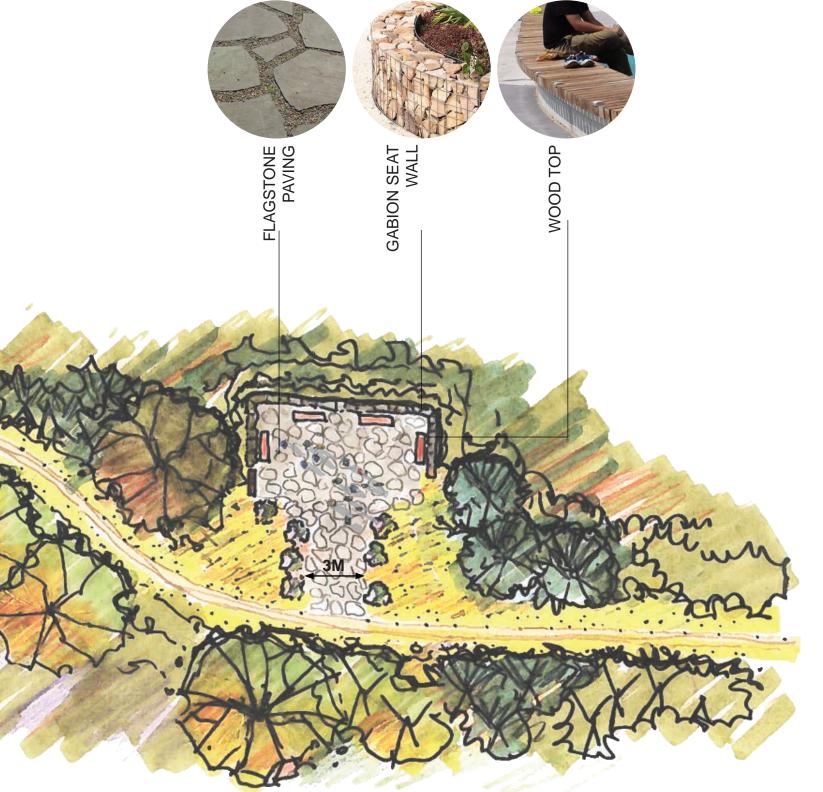




5.2 HOMESTEAD







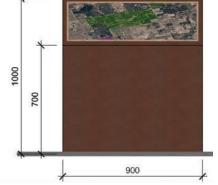
The 'Homestead' area will tell the story of early Uxbridge settlers by revealing the c.1860 stone building foundation, hidden for years in the wild overgrowth just north of the trail. The history of the three 'Yeomen' who cultivated small areas of land for their families, their farming practices, and the importance of settling close to the West Duffins Creek, will be shared with interpretive signage installed in this reclaimed space. Designed as an outdoor room, with random flagstone paving (inspired by the fieldstone 'dry laid' stone wall), this location will become an educational destination for groups and people of all ages. Benches will provide a place for rest and an opportunity to sit together to talk, and heritage shrub species will be planted that signify a 'settler presence' in the landscape.



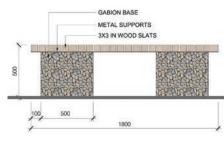
FIELDSTONE WALL



INTERPRETIVE SIGN



INTERPRETIVE SIGN



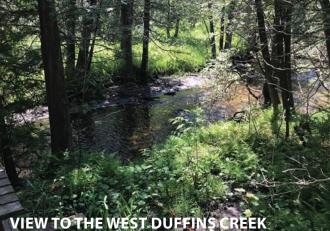
GABION BENCH

CONCEPT SKETCH

5.3 **EAGLE'S REST**

(West Duffins Creek Lookout)

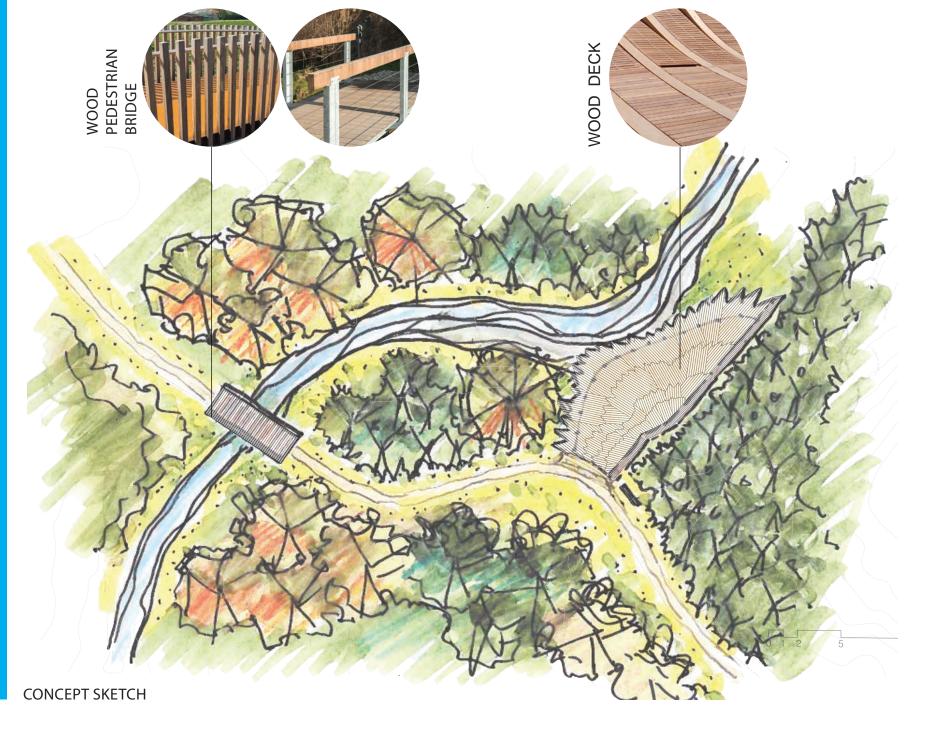










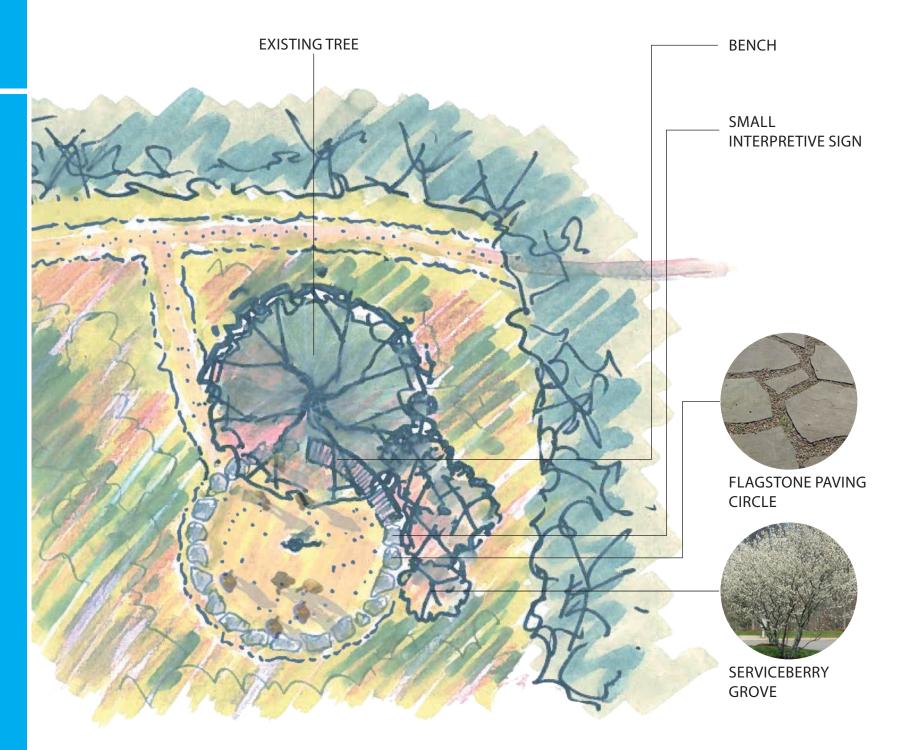


The history of early Ontario relating to Indigenous First Nations peoples includes the trading of commodities, formal agreements, and shared and evolving understandings. This area has been designed with a wood deck lookout over the West **Duffins Creek, inspired by the silhouette** of an eagle wing. Revered and sacred to most North American Indigenous peoples, the eagle feather is a symbol of deep respect and honour. This place is a gesture to honour the Indigenous communities that lived in and continue to live in the Uxbridge area. The conceptual design for this special place was inspired by an impromptu water ceremony performed by an Indigenous elder at this location, and will be further refined with input from First Nations through future engagement. The space will allow for communities to gather for ceremony, and will include seating for resting and teachings, as well as interpretive signage to share the important history of the Indigenous peoples of the local area.

WATER PUMP GARDEN



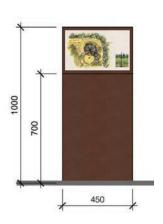
EXISTING HERITAGE WATER PUMP



CONCEPT SKETCH



The Water Pump Garden is a rest spot beside a heritage tree, and is an opportunity for an interpretive focal point. The design includes a circular space formed by a frame of random flagstone paving and a curved bench (similar to that used in the Homestead), and will remind visitors of the vital importance of clean water to early settler life.



SMALL INTERPRETIVE SIGN

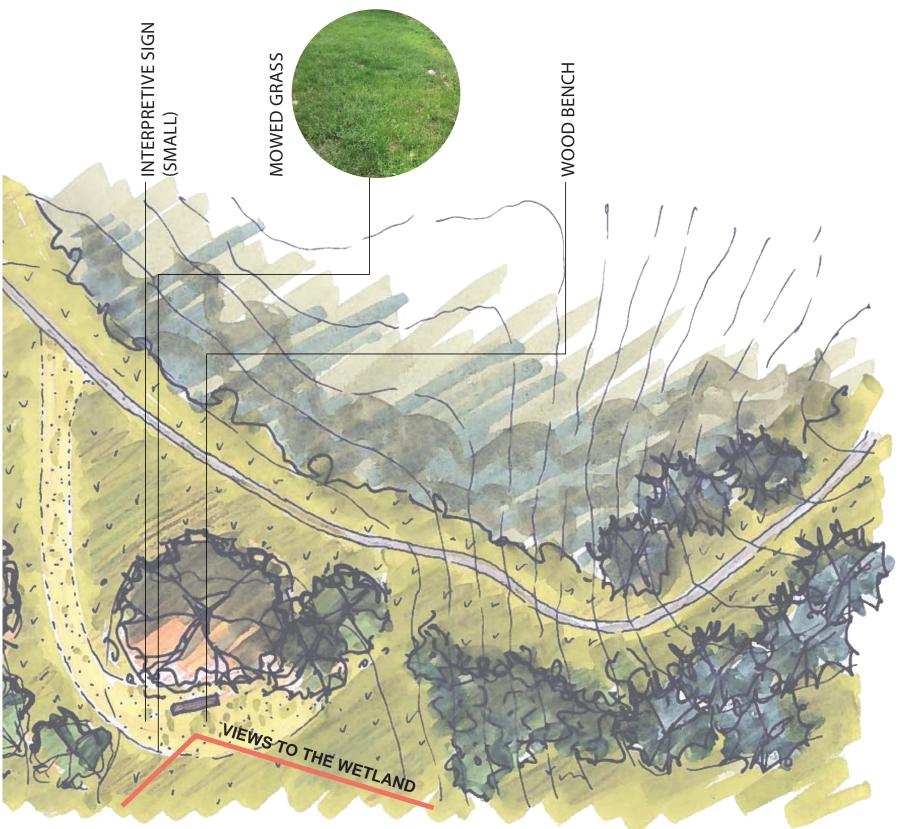


BENCH OPTION 1: GABION BENCH



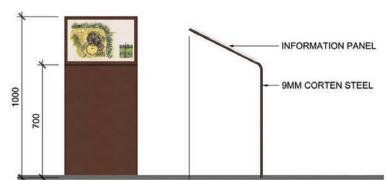
BENCH OPTION 2: WOOD BENCH

MORAINE LOOKOUT





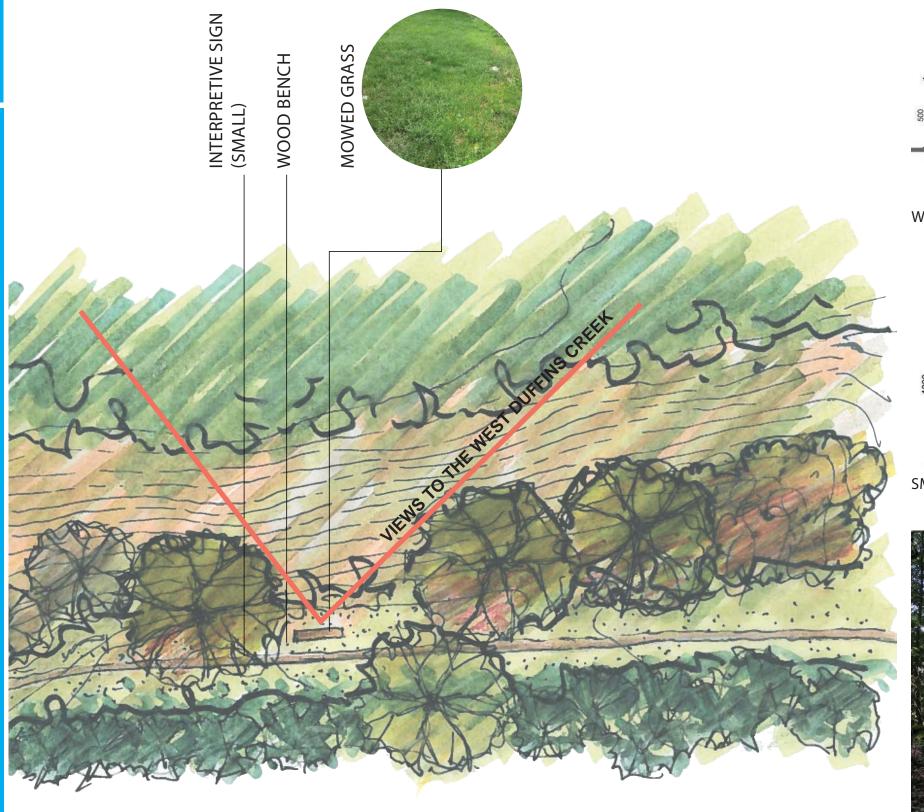
WOOD BENCH



SMALL INTERPRETIVE SIGN



WEST DUFFINS RIDGE LOOKOUT





WOOD BENCH



SMALL INTERPRETIVE SIGN



THE GREEN DOOR

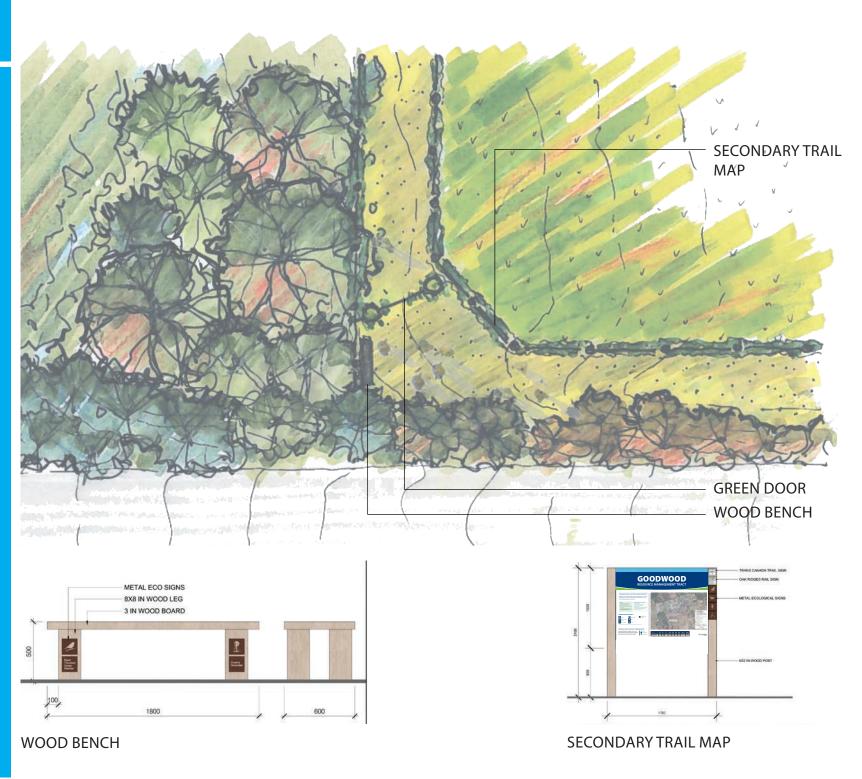
(Webb Road Entrance Area)



FUTURE PEDESTRIAN CROSSING

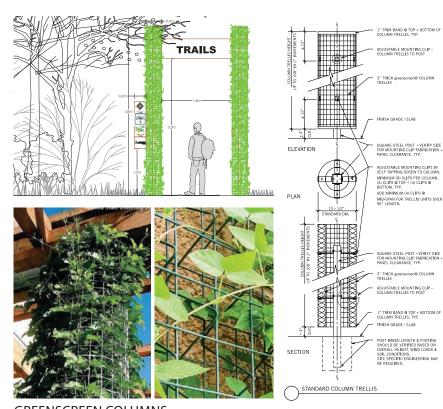


VIEW TO WEST





PROPOSED GREEN DOOR

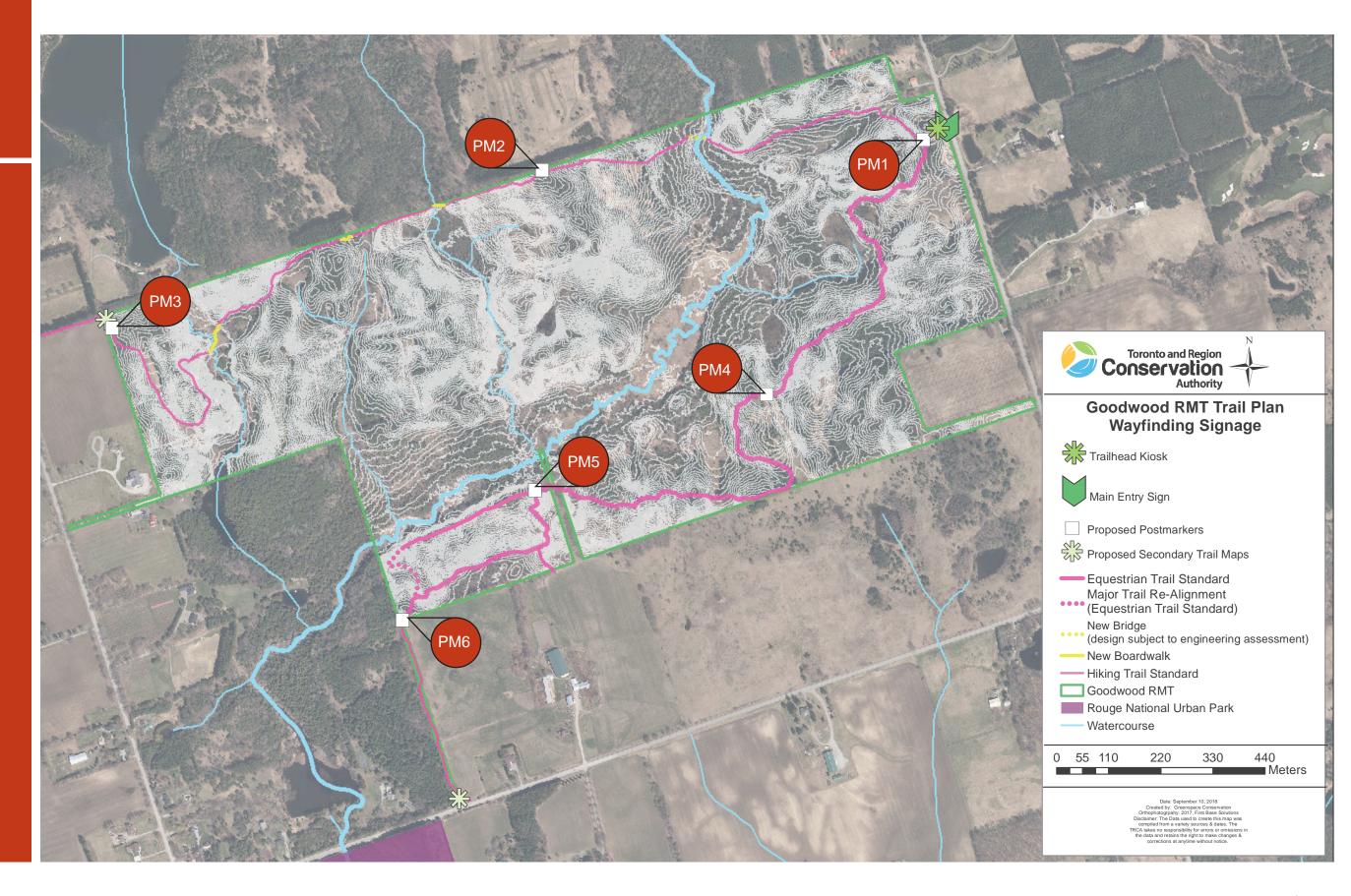


GREENSCREEN COLUMNS

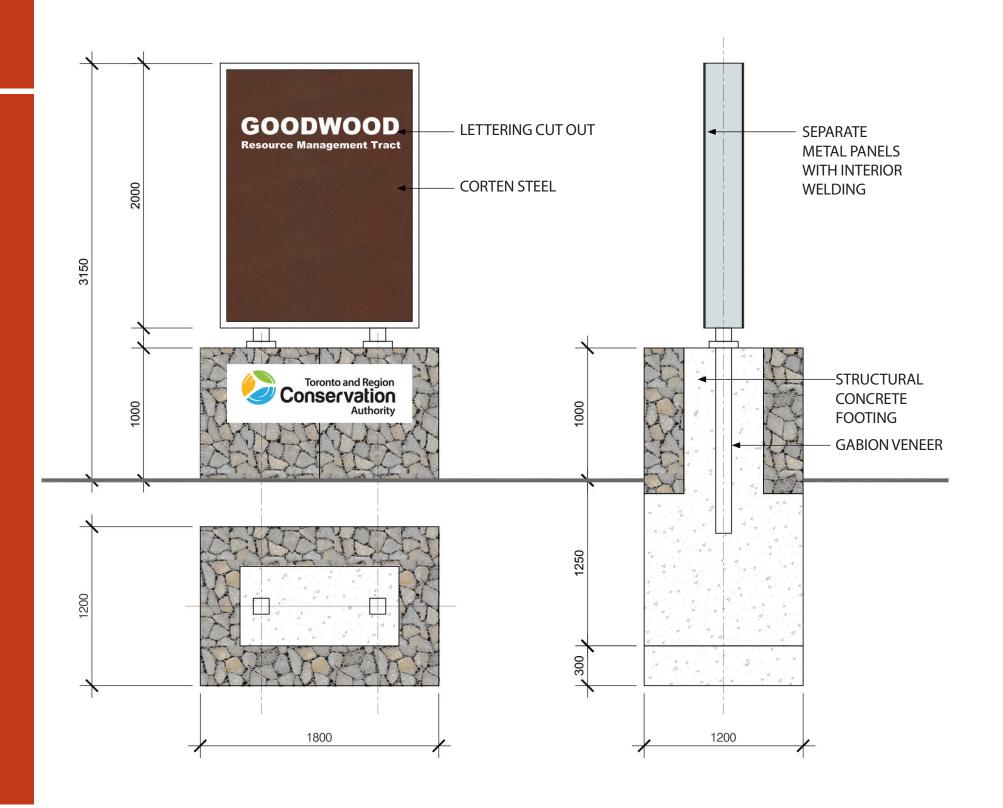
© www.greenscreen.com

WAYFINDING

SIGNAGE



MAIN ENTRY SIGN





NARROW GABION WALL CONSTRUCTION

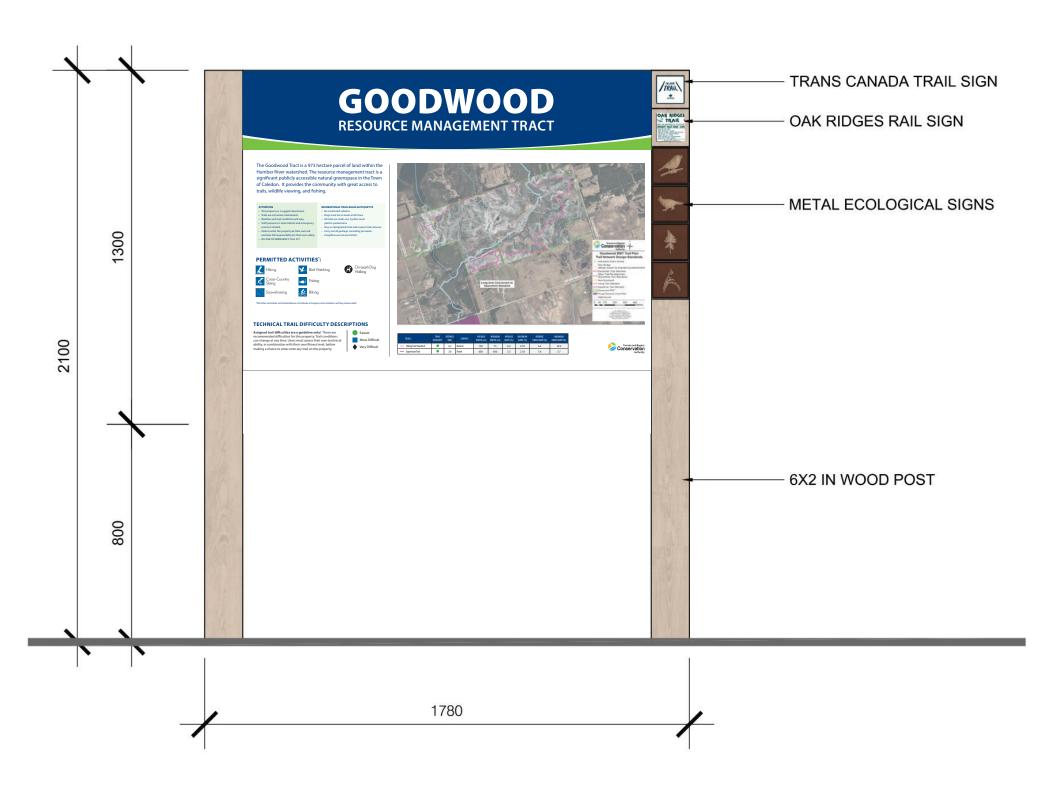


GABION WALL



CURRENT TRCA PROPERTY NAME SIGN

SECONDARY TRAILHEAD MAP



PRIMARY TRAILHEAD KIOSK

OPTION 1: PROPOSED KIOSK

The proposed Kiosk consists of a gabion base, wood paneling, and corten steel letters. It also can perform as a rain water harvesting device to collect rain water

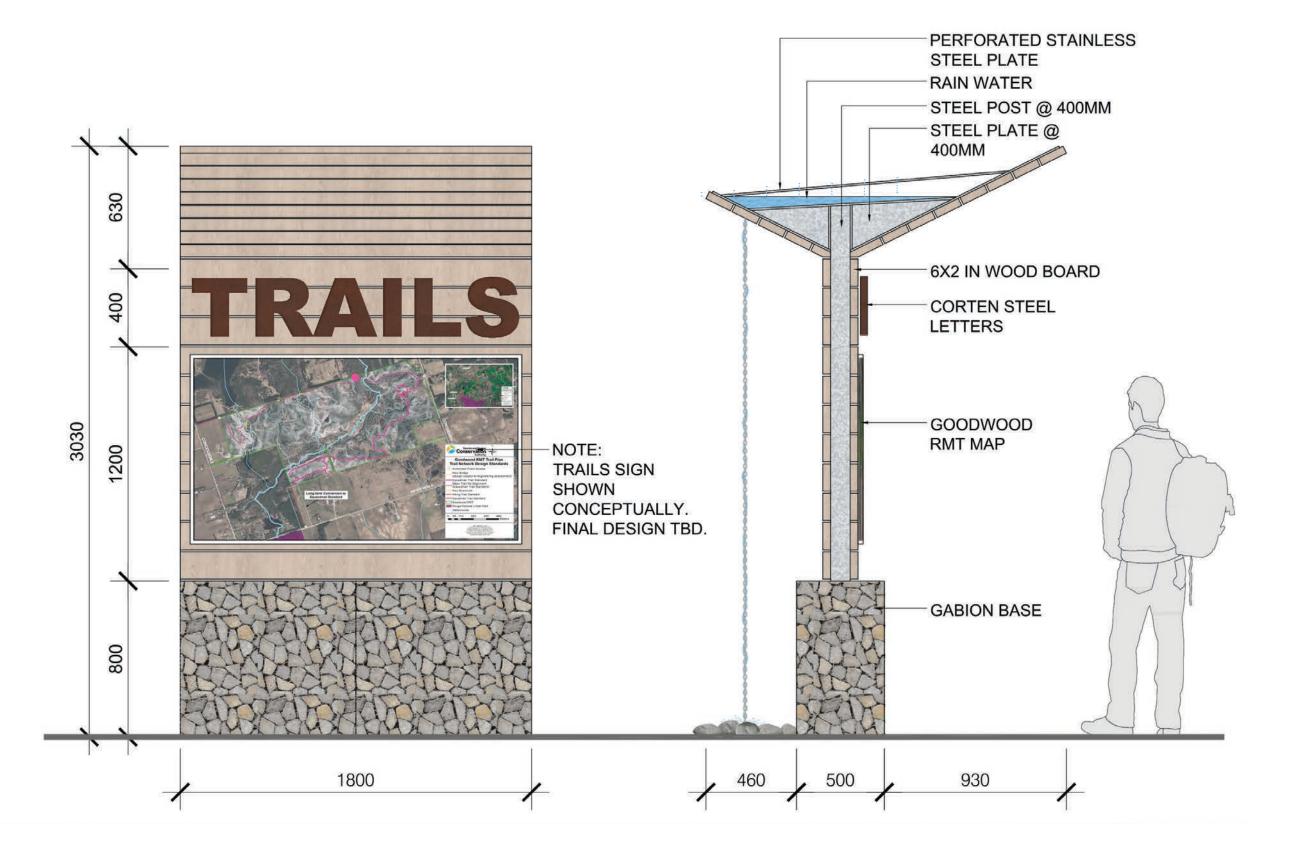


CORTEN STEEL LETTER ON **STONE WALL**

© Fiona Slade



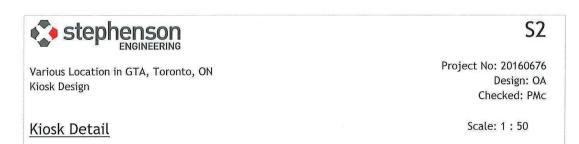
FIELDSTONE GABION WALL © Karen Erikson



PRIMARY TRAILHEAD KIOSK

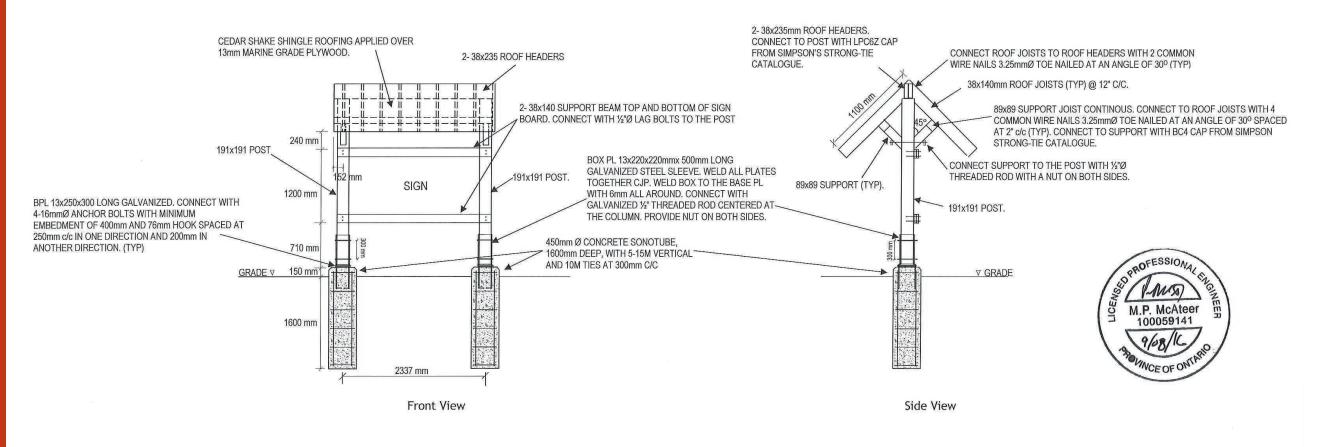
OPTION 2:

CURRENT TRCA KIOSK



REV	ISSUED FOR	DATE
2	Issue for Construction	08/09/2016
1	Issue for Review	28/06/2016

- READ THIS DRAWING IN CONJUNCTION WITH GENERAL NOTES (S1)
- 2. EXCEPT AS INDICATED ON THE DRAWING, IT IS ASSUMED THAT NO OTHER STRUCTURE OR SUDDEN CHANGE IN GRADE OCCUR WITHIN 4500mm OF THIS SIGN STRUCTURE.
- CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL
- THE EXISTING SUB-SOIL IS EXPECTED TO BE NATURAL UNDISTURBED SILTY SAND TILL. IT IS ASSUMED THAT THE SOIL HAS FOLLOWING PROPERTIES γ = MIN 18 kN/m³ and Kp= MIN 2.4.
- IT IS CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL MEASUREMENTS AND TO CHECK FOR ASSUMPTIONS STATED IN NOTES 2 TO 4 ABOVE ARE CORRECT. CONTRACTOR TO INFORM THE ENGINEER PRIOR TO INSTALLATION, SO THAT THE DESIGN ASSUMPTIONS CAN BE CHECKED AND REVISED TO SUIT SITE CONDITIONS.
- 6. ROOF JOISTS COULD RANGE FROM 4/12 TO 12/12 ANGLE.
- 7. ALL TIMBER POSTS TO BE OF SPF #2 GRADE PRESSURE TREATED.



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POST MARKER



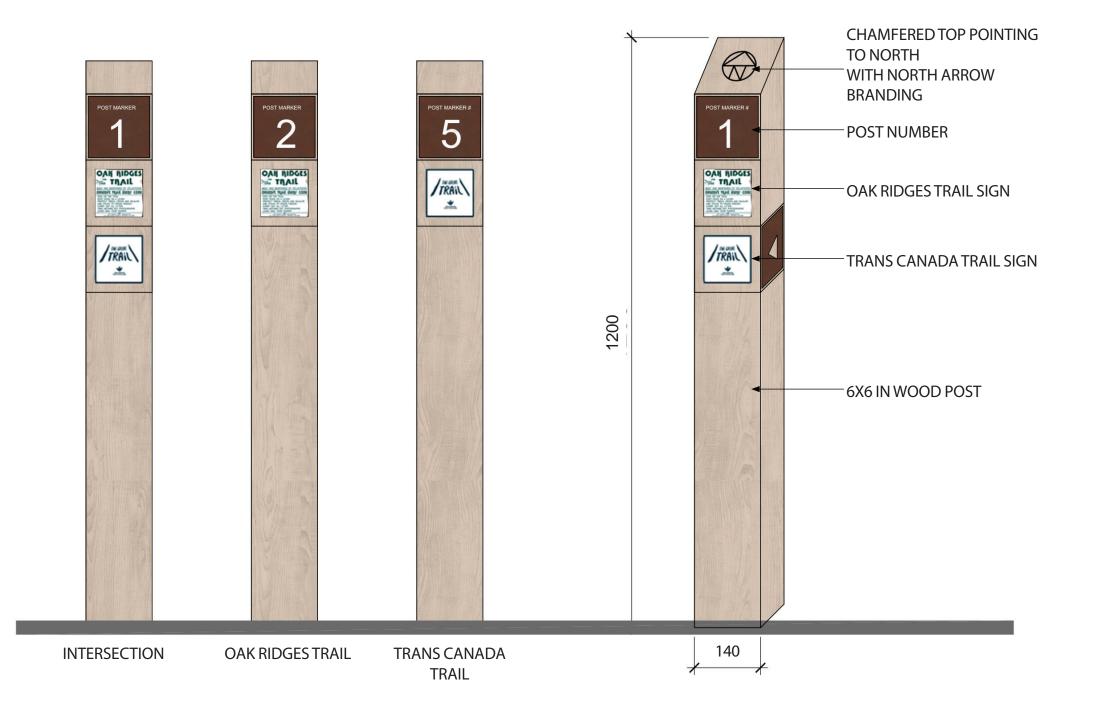
TRCA CURRENT POST MARKER



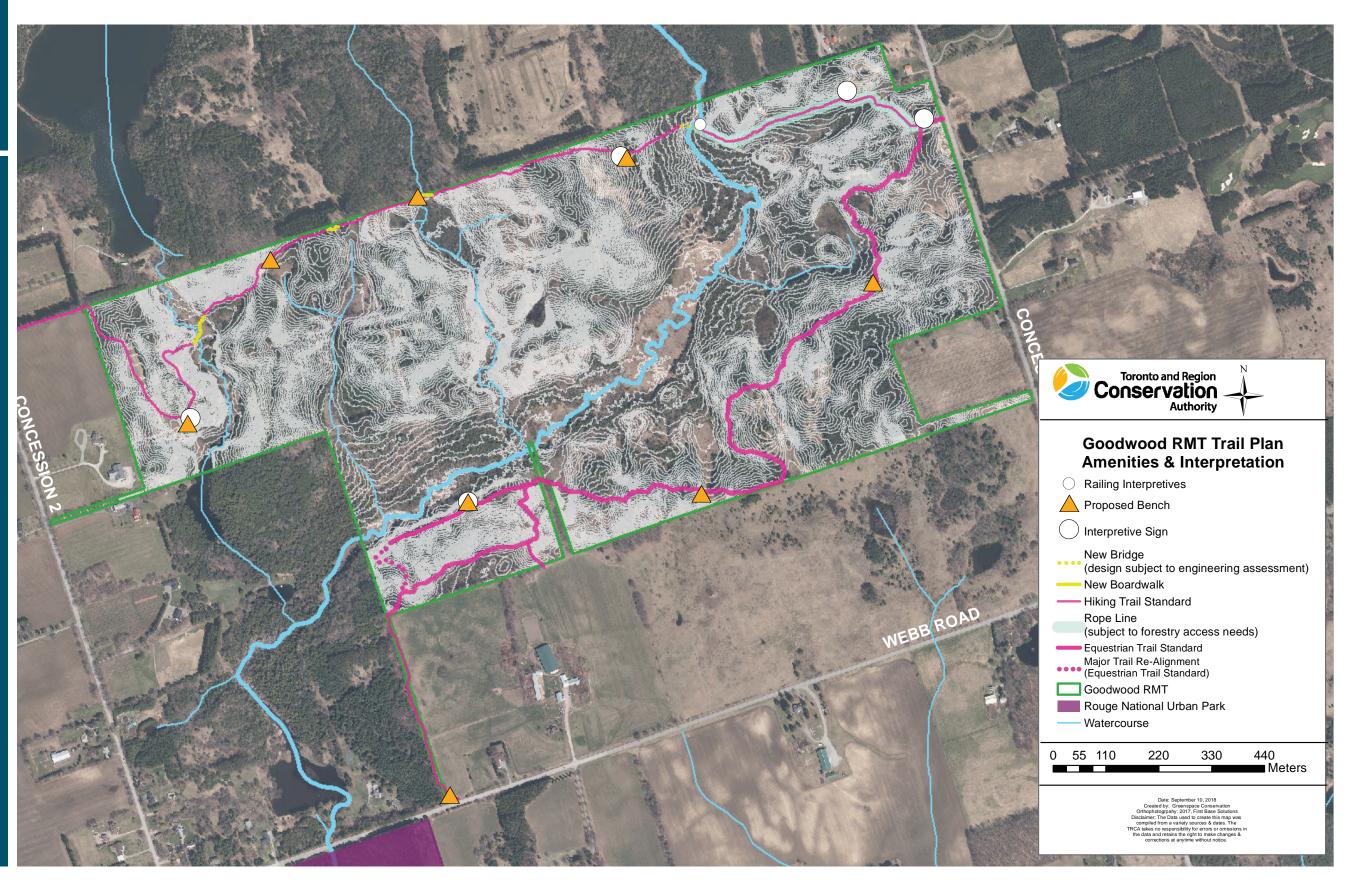


POST MARKER COLLEGE OF CHARLESTON, SC, US © Ayers Saint Gross

The post maker is developed based on the current TRCA wood post marker. Laser cut corten steel plates are added to indicate post number. Trans Canada Trail and ORT signage is incorporated as well.



AMENITIES + INTERPRETATION



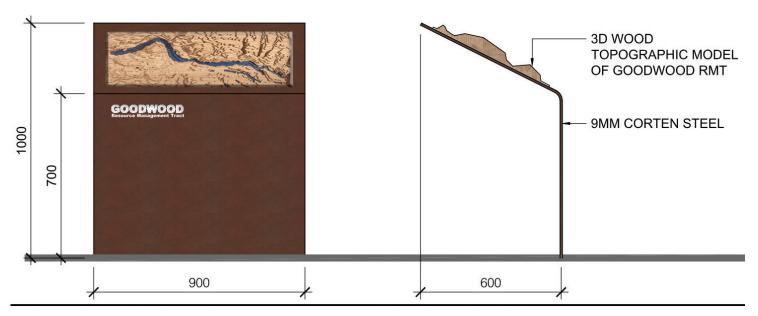
7.1 **INTERPRETIVE SIGN**



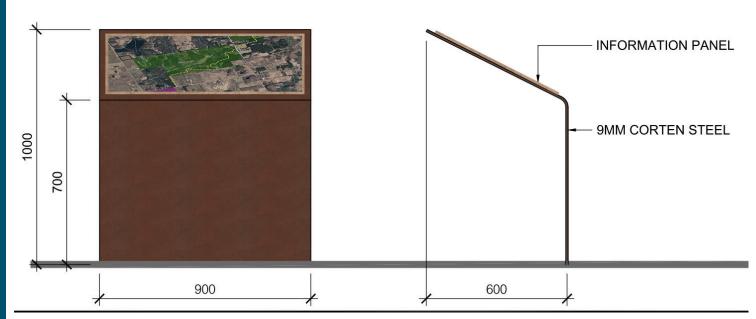
LONGWOOD GARDENS MEADOW, PENNSYLVANIA © Gecko Group



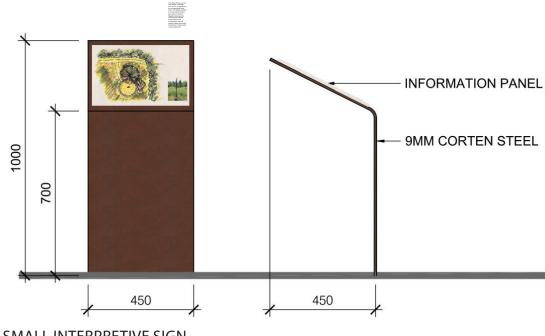
SMALL CORTEN STEEL **INTERPRETIVE SIGN** © Sofia Weller



INTERPRETIVE SIGN WITH 3D MODEL/RELIEF MODEL AT THE ENTRANCE OF **CONCESSION 3**







SMALL INTERPRETIVE SIGN

7.2 ARTISTIC RAILING INTERPRETIVE SIGNS

The Township of Uxbridge has a strong art community. Local art can be incorporated into interpretive elements.













THE MEADOW GARDEN AT LONGWOOD GARDENS, KENNETT SQUARE, PENNSYLVANIA

7.3 BENCH

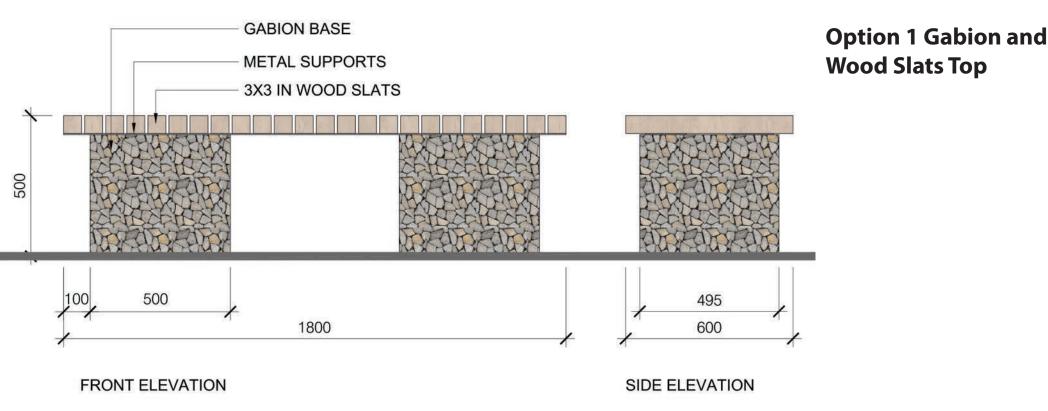


TRCA CURRENT BENCH

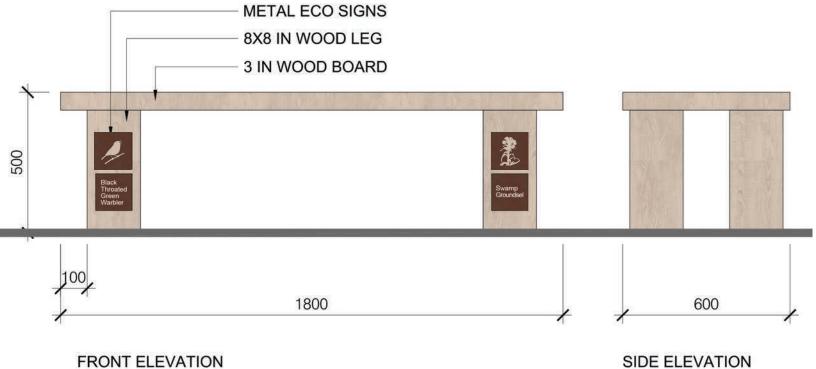
The Goodwood RMT is an ecological sanctuary. The species cut out from corten steel plates were selected by TRCA biologists. The plates are mounted on wood benches at certain areas. The species chosen intend to reflect the range of biodiversity and sensitive species present onsite.



METAL SIGNS AT THE LONGWOOD GARDENS © Gecko Group



Wood Slats Top



Option 2 Wood Bench

Metal Ecological Highlight Species Signs



Beech Fern







Black-throated Ruffed Grouse Green Warbler

Ovenbird

Veery





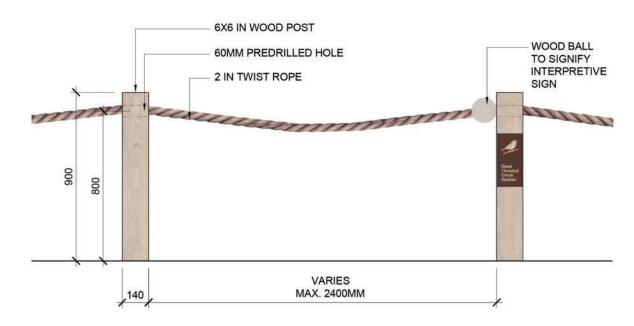
Sharp Lobed

Hepatica

Thin-leaved CottonSwamp Groundsel Grass

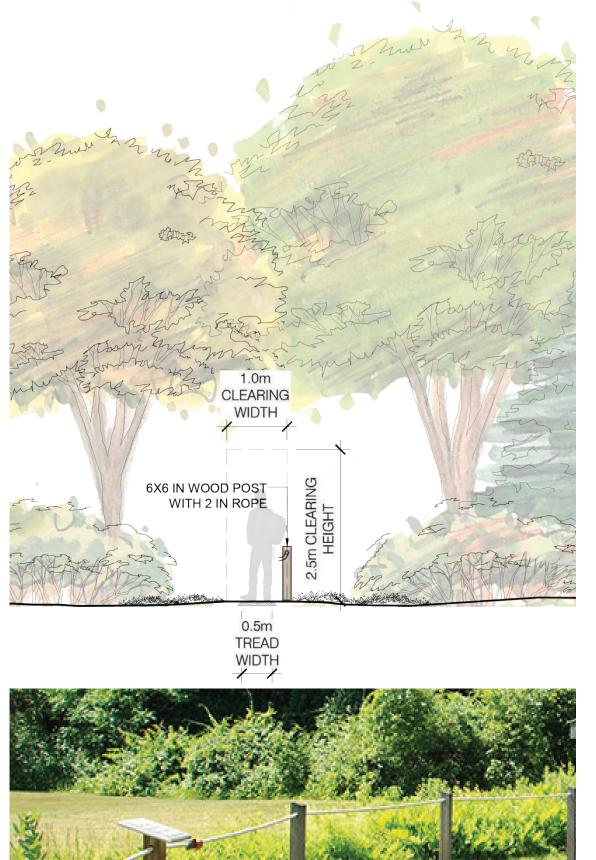
ROPE LINE

A rope line feature along a section of the hiking trail will improve accessibility for persons with visual disabilities. The round bead is used to indicate interpretive stops.

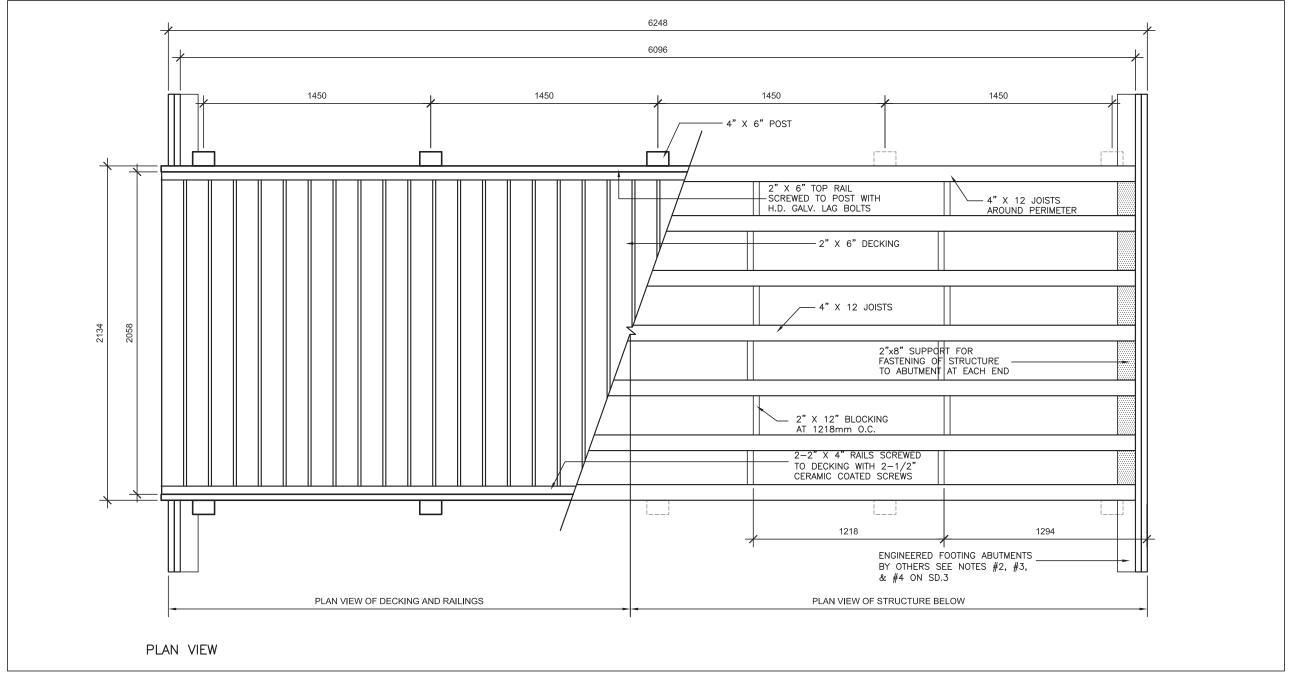








BRIDGE DETAIL





100-401 Wellington St. W, Toronto, ON M5V 1E7

Tel. 416.598.6695 Fax. 416.5967892 www.stantec.com Legend

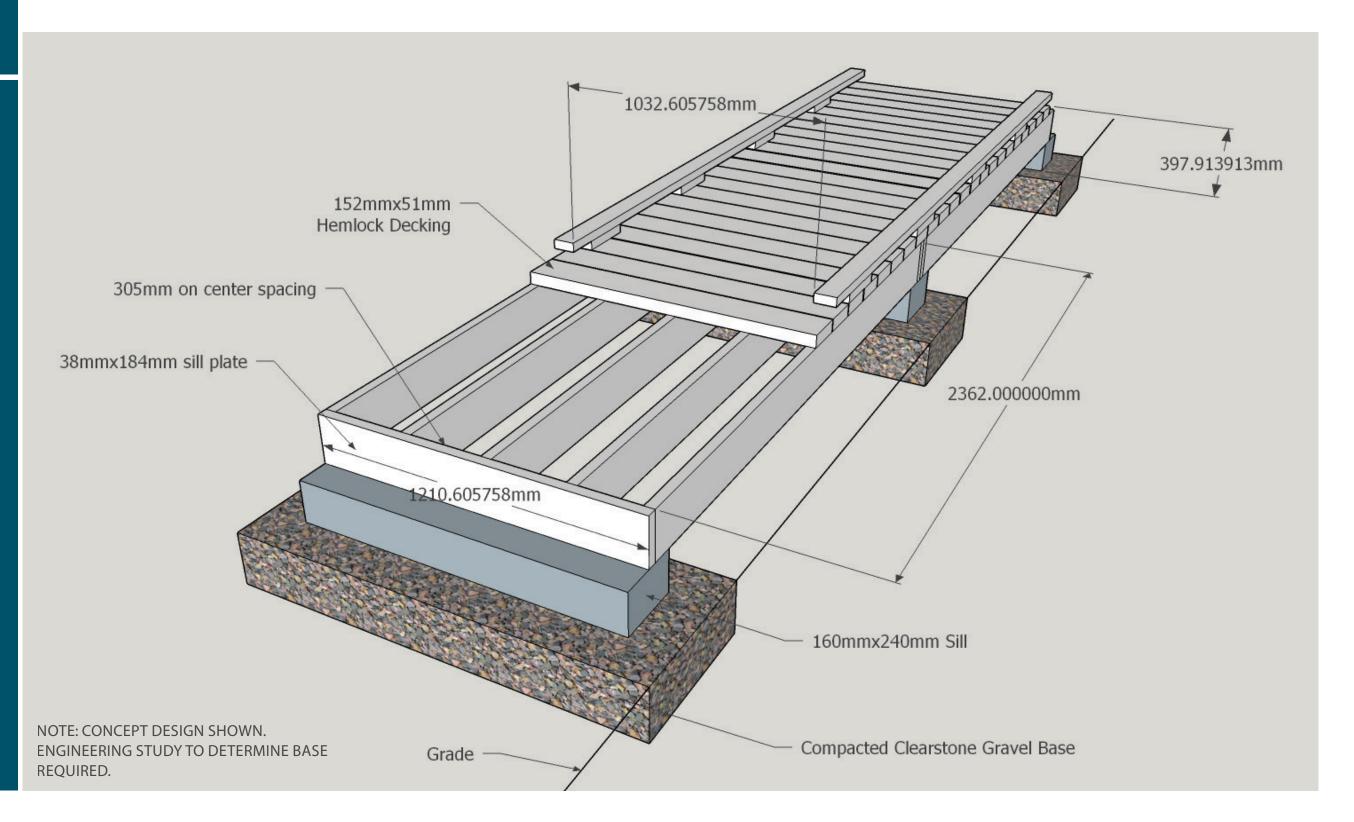
The affixed engineer's seal is responsible for the design of the structural wood members only.

W. R. 10UZ0 100055578
160622456
Nov 29, 2016

NOTE: THIS DRAWING IS FOR REFERENCE ONLY.

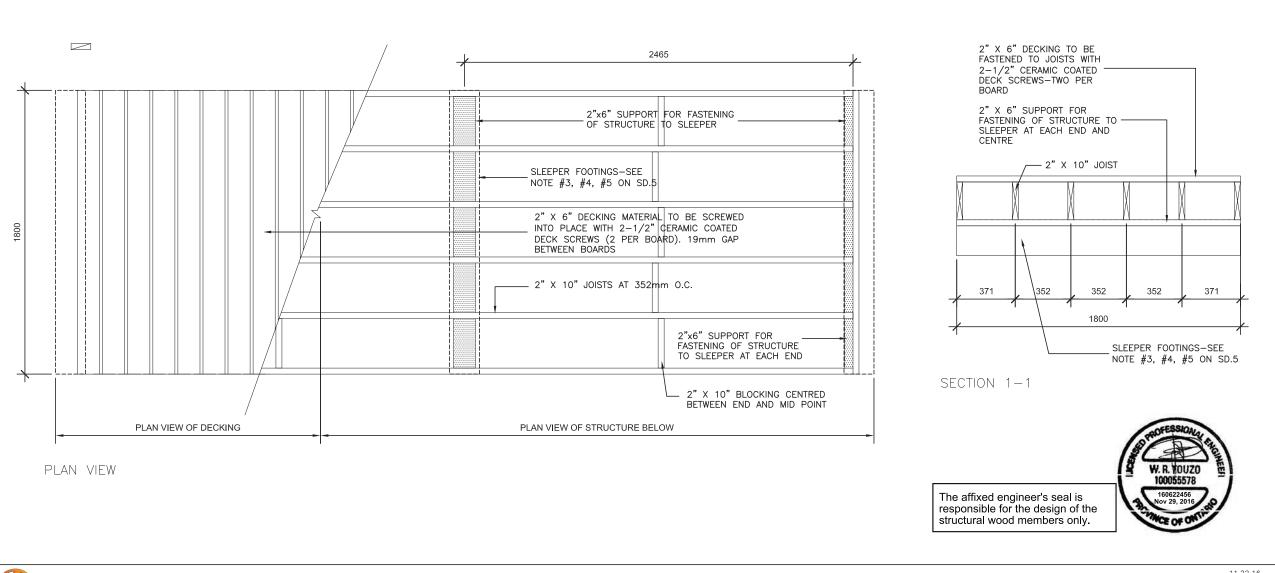
7.6 **BOARDWALK DETAIL**

OPTION 1: 1.2 M BOARDWALK



7.6 **BOARDWALK DETAIL**

OPTION 2: 1.8 M BOARDWALK



Stantec

100-401 Wellington St. W, Toronto, ON M5V 1E7

Tel. 416.598.6695 Fax. 416.5967892 www.stantec.com

Legend

NOTE: THIS DRAWING IS FOR REFERENCE ONLY.

UXBRIDGE TRAILS

EWEN TRAIL BOARDWALK PLAN AND SECTION

1:20

Goodwood RMT Trail Plan Project

Appendix 2: Goodwood RMT Trail Plan Implementation Budget

	Γ	Phase 1			Phase 1 Total Phase 2				Phase 2 Totals		Phase 3		Phase 3 Totals
item	Total Cost	Year 1	Year 2	Year 3		Year 4	Year 5	Year 6		Year 7	Year 8	Year 9	
Additional Studies & Land Acquisitions													
Bridge and Boardwalk Engineering Studies	\$ 52,020	\$ 52,020 \$	- \$	_	\$ 52,020	\$ - \$	- \$	_	\$ - \$	- \$	- \$	-	\$ -
Structural Review of Signage Details	\$ 10,404	\$ 10,404 \$	- \$		\$ 10,404	\$ - \$	- \$		\$ - \$	- \$	- \$		\$ -
Shop Drawings of Wayfinding and Amenities Details					· ·								φ -
1 , , , , , , , , , , , , , , , , , , ,	\$ 8,323	\$ 8,323 \$	- \$	-	-,	\$ - \$	- \$		- \$		- \$	-	-
Land Acquisitions	\$ 15,606	\$ 15,606 \$	- \$		\$ 15,606	\$ - \$	- \$		\$ - \$	- \$		-	\$ -
Total Additional Studies & Land Acquisitions	\$ 86,353	\$ 86,353 \$	- \$	-	\$ 86,353	\$ - \$	- \$	-	\$ - \$	- \$	- \$	-	\$ -
General Trail Improvements													
Trail Work to Meet Designated Standards (Hiking or Equestrian),									\$ -				\$ -
Culvert Installation, Minor Re-routes	\$ 75,106		- \$		\$ 75,106		- \$		\$	- \$	- \$	-	
Unauthorized Trail Closures Major Trail Re-Alignment	\$ 10,378 \$ 36,622	\$ 10,378 \$ \$ 36,622 \$	- \$ - \$	-	\$ 10,378 \$ 36,622	\$ - \$ \$ - \$	- \$ - \$		- \$	- \$ - \$	- \$ - \$	-	-
Boardwalks (83 m)	\$ 30,022	\$ 30,022 \$ \$ - \$	- \$ 117,210 \$	-	\$ 117,210		- \$ - \$		\$ - \$ \$ - \$	- \$ - \$	- \$ - \$	- -	\$ - \$ -
Bridge Construction (20 m)	\$ 185,711	\$ - \$	185,711 \$	- -	\$ 185,711	φ - ψ \$	- \$		\$ - \$	- \$	- \$	-	\$ -
Total Trail Improvements	\$ 425,028	\$ 122,107 \$	302,922 \$		\$ 425,028	\$ - \$	- \$		\$ - \$	- \$	- \$	-	\$ -
System-Wide Wayfinding	120,020	Ψ,	00L,02L V		4120,020	*			*	•	*		•
New Postmarkers (\$100/each)	\$ 649	\$ - \$	- \$	649	\$ 649	\$ - \$	- \$		\$ - \$	- \$	- \$	-	\$ -
New Secondary Trailhead Map (\$2,275/each)	\$ 2,463	\$ - \$	- \$			\$ - \$	- \$		\$ - \$	- \$	- \$	-	\$ -
Directional Trail Sign (U-Bar) - Concession 3 Trail Crossing (\$500/each)	\$ 1,082	\$ - \$	- \$	1,082		\$ - \$	- \$		\$ - \$	- \$	- \$	-	\$ -
Total System-Wide Wayfinding	\$ 4,194	р - ф	- p	4,194					ψ ψ	- \$	- \$		ф - •
System-Wide Amenities	4,194		•	4,134	Ψ,154	\$ - \$	- \$	-	- \$	- 0	- 3	-	•
New Wood Bench (\$600/each)	\$ 0.500	¢ *	- \$	0.500	¢ 2.500	s - s	- \$		¢ .	- \$	6		¢
Ecological Highlight Species for Wood Benches	\$ 2,598 \$ 1,434	\$ - \$ \$ - \$	- \$	2,598	\$ 2,598 \$ -	• - • • - •	- \$ - \$		- \$ \$ - \$	- \$ - \$	- \$ 1,434 \$	-	\$ - \$ 1,43 ²
Ecological Highlight Species for Secondary Entry Sign	\$ 956	ν - ν \$ - \$	- \$	- -	\$ -	φ - φ \$ - \$	- \$ - \$		\$ - \$	- \$	956 \$	-	\$ 956
Total System-Wide Amenities	\$ 4,988	\$ - \$	- \$	2,598	· ·	• • • • • • • • • • • • • • • • • • •	- \$		\$ - \$	- \$ - \$	2,390 \$		\$ 2,390
Concession 3 Entrance (Maple Way)	-,500				2,000		-		· · · · · · · · · · · · · · · · · · ·		2,000		
Removal of Existing Gate and Posts	\$ 1,082	\$ - \$	- \$	1,082	\$ 1,082	\$ - \$	- \$		\$ - \$	- \$	- \$	-	\$ -
Clearing/Excavation (\$12/sqm)	\$ 1,299	\$ - \$	- \$				- \$		- \$	- \$	- \$	-	\$ -
Grading (\$10/sqm)	\$ 1,082	\$ - \$	- \$	1,082			- \$		\$ - \$	- \$	- \$	-	\$ -
Tree Removal (\$20/each)	\$ 2,165	\$ - \$	- \$	2,165			- \$	-	\$ - \$	- \$	- \$	-	\$ -
Seeding (\$20/sqm)	\$ 65	\$ - \$	- \$	65	\$ 65	\$ - \$	- \$	-	\$ - \$	- \$	- \$	-	\$ -
Main Entry Sign	\$ 12,989	\$ - \$	- \$	12,989	\$ 12,989	\$ - \$	- \$	-	\$ - \$	- \$	- \$	-	\$ -
Primary Trailhead Kiosk	\$ 21,649	\$ - \$	- \$	21,649		\$ - \$	- \$	-	\$ - \$	- \$	- \$	-	\$ -
Entry Gate (Standard Metal)	\$ 1,082	\$ - \$	- \$	1,082		\$ - \$	- \$	-	\$ - \$	- \$	- \$	-	\$ -
V' Horse Gate	\$ 2,165	\$ - \$	- \$	2,165	\$ 2,165		- \$		\$ - \$	- \$	- \$	-	\$ -
Interpretive Sign - Topographic Model	\$ 8,833	\$ - \$	- \$	-	\$ -	\$ 8,833 \$	- \$		\$ 8,833 \$		- \$	-	\$ -
Gabion Retaining Wall	\$ 7,949	\$ - \$	- \$	-	\$ -	\$ 7,949 \$	- \$		\$ 7,949 \$	- \$	- \$	-	-
Gabion Seat Top	\$ 14,132	\$ - \$	- \$	-	\$ -	\$ 14,132 \$	- \$		\$ 14,132 \$	- \$	- \$	-	\$ -
Total Concession 3 Entrance	\$ 74,493	\$ - \$	- \$	43,579	\$ 43,579	\$ 30,914 \$	- \$	-	\$ 30,914 \$	- \$	- \$	-	\$ -
Homestead	0.000	A				<u> </u>		0.000			•		•
Clearing/Excavation (\$12/sqm)	\$ 2,068	\$ - \$	- \$		\$ -	\$ - \$	- \$,			'		\$ -
Grading (\$10/sqm) Gabion Benches	\$ 1,723 \$ 11,487	\$ - \$ \$ - \$	- \$ - \$		\$ - : \$ -	\$ - \$	- \$ - \$,			- \$ - \$	-	\$ -
Interpretive Sign (1.2m Wide)	\$ 9,189	\$ - \$ \$ - \$	- \$ - \$	-	\$ - -	\$ - \$ \$ - \$	- Þ - \$				- \$ - \$	-	\$ - \$ -
Flagstone Paving - Random Pavers	\$ 17,230	φ - φ \$ - \$	- φ	-	\$ -	φ - 3 \$ - \$	- \$ - \$,			- \$	-	\$ -
Seeding (\$20/sqm)	\$ 3,446	\$ - \$	- \$	_	\$ -	\$ - \$	- \$				- \$	-	\$ -
Large Shrubs (600mm height)	\$ 1,436	\$ - \$	- \$	-	\$ -	\$ - \$	- \$,		- \$	- \$	-	\$ -
Low Shrubs and Groundcovers	\$ 1,206	\$ - \$	- \$	-	\$ -	\$ - \$	- \$,		- \$	- \$	-	\$ -
Total Homestead	\$ 47,785	\$ - \$	- \$	-	\$ -		- \$,		- \$	- \$	-	\$ -
Water Pump Garden													
Clearing/Excavation (\$12/sqm)	\$ 976	\$ - \$	- \$	-	\$ -	\$ - \$	- \$	976	\$ 976 \$	- \$	- \$	-	\$ -
Grading (\$10/sqm)	\$ 804	\$ - \$	- \$		\$ -	\$ - \$	- \$	804	\$ 804 \$		- \$	-	\$ -
New Wood Bench (\$600/each)	\$ 689	\$ - \$	- \$	-	\$ -	\$ - \$	- \$			- \$	- \$	-	\$ -
Interpretive Sign (0.3 m) wide	\$ 4,595	\$ - \$	- \$	-	\$ -	\$ - \$	- \$,			- \$	-	\$ -
Seeding (\$20/sqm)	\$ 1,608	\$ - \$	- \$	-	\$ -	\$ - \$	- \$,		- \$	- \$	-	\$ -
Large Shrubs (600mm height)	\$ 1,436	\$ - \$	- \$	-	\$ -	- \$	- \$,		- \$	- \$	-	\$ -
Ecological Highlight Species for Wood Bench	\$ 478	\$ - \$	- \$	-	\$ - 3	\$ - \$	- \$		\$ - \$	- \$	478 \$	-	\$ 478
Total Water Pump Garden	\$ 10,586	\$ - \$	- \$	-	\$ -	\$ - \$	- \$	10,108	\$ 10,108 \$	- \$	478 \$	•	\$ 478
Green Door		<u> </u>				•			A				<u> </u>
Clearing/Excavation (\$12/sqm)	\$ 2,433	\$ - \$	- \$		-	\$ - \$	2,433 \$		\$ 2,433 \$	- \$			\$ -
Grading (\$10/sqm)	\$ 2,027	\$ - \$	- \$		-	\$ - \$	2,027 \$		\$ 2,027 \$	- \$	- \$	-	\$ -
Green Door Entry Feature	\$ 13,514 \$ 649	\$ - \$	- \$	-	\$ -	\$ - \$	13,514 \$		\$ 13,514 \$ \$ - \$	- \$	- \$	-	\$ -
New Wood Bench (\$600/each)		\$ - \$ ¢	- \$	649		\$ - \$	- \$		II II		- \$	-	\$ - ¢
New Secondary Trailhead Map (\$2,275/each)	\$ 2,463 \$ 4,054	\$ - \$ ¢	- \$ - \$	2,463		\$ - \$ \$ - \$	- \$		\$ - \$ \$ 4,054 \$	- \$ - \$	- \$ - \$	-	\$ ¢
Seeding (\$20/sqm) Ecological Highlight Species for Wood Bench	\$ 4,054	\$ - \$ \$ - \$	- \$	-	\$ - S	• - • • - • •	4,054 \$ - \$		\$ 4,054 \$	- \$ - \$	478 \$	-	\$ - \$ 47
Ecological Highlight Species for Secondary Entry Sign	\$ 956	τ - τ \$ - \$	- \$ - \$	-	\$ -	ъ - ъ \$ - \$	- Þ		\$ - \$	- 5 - \$	956 \$	-	\$ 95
Total Green Door	\$ 26,574	\$ - \$	- \$	3,112	Ψ .		22,028 \$		\$ 22,028 \$	- \$	1,434 \$		\$ 1,43 ₄
Moraine Lookout	20,014			0,112	0,112		ΣΕ, ΌΣΟ Ψ		Ψ ΣΕ,ΟΕΟ Ψ		1,τοτ ψ		7 1,70
Clearing/Excavation (\$12/sqm)	\$ 100	¢ *	•	100	¢ 100	÷ •	^		\$ - \$	6	6		<u>¢</u>
Grading (\$10/sqm)	\$ 130 \$ 108		- \$ - \$	130 108			- \$ - \$		\$ - \$ \$ - \$	- \$ - \$	- \$ - \$	-	\$ - \$ -

New Wood Bench (\$600/each)	\$ 649	\$ - \$	- \$	649	\$ 649	\$ - \$	- \$	- 1:	\$ - Is	- \$	- \$	- 1	\$ -
Interpretive Sign (0.3 m) wide	\$ 4,330	\$ - \$	- \$	4,330			- \$	- :	- 19	- \$	- \$	-	\$ -
Seeding (\$20/sqm)	\$ 216	\$ - \$	- \$	216		\$ - \$	- \$	- :	-	- \$	- \$	-	\$ -
Ecological Highlight Species for Wood Bench	\$ 478	\$ - \$	- \$	-	\$ -	\$ - \$	- \$	- :	\$ - 9	- \$	478 \$	-	\$ 478
Total Moraine Lookout	\$ 5,912	\$ - \$	- \$	5,434	\$ 5,434	\$ - \$	- \$	- :	\$ - \$	- \$	478 \$	-	\$ 478
West Duffins Ridge Lookout													
Clearing/Excavation (\$12/sqm)	\$ 520	\$ - \$	- \$	520		\$ - \$	- \$	- :	\$ - \$	- \$	- \$	-	\$ -
Grading (\$10/sqm)	\$ 433	\$ - \$	- \$	433	\$ 433	\$ - \$	- \$	- :	\$ - \$	- \$	- \$	-	\$ -
New Wood Bench (\$600/each)	\$ 649	7 7	- \$	649		\$ - \$	- \$	- :	\$ - \$	- \$	- \$	-	\$ -
Interpretive Sign (0.3 m) wide	\$ 4,330		- \$	4,330		\$ - \$	- \$	- :	\$ - \$	- \$	- \$	-	\$ -
Seeding (\$20/sqm)	\$ 433		- \$	433	\$ 433	\$ - \$	- \$	- :	\$ - \$	- \$	- \$	-	\$ -
Ecological Highlight Species for Wood Bench	\$ 478	7 7	- \$	-	\$ -	\$ - \$	- \$	- :	\$ - \$	- \$	478 \$	-	\$ 478
Total West Duffins Ridge Lookout	\$ 6,843	\$ - \$	- \$	6,365	\$ 6,365	\$ - \$	- \$	- :	\$ - 8	- \$	478 \$	-	\$ 478
Eagle's Rest													
Clearing/Excavation (\$12/sqm)	\$ 1,406		- \$	=	\$ -	\$ - \$	- \$	- :	\$ - \$	1,406 \$	- \$	-	\$ 1,406
Grading (\$10/sqm)	\$ 1,172		- \$	-	\$ -	\$ - \$	- \$	- :	\$ - \$	1,172 \$	- \$	-	\$ 1,172
Eagle's Rest Wood Deck and Interpretive Signage	\$ 234,332		- \$	-	\$ -	\$ - \$	- \$	- :	\$ - \$	234,332 \$	- \$	-	\$ 234,332
Seeding (\$20/sqm)	\$ 469		- \$	-	\$ -	\$ - \$	- \$	- ;	\$ - \$	469 \$	- \$	-	\$ 469
Total Eagle's Rest	\$ 237,378	\$ - \$	- \$	•	\$ -	\$ - \$	- \$	- ;	• - •	237,378 \$	- \$	-	\$ 237,378
Rope Line Accessibility Feature													
Rope Line Accessibility Feature	\$ 37,789		- \$	-	\$ -	\$ - \$	- \$	- :	\$ - \$	- \$	- \$	37,789	
Total Rope Line Accessibility Feature	\$ 37,789	\$ - \$	- \$	-	\$ -	\$ - \$	- \$	- :	\$ - 8	- \$	- \$	37,789	\$ 37,789
Vesity & Dhase Tatala		A	202.202	27.004	A					207.070			
Yearly & Phase Totals	\$ 967,924	\$ 208,460 \$	302,922 \$	65,281		\$ 30,914 \$	22,028 \$	57,894		237,378 \$	5,258 \$	37,789	
Summary					Phase 1 Totals				Phase 2 Totals:				Phase 3 Totals
Subtotal	\$ 967,924	\$ 208,460 \$		65,281						\$ 237,378 \$	5,258 \$	37,789	
Project Administration (15%)	\$ 145,189		45,438 \$	9,792			-, +				789 \$	5,668	\$ 42,064
Permitting (7%)	\$ 67,755		21,205 \$	4,570							368 \$	2,645	
Corporate Surcharge (5%)	\$ 59,043			3,982							321 \$	2,305	
Contingency (20%)	\$ 247,982		77,609 \$	16,725				14,832		\$ 60,816 \$	1,347 \$	9,681	\$ 71,845
Totals	\$ 1,488,000	\$ 320,000 \$	466,000 \$	100,000	\$ 886,000	\$ 48,000 \$	34,000 \$	89,000	\$ 170,000	\$ 365,000 \$	8,000 \$	58,000	\$ 431,000

Please note that cost estimates have been adjusted for inflation