

Tay Valley Township Forest Trail Planning Exercise Final Draft

August 2021



Tay Valley Township


Sierra Planning and Management
advice • strategy • implementation



the mbtw group

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1. Introduction

1.1 Background & Purpose

Sierra Planning and Management and MBTW were retained by Tay Valley Township to conduct a feasibility assessment of the development and operation of a municipally owned and operated forest trail park on a 27-acre parcel of land generally located on the northwest quadrant of the intersection of County Road 14 (Narrows Lock Road) and Stanley Road.

A feasibility assessment is an investigation of a range of factors that together help determine the overall merit and suitability of the site for development as well as gauge whether the site can achieve the design and operational goals set out by the Township in order to meet the needs of its residents. This assessment therefore considers existing municipal policy and commitment to developing public access to open space, community views on the proposed development under study, and importantly the views expressed by landowners in the vicinity of the site. In addition, a critical part of any feasibility analysis is to document the existing planning policies which would apply to the proposed development and environmental conditions as known at the time.

The resulting concept diagrams prepared give vision to the range of possibilities for public access to the site based on the range of documents site constraints and opportunities

and opinions expressed. These concepts are themselves, along with the balance of the report, then subject to further public discussion. The primary goal of any feasibility study is to identify the range of factors that need to be understood, discussed, and balanced in considering a site for development.

Alongside this process, engagement has commenced with indigenous communities and organizations regarding the proposed development opportunity. The results of this engagement will be used to further inform the Township in its consideration of the development potential for the site as a Forest Trail park.

1.2 Project Antecedents

Strategic Plan Link

Tay Valley's Vision Statement: Tay Valley Township is a rural community that honours our culture and heritage, whose citizens and leaders strive to improve the quality of life for all residents and visitors in a sustainable, adaptable and secure environment.

Recreation and Culture: Our recreation and cultural programs continue to flourish for young and old alike. The Township has a network of interconnected trails, safe cycling routes and paddling routes.

Age-Friendly Community Plan

The Age-Friendly Community Plan, adopted by Council in 2016, calls for accessible trails, pathways and parks within the Township.

Solar Farm Agreement

Northland Power Solar North Burgess LP and Council entered into an agreement in 2013. Northland was to dedicate (per Sections 9 and 10 of that agreement) the lands surrounding the solar farm to either the Township, a conservation land trust or other similar entity as determined by the Township with a pathway between the woodlot and the wetland areas. This land was finally transferred to the Township in 2020.

Recreation Master Plan

The Joint Recreation Master Plan was approved by Council in 2020. Trends from the Master Plan show that more inclusive and accessible outdoor recreation amenities are required. These amenities are to be welcoming and navigated easily by all ages and abilities. In addition to community connectivity, trail systems promote healthy, active lifestyles when used for exercise such as walking. Recommendation #47 was to continue with this trail's development once the land was acquired.

2021 Budget

In moving forward with the Solar Farm Agreement and the Recreation Master Plan, the "Parks Plan" was included in the 2021 Budget as a project to be funded by development charges and cash-in-lieu of parkland funds. No taxpayers dollars were allocated to this project.

Parks Plan (Trail)

A Parks Plan is essentially a concept and cost estimate of what will be built in the space in the future and is required

to obtain grant funding, as a check box on most applications. The initial goal of this project was to have the design concept and cost estimate in place so that the Township could apply for funding when available. The “Parks Plan” name may be a bit misleading as it is anticipated to have an accessible trail/pathway loop in this space and not a typical park with open space.

As part of the process for a Parks Plan the Province requires public consultation both under the [Accessibility for Ontarians with Disabilities Act, 2005](#), and consultation with indigenous groups. This consultation must occur at the Parks Plan stage for the Township to be successful in any grant application. In addition, the adjacent property owners were also contacted as part of the consultation process. Neighbours have been afforded an opportunity to speak directly with the project lead (Sierra Consulting) to learn the finer details of the project and to mitigate any concerns that they may have.

Grant

A number of grant opportunities became available as part of the Federal and Provincial Government COVID-19 strategy. The Township applied to the COVID-19 Resiliency Infrastructure Stream for the construction of an accessible trail/multi-use pathway, an area for educational demonstrations and interpretive signage, areas for accessible park furniture (benches, bike racks, picnic table) and accessible exercise equipment at this location, all of which met the criteria of the grant. As the project was outdoors, it would also assist with mental health and overcoming self-isolation, and was accessible to multiple

abilities and ages. The grant was also dependent on the completion of the Parks Plan.

1.3 Limitations

The contents of this report and its analysis is based, in part, upon a range of primary and secondary sources. Sierra Planning and Management is responsible for the accuracy of primary sources of information including reference to Official Plan and Zoning By-Law policies, amongst other primary references. In the event that any secondary source information is inaccurate or incomplete, Sierra Planning and Management or its sub-consultants will not be held liable for original errors in data.

The report and the information contained within it is prepared specifically for the purposes as laid out in this report. Reliance on information and opinion contained in this report for other purposes is not recommended. The contents of this report should not be extracted in part from the entire report without the permission of Sierra Planning and Management.

2. The Site

2.1 The Land Holding, Its Features and Surrounding Land Uses

At 11.2 hectares (27.7 acres) the Township owned site, dedicated to it almost a decade ago as part of the agreement implementing the North Burges Solar Farm operation, represents a strong example of forested and naturalized land in close proximity to existing historic settlements, agricultural operations and most recently green energy sector operations.

The imposition of the solar farm undoubtedly changed the viewscape of this landscape if not its rural character. Effective planning has enabled this operation to be sited in such a way as to protect the existing wetland, with buffers between it and inhabited properties to the south.

Indeed, the role of this site as an important tree buffer is something that this plan seeks to protect. While the concept of a park is the subject of this feasibility, it is also an opportunity for effective stewardship and active management of the forest to pursue both a function of moderate, low impact public access and maintenance of its role as a woodland ecosystem. Whether these goals can be effectively balanced will be judged by the community as an outcome of this planning exercise, but the intent is to ensure that the qualities of this landholding – its topography, tree canopy, sustainability of the ecosystem

while meeting the existing needs for accessible municipally controlled public space. The 2020 Parks and Recreation Master Plan for the Town of Perth, Tay Valley Township, Drummond North Elmsley and Lanark Highlands provides further details regarding the community needs and the recommended public policy response.

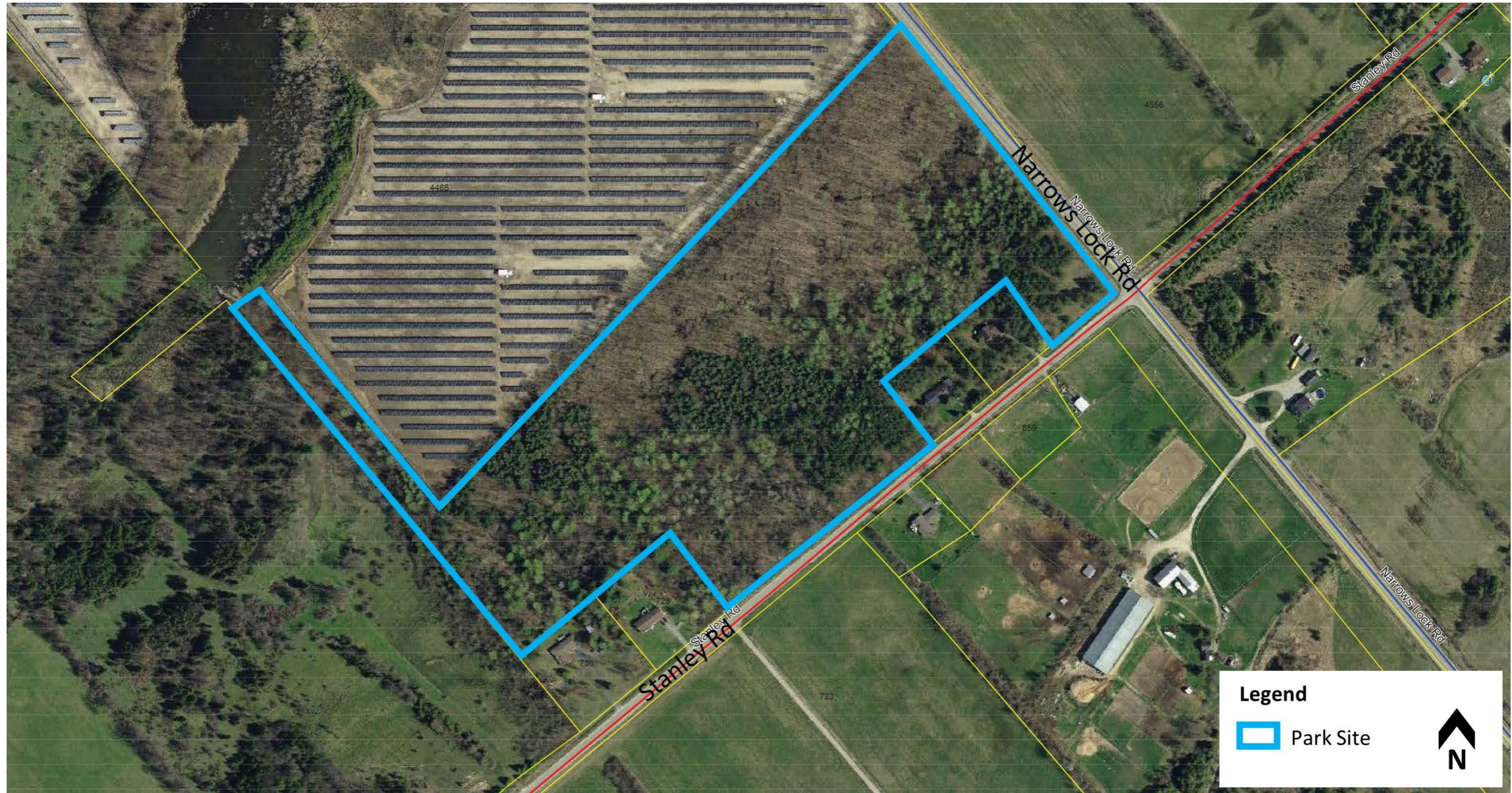
The subject site is well located, in close proximity to the mid- 19th Century-established village of Stanleyville to the west. The intersection of County Road 14 and Stanley Road forms part of the Rideau Trail and other amenities exist in the immediate vicinity. A short distance south of the intersection is Burgess Hall, a community gathering hall with a community kitchen and baseball field. Further west is the Bridget Vincent Mary (BVM) Hall built in 1953 and open for community use. The development of the subject site for further public access represents an opportunity, if achieved without undue impact on the village community, to further the commitment to public services in this area.

The intent of this development is to meet the broader need in the Township while also ensuring local residential amenity is not unduly impacted. The presence of existing halls in proximity provides a potential opportunity to utilize the park for educational purposes in particular for schools that can utilize both the indoor hall space and outdoor forest trails as a combined program of learning.

Exhibit 1: Rideau Trail



Exhibit 2: Site



2.2 Land Use Planning Context

Lanark County Sustainable Communities Official Plan

The County Official Plan (adopted June 2012 with Policy Schedules Revised as of January 2017), designates the subject site in its entirety as follows:

- Official Plan Schedule A: Rural Area; and
- Official Plan Schedule B: Source Water Protection Area

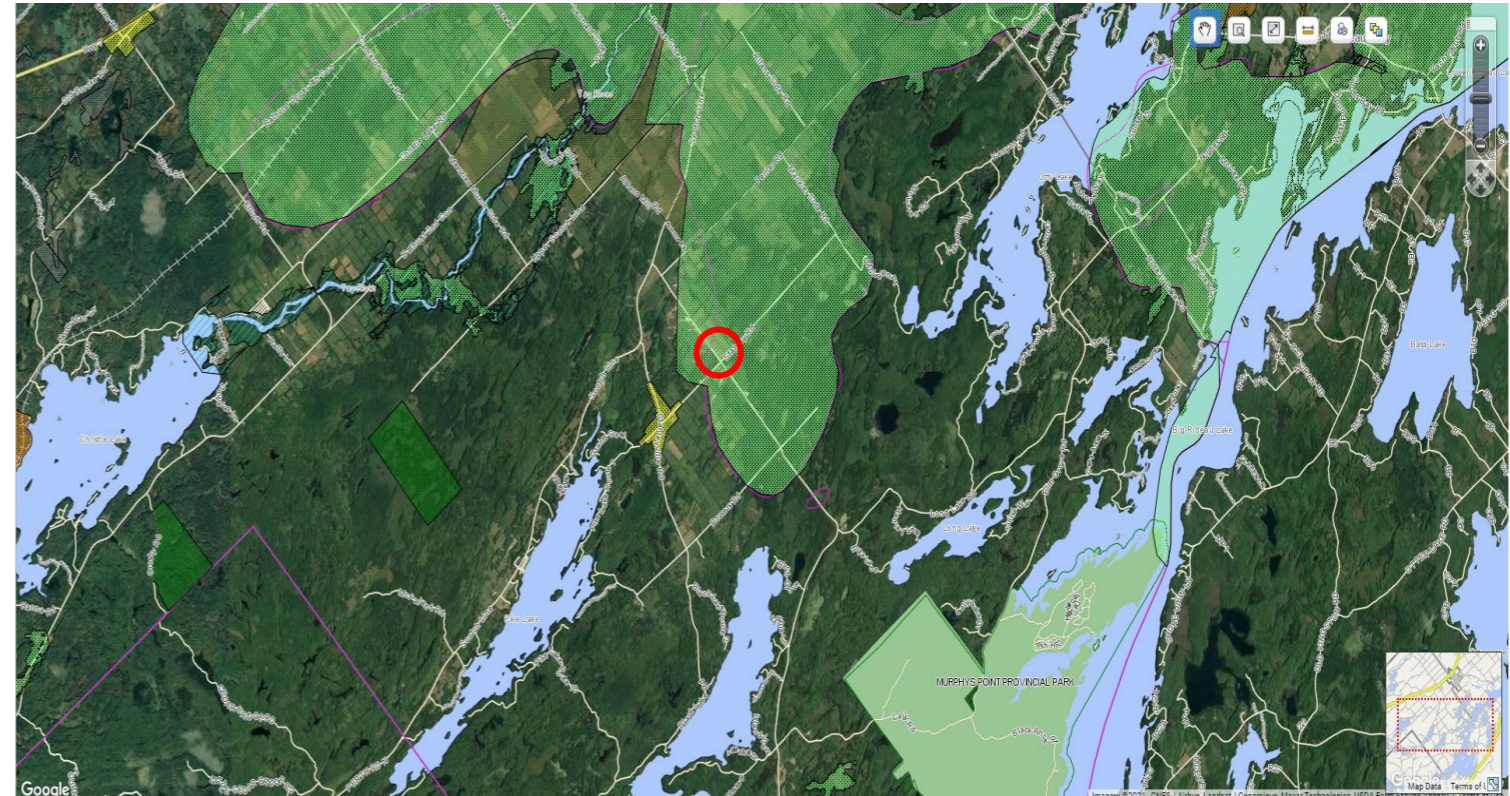
Section 3.2 of the County Official Plan identifies that the Rural Area designation allows for various local Official Plan designations which can provide additional direction for specific rural land uses.

Section 3.3.1 outlines the objectives of development in rural areas as including:

1. To ensure that residential and non-residential development is consistent with rural service levels;
2. To maintain the distinct character of rural, waterfront and settlement areas; and
3. To ensure that development is compatible with natural heritage features and natural resource uses.

The site is not located within the Rideau Canal Corridor and is not therefore subject to the policies of the Lanark County OP with respect to implementing the Rideau Canal Corridor Landscape Strategy with regard to future development.

Exhibit 3: Lanark County OP Schedule A and B (as shown in Lanark County Map Viewer with Applicable Layers)



With respect to Surface and Ground Water Protection and Enhancement, Section 5.5.8 of the County Official Plan, notes that the “County of Lanark and its constituent municipalities have an obligation to consider the impact of development and land use on surface water and ground

water in order to ensure the long-term viability of this resource”.

Tay Valley Township Official Plan (2016)

Section 1.3.3. Objectives of the Plan include several pertinent objectives relative to the consideration of a public park use on the subject lands. Among other objectives:

- (2) to preserve and enhance the agricultural, rural and recreational character of the community

including the rich landscape of lakes, forests and wetlands, shorelines and natural habitat.

- (8) to provide for the protection of natural resources such as agricultural lands, forests, ground and surface water, mineral aggregates and minerals.
- (15) to develop and maintain sufficient parkland and trails, open space and community facilities to

meet the needs of various age and socio-economic groups.

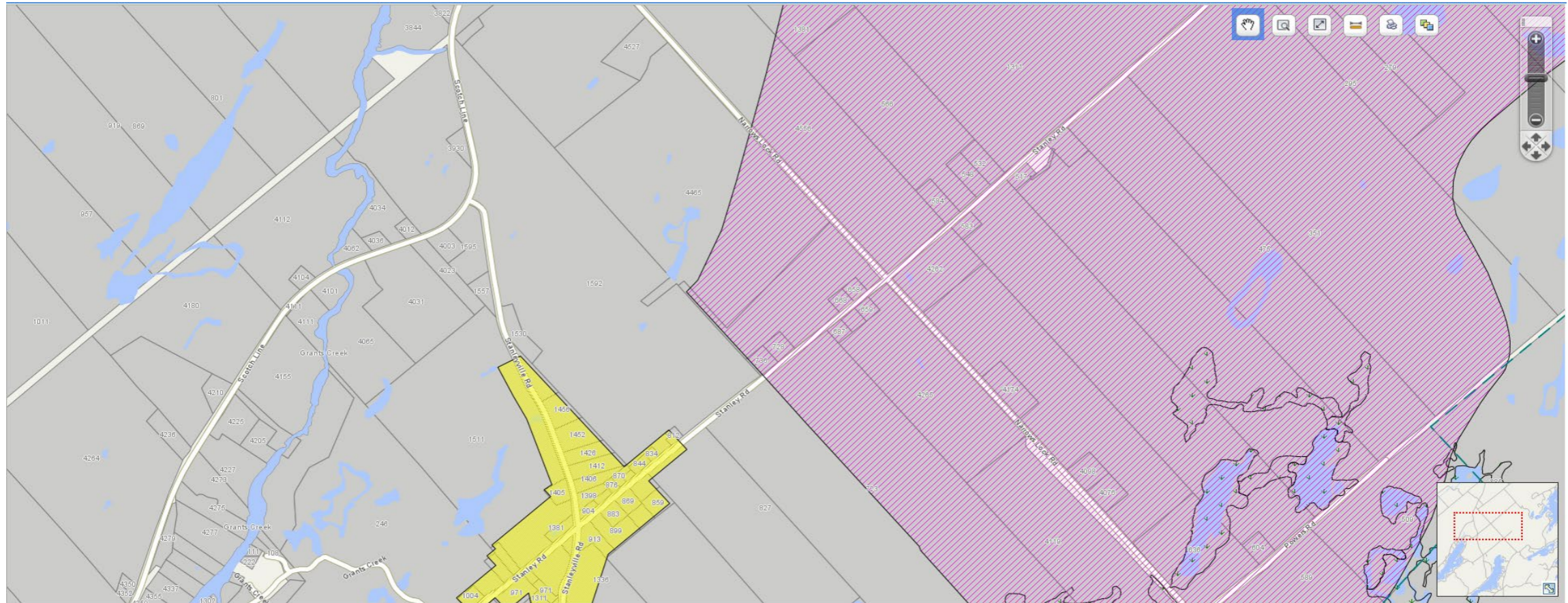
Section 2.12 of the Official Plan notes that Parks shall generally be permitted in all land use designations.

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The lands in question are designated Rural and Mineral Resource. Permitted uses within Rural designated lands are varied and include agriculture, forestry, conservation, various outdoor recreational uses and commercial, industrial and residential uses subject to use-

specific conditions and limitations. Recreational uses are not identified as a specific class of land use and subject to limitations in Rural Areas.

Exhibit 4: Tay Valley Township Official Plan Schedule A (as shown in Tay Valley Map Viewer)

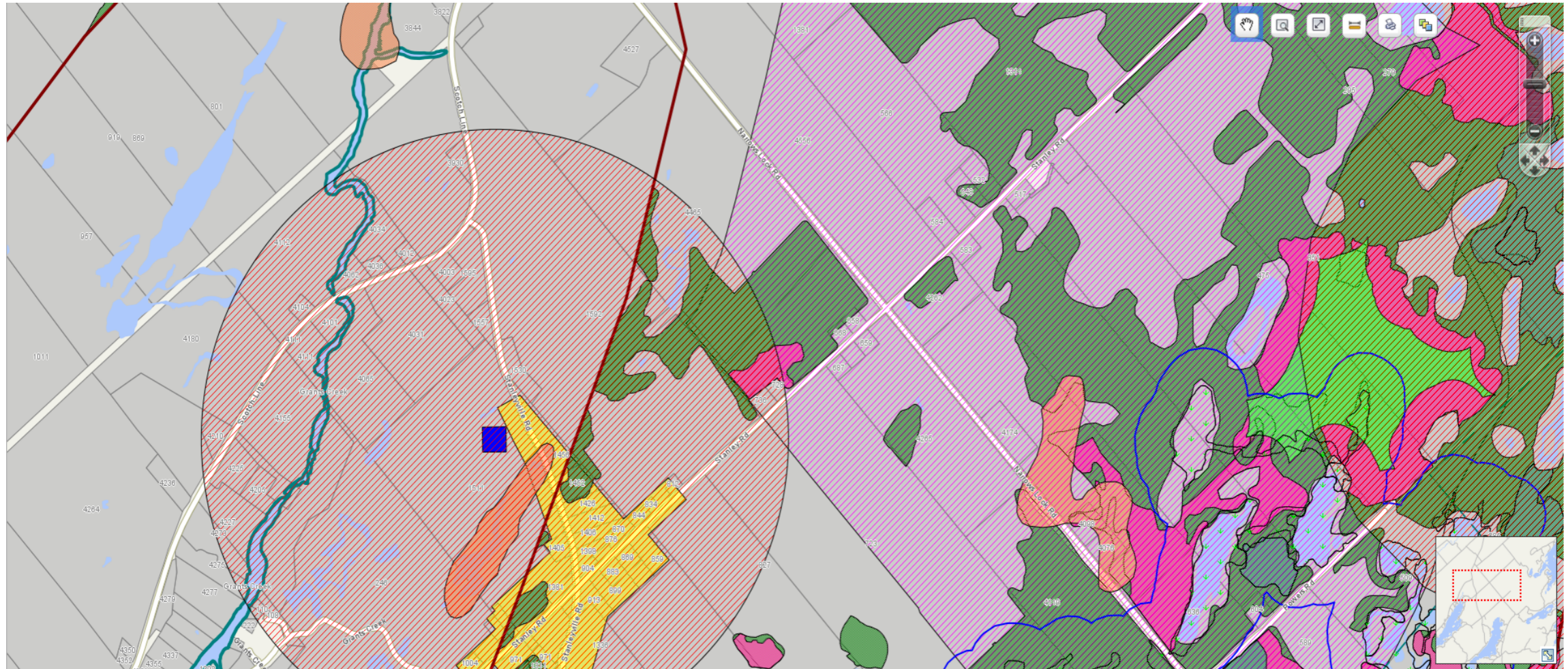


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The subject lands are designated Mineral Resource. Within this designation, a range of uses, including conservation and outdoor recreation uses are permissible, providing that this does

not include buildings or activities which preclude or hinder the establishment of new mineral mining or mineral aggregate operations or access to mineral resources.

Exhibit 5: Tay Valley Township Official Plan Schedules A+B (as shown in Tay Valley Map Viewer)



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The subject lands are within the 1,000 m radius limit of an abandoned mine. Section 3.3.3 (Policies) item 11 requires that approval of development in this zone is conditional on approval of the Ministry of Mines and Northern Development (now the Ministry of Natural

Resources and Forestry) based on the nature and extent of the hazards and subject to a technical report as required.

Exhibit 6: Tay Valley Township Official Plan Schedule A+B+C (as shown in Tay Valley Map Viewer)

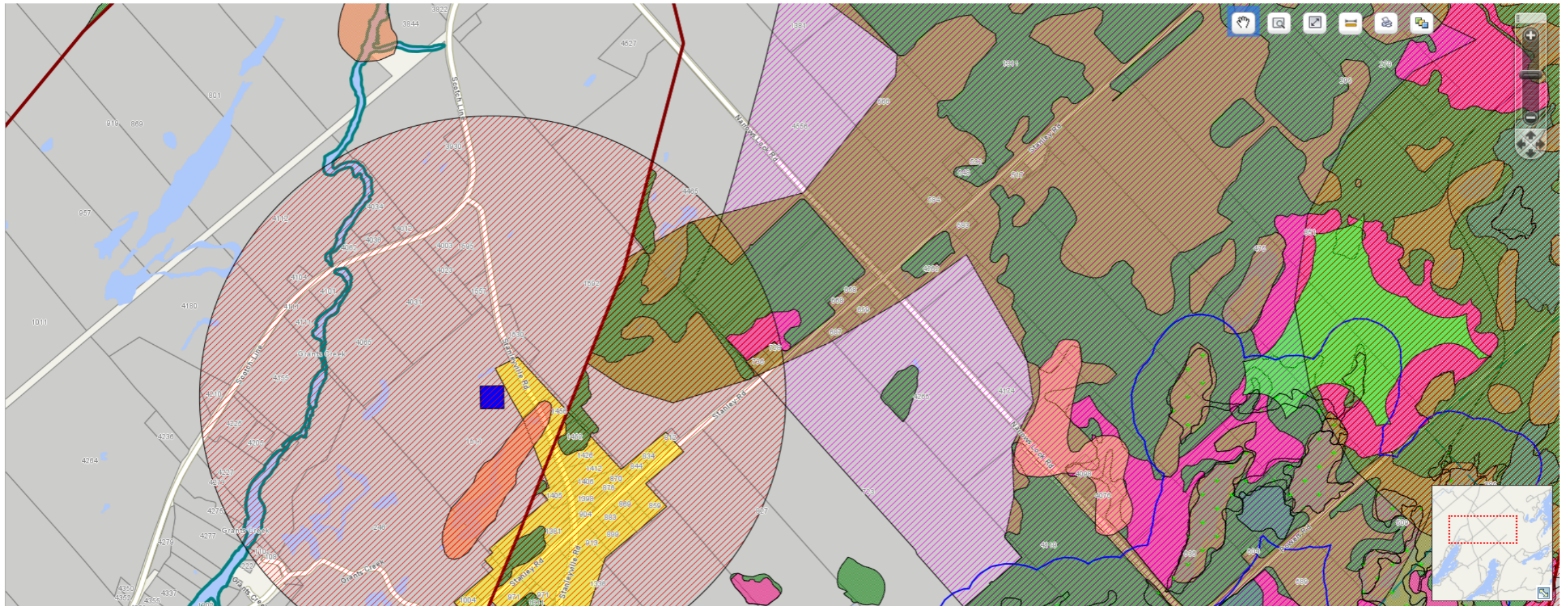
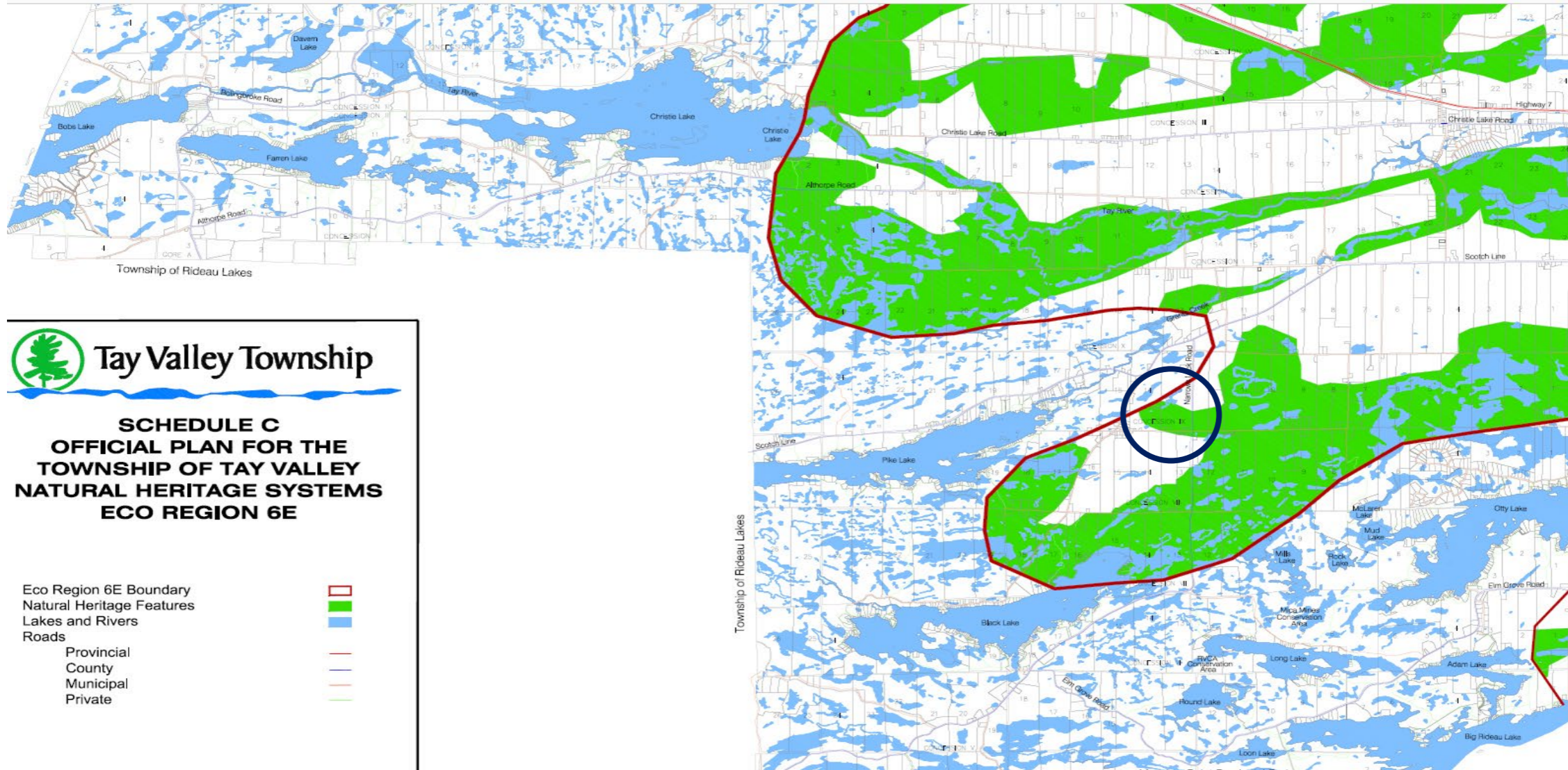


Exhibit 7: Tay Valley Township Official Plan Schedule C



Tay Valley Township

**SCHEDULE C
OFFICIAL PLAN FOR THE
TOWNSHIP OF TAY VALLEY
NATURAL HERITAGE SYSTEMS
ECO REGION 6E**

Eco Region 6E Boundary
Natural Heritage Features
Lakes and Rivers
Roads

- Provincial
- County
- Municipal
- Private

In terms of environmental sensitivity, Schedule B of the Official Plan identifies the bulk of the lands as “Significant Woodlot – All Other”, with a smaller but still significant designation of “Significant Woodlot – Rare Tree Species” in the south-east quadrant of the site as detailed below. Section 2.22.5 (5) of the Official Plan elaborates on the characteristics of Significant Woodlands to **include old growth, woodland greater than 0.5 ha with rare species present, and Interior Woodland core habitats greater than 8 ha and further than 100 m from the edge of the Woodland**. Relevant Official Plan policies include:

- Prohibition under the Provincial Policy Statement of development or alteration of Significant Woodlands in Ecoregion 6E unless it can be shown there will be no negative impact.
- (Section 2.22.5 (6) “ Where a forested area is identified as being potentially Significant in Eco Region 6E, development and site alteration may be permitted on Significant Woodland in accordance with the policies of the land use designation shown on Schedule A, if it is demonstrated through an Environmental Screening Checklist or Environmental Impact Study that there will be no negative impacts on the natural features or function for which the forested area is considered significant”;

The Significant Woodland - All Other designation is not subject to the following policies. In terms of the subject site, the majority of the woodland is All Other and this is where development and alteration of the forest would

occur to implement a trail plan. The area designated Rare Species would not be subject to development.

Applicable Zoning Policies

Tay Valley Township Zoning By-Law No. 02-121 (Consolidation Version October 26, 2018)

The subject lands are zoned Rural (RU) where a range of permitted uses are provided for along with separation and set-back requirements depending on the use. Park use is provided for as a permitted use in Open Space (OS) Zones.

However, many local zoning by-laws enable public uses in any zone where compatibility of the land use can be assured, and Tay Valley Township is no different. The development of a public park represents a Public Use, defined as follows (Section 2 Definitions):

“**PUBLIC USE** shall mean the use of land, buildings or structures for the supply of public services by the Corporation, the County of Lanark, the Governments of Ontario or Canada, any agencies, boards commissions or authorities thereof, and any company providing electricity, natural gas, wired or wireless communications or rail transportation”.

“**PUBLIC PARK** shall mean a park owned or controlled by the Corporation or by any ministry, board, commission or authority established under any statute of Ontario or Canada”.

As a public use, the development of a forest trail park on the subject lands is permitted. Section 3.17 (Public Uses) of the Zoning By-Law enables the use of any land for the purpose of a public use as defined by the By-Law, contingent on such use observing the lot coverage, setback and yard requirements of the zone and that the use is designed, maintained and used in a manner compatible with the building and structures permitted in the zone.

While the public use provisions enable location in any zone, the municipality, as a corporate citizen, is bound to follow best practices and ensure that the intent of the Zoning By-Law to ensure compatibility of land use is upheld.

2.3 Agency Consultation

2.3.1 Rideau Valley Conservation Authority (RVCA)

Initial consultation with both the Rideau Valley Conservation Authority and the County occurred in May and June of this year. The outcome of this consultation is summarised below.

The consulting team consulted with the RVCA regarding the status of the wetland which joins the subject site at its northern limit, and which is a feature of the Solar Farm project which includes installations surrounding the wetland.

The wetland is not identified as a Provincially Significant Wetland and is not currently regulated by the RVCA. The

requirement to regulate the wetland may change in the future as the RVCA considers a change of policy that would

include regulation of all lands within 120 metres of a water body.

Should this policy take effect in the near future, this translates into a requirement for the RVCA to approve an application for permit to develop within the 120-metre zone. Regulation of development would include requirements to assess the type of development, its nature and scale, type of materials, risk of impacts and their mitigation measures.

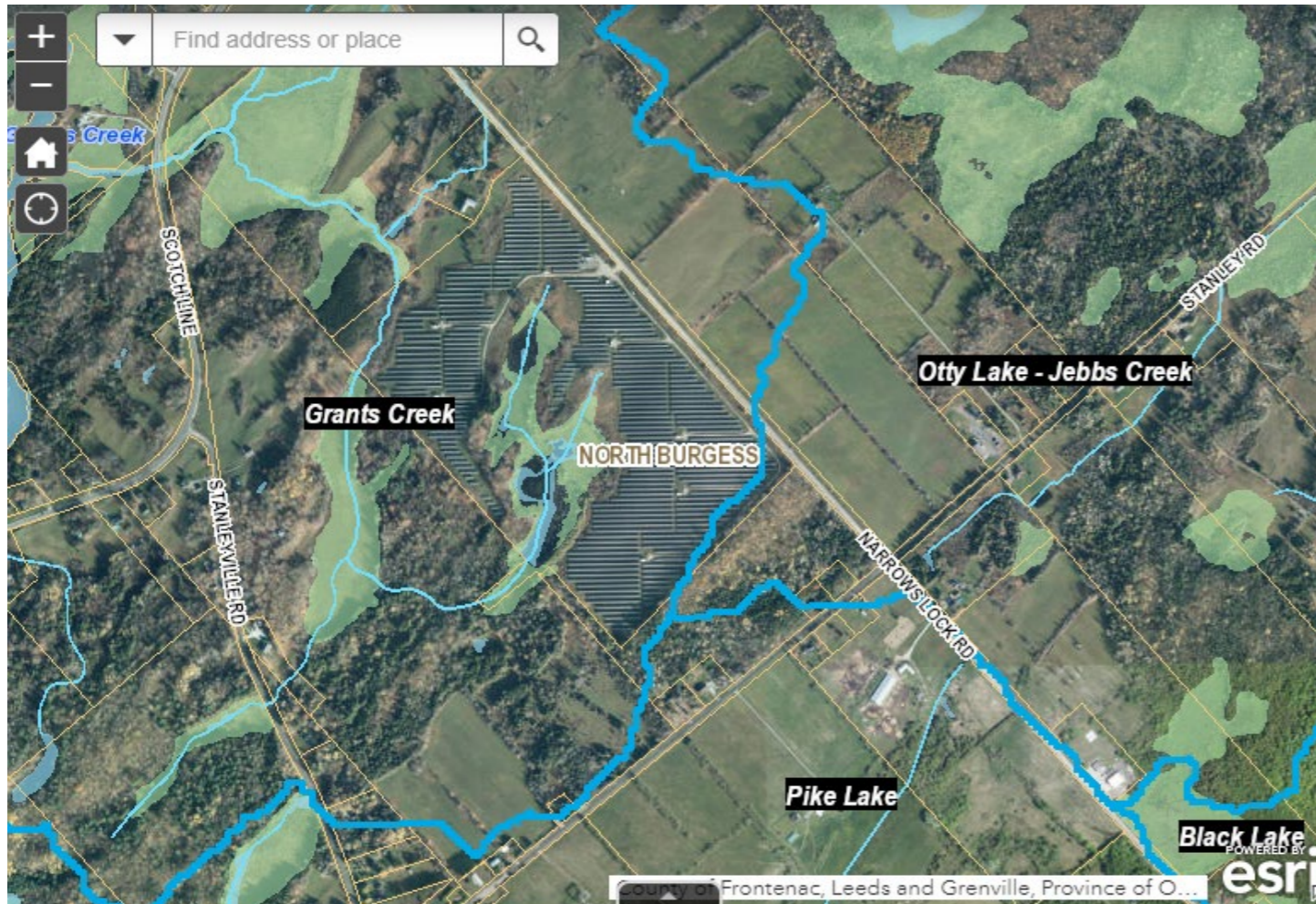
The RVCA is understood to be generally supportive of the development of passive public access opportunities on lands in proximity to water bodies but that this is conditional upon the demonstration that impacts are acceptable. Given that the existing Environmental Impact Statement carried out for the solar farm project dates to 2012, a review of impacts likely as a result of the proposed park development is likely warranted.

2.3.2 Lanark County - Forestry

The consulting team discussed the proposed project with staff of Lanark County with responsibility for management of County forests and the application of relevant County by-laws in respect of forest management in the County.

Lanark County Forest Conservation By-Law 2016-22 applies to woodlots in excess of two (2) hectares on a single parcel of land. This provides for the protection of woodlots for those forests which are not subject to Good Forestry Practices (Ontario Forestry Act) to the subject site. Harvesting activities undertaken or authorized by a municipality are approved practices subject to all relevant other municipal, provincial and federal legislation including

Exhibit 8: RVCA Map Viewer showing Watercourses, Wetland and Hydrology (Drainage) Boundaries



(as examples) the Endangered Species Act and Planning Act.

2.3.3. Lanark County – Highways

Municipal staff engaged with County staff to determine the feasibility of an access to the subject site from Narrows Lock Road. An application for entrance permit has been submitted to the County to determine any concerns that the County may have regarding the location of a site access along this stretch of County Road 14. It is understood that the County of Lanark Public Works Department has approved in principle the location of the entrance and this is demonstrated on the concept drawings provided later in this report.

2.3.4 Indigenous Communities Consultation

Consultation with representatives of indigenous communities and organizations was initiated at the outset of the study in May, 2021. This consultation has since expanded to organizations located outside of the region, based on the requirements of Infrastructure Canada, the organization to which application has been made for capital funding to advance the project following the development of conceptual site testing and feasibility.

As of the time of writing, a detailed response from the Tay River Algonquian Community has been received, providing the following guidance in respect of the feasibility of developing the site for a forest trail park:

- Further research on relevant archeological information and studies completed in the vicinity

of the site in the period since 2011, as well as in the North Burgess area as a whole;

- Undertake a Sustainable Stewardship Forest Tree Management Plan;
- In view of the significant natural heritage features of the site, ensure that planning for both development of the park and any programming opportunities seek to ensure the sustainability of the forest ecosystem; and
- Include opportunities to honour indigenous historical and current presence in the Township through design elements for the trail systems and interpretive exhibits.

The report will be updated with further comments as they are received.

2.4 Natural Features & Environmental Significance

Construction of the North Burgess Solar Project required significant and thorough environmental study of the whole original parcel of land which included what is now referred to as the Tay Valley Park site. Environmental studies included a Natural Heritage Environmental Impact Study (NHEIS) which was supported by the necessary Natural Heritage Records Review Report, Natural Heritage Site Investigations Report and Evaluation of Significance Report, among other technical requirements. Background studies for the NHEIS were done in 2010 and the EIS was completed in 2012.

Relevant Existing Information and Documents:

- North Burgess Solar Project, Natural Heritage Environmental Impact Study. Prepared for Northland Power Inc, September 12, 2012 by Hatch Ltd.
- North Burgess Solar Project, Natural Heritage Records Review Report. Prepared for Northland Power Inc, August 2012 by Hatch Ltd.
- North Burgess Solar Project, Natural Heritage Site Investigations Report. Prepared for Northland Power Inc, August 2012 by Hatch Ltd.
- North Burgess Solar Project, Evaluation of Significance Report. Prepared for Northland Power Inc, August 2012 by Hatch Ltd.

Given the availability of recent site-specific environmental information, the Township did not include ecological study of the site in the consultant's scope of work for the Tay Valley Park Plan project. Information in this report is a consolidation and summary of the existing available material with the purposes of identifying an appropriate approach to the creation of publicly accessible recreation space on this site. Please note that the consulting team also engaged with the Rideau Valley Conservation Authority (RVCA) and the County Forester. The following is a summary of findings.

Project Site

In general, the 27-acre site is characterized as a woodlot with a diverse mix of deciduous and coniferous forest. The land slopes from a north-west high point, south-east towards the Stanley Road and Narrows Lock Road

intersection. The narrow portion connecting to the wetland area slopes from the north-west high point to the wetland edge. In the main portion of the site slopes range from 1:50 to 1:30, however, in the narrow portion, slopes average 1:10, which would not be conducive to providing barrier-free access.

The area along the north property line, adjacent to the solar farm, has been disturbed and evidence of regeneration can be seen.

The east edge of the site is separated from Narrows Lock Road by a rural drainage ditch. Access to the park site would likely occur from this side due to high visibility and connectivity to county cycling routes. There is a small drainage ditch along the south property line at Stanley Road. Some site drainage does drain towards the private residential lots on Stanley Road. Available contour mapping does not indicate if drainage swales or ditches have been constructed to redirect flow in these areas.

Four private residential properties along Stanley Road directly abut the site. Existing vegetation surrounding the private properties appears to be thick and undisturbed. It is important to note that respect for resident privacy – both visibility and noise – should be a key element of the proposed plan.

Natural Heritage Features

Natural heritage features on the site have been identified as ‘significant’ due to the quality of habitat they provide. These include:

- All lands on and within 120m of the site have been identified as having significant and highly diverse habitat for milk snake.
- Wetlands and watercourses within 120 meters of the site could be considered significant animal movement corridors and significant habitat for western chorus frog, eastern ribbon snake, northern map turtle and snapping turtle. This only applies to the narrow portion of the site that connects to the wetland area. This area is also considered to be significant amphibian breeding habitat.
- Woodlands on and within 120 meters of the site are forest providing high diversity of habitat. Woodlands on-site and to the west of the project area are considered significant animal movement corridors and significant woodland.

Hydrological Features

There does not appear to be any watercourses within the larger portion of the site however, there are pockets of isolated depressed areas where water likely accumulates in spring thaw and after large storm events. The major feature is the wetland to the north of the site. Currently the wetland is not regulated by the RVCA, however, policy changes are anticipated within the next 12 months that will enact regulation; approval from the RVCA will be required for any works proposed within 120m.

Rare Tree Species

There is a pocket of rare tree species on site generally located in the south-west side of the site. This information

was available via the Tay Valley Township Interactive Map site and was confirmed by the County Forester.

Woodlot 3 (per EIS) / Lanark County Forest

The park site was originally part of a larger land holding that was operated as a farm. Portions of the larger site were cultivated until recently; however, it is not clear if/when the park site area was cultivated or cleared for livestock. The relatively young age of the existing trees indicates past clearing activities.

As noted, woodlands within the site currently provide a high diversity of habitat as well as providing corridor area for animal movement. Background information noted that this woodlot is not designated as Old Growth Forest or Interior Forest as defined by the MNRF and as noted in Schedule B of the Township Official Plan.

Considerations & Constraints

Buffers and Setbacks:

- Reasonable setbacks from Burgess Solar
- Reasonable setbacks from adjacent private residential properties per Zoning By-Law as a minimum.

Drainage, Surface Run-off

Efforts should be made to minimize disturbance to existing surface water run-off and drainage patterns. This includes minimizing grading and ditching, soil compaction and vegetation removal.

Removal of Trees and Vegetation

It is recommended that prior to the detailed design stage a tree inventory and conditions assessment be done to identify trees that are appropriate for removal (i.e., dead, hazardous, in decline or invasive). Park program elements can then be strategically located in pockets created by tree removals to preserve healthy trees. It is noted that the Township has a forest conservation by-law and permits up to 4 acres of clearcutting in non-designated or protected forests.

Generally, the removal of trees and understorey vegetation should be minimized to maintain habitat diversity. The introduction of some park features will likely require selective removals. Compensation planting should complement existing on-site species while enhancing ecological diversity and habitat opportunities. Removal of invasive species and replacement with native materials is recommended.

Vegetation removed to accommodate park features should remain on site and be placed in areas, for example around the site perimeter, to provide increased habitat opportunities for snakes and other wildlife.

Construction Windows

Where possible construction of proposed park elements should occur outside of the spring emergence for milk snake, for example April through May, when the species can be slow moving.

Activities such as tree clearing, grading and construction of trails should be

scheduled to occur outside of breeding bird seasons - generally, May through July - so that impacts to species breeding on the site will be minimized. Should construction be required during the breeding period areas potentially impact should be searched by trained biologists to determine if birds are currently nesting in these areas. If occupied nests are found, work should be suspended or refocused to at least 100m away until the nests are abandoned.

2.5 Archaeological Findspots

The North Burgess Solar Project Draft Stage 1 and 2 Archaeological Assessment Report, August 25, 2011 notes two Findspots relevant to the park site.

- Findspot 2 – Unique man-made arrangement of stones.
- Findspot 3 – Historic-era well.

Findspot 2 could be integrated within a trail node, although the history and purpose of the arrangement of stones was not determined. Findspot 3 will likely not be integrated into the park plan as it is very close to the residential properties. It is not clear if Findspot 2 is within the park site or within the fenced area of the solar farm. Detailed site planning should the project proceed can resolve this and ensure the protection of the site.

The noted Assessment indicates that both Findspots do not warrant further investigation. It is important to note however, that this site has high potential for the presence

of both Pre-contact and Historic-era archeological sites. Construction activities should be monitored accordingly.

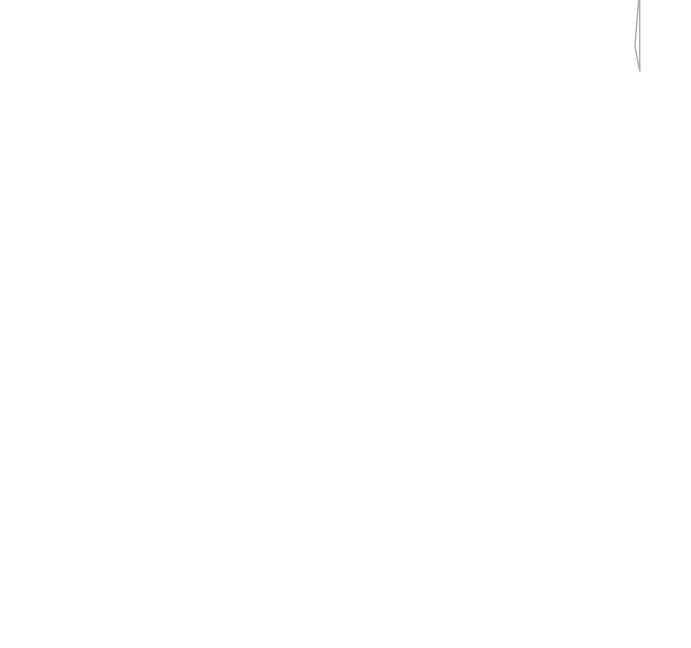
Park Program Features

Given the known characteristics of the site, new park features, and programming should be environmentally focused and include features that can be integrated 'gently' to minimize interruption to drainage patterns, vegetation and wildlife movement.











Refer to Exhibit 9 (Drawing EX-1) Existing Conditions Mapping



Key Plan

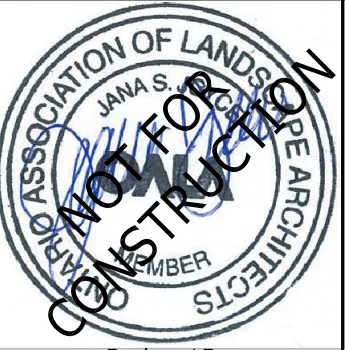


Legend

-  CONTOURS
-  ENVIRONMENTALLY SENSITIVE LANDS & SITE FEATURES
-  DRAINAGE DITCH
-  CYCLING ROUTE
-  120M HYDROLOGICAL FEATURE SETBACK
-  PRIVATE RESIDENTIAL
-  AREA WITHIN DOWL OF WETLAND
-  SIGNIFICANT WOODLAND / LANARK COUNTY FOREST
-  RARE TREES SPECIES
-  WETLAND

No	Date	Revisions	By

This drawing, as an instrument of service, is provided by, and is the property of The MBTW Group. The contractor shall check and verify all dimensions and report all errors and omissions to the Landscape Architect whose seal is affixed to this drawing before proceeding with the work. This drawing is not to be scaled.



Designed By
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Project Name:
Tay Valley Parks Plan
 Municipality: Tay Valley Township, ON

Sheet Title:
Existing Conditions Summary

Designed:	Drawn:	Scale:	Drawing No.:
JSJ	XX	1:1000	EX-1
Date of Drawing:	Job No.:		
August 2021	SPM002		

2.6 Updated Agency Consultation

The initial draft of this report, issued in June 2021 included the following next steps:

1. “continue to conduct the necessary environmental due diligence that has commenced with this study. This comprises a range of confirmatory tasks underway to review the potential for impacts on threatened and endangered species and habitat, any preventative measure necessary to protect the wetland, and a review of the health and management practices necessary for the forest itself. With respect to the latter, this includes at present a consideration of the nature of the woodland itself – later, this will also include arborist analysis of specific proposed trail routes to determine if these need to be adjusted to minimize loss of healthy trees, and to ensure necessary winnowing of trees that pose potential danger to the public accessing the trails. Ensuring the integrity of the tree canopy is a critical goal;
2. Undertake the necessary further review of archaeological analysis that has occurred in the vicinity in the last decade as a supplement to the cultural heritage assessment of the site performed at the time of the planning decisions for the solar farm.”

Further review has comprised confirmations as to the nature and significance of the environmental and archaeological features present and/or near the site. In

terms of the mitigation measures that are also necessary, consultation with agencies has identified the types of actions that can inform design, construction and eventual operation of the park.

Archaeological Significance

The study team undertook further review of the existing archaeological research record for the area within which the proposed forest trail park is located. Primarily, this confirmed the integrity and applicability of the existing research conducted as part of the approvals process for the North Burgess Solar Farm project.

The Stage 2 assessment applies to the site and was a comprehensive summer study of the lands. This enabled a comprehensive implementation of test pitting such that there is a very high degree of confidence in the findings of the study for the entire solar site which includes the lands now in Township ownership. Additional winter period work was undertaken to enable further small area investigation to supplement the earlier findings. As a result of the work undertaken, the Township can be satisfied that additional archaeological assessment of the lands now owned by the Township is not required.

This applies both to the indigenous artifact find (Findspot #1 that is not on Township owned land) as well as the two historic features (Findspot #2: a sugar furnace, and Findspot #3: an historic well). As noted, only Findspot #3 is definitively on Township owned land but is well away from the location of any future trail.

Environmental Significance of the Lands

Subsequent to the release for public review of the draft report, the Study team conducted further due diligence with respect to the significance and sensitivity of both the wetland and forest ecosystems. In addition, the study team undertook further consultation with respect to the significance of the woodland tree species and the potential impacts of the development of a forest trail park owned and operated by the Township.

Aquatic and Forest Animal and Plant Ecosystems

Further consultation was undertaken to seek the advice of the Rideau Valley Conservation Authority (RVCA), including an on-site meeting and review of the lands, woods and wetland in question. As a result of the review and on-site field observations, the following items of significance were confirmed:

1. Although the wetland is not designated as a provincially significant wetland (PSW), and is therefore not currently regulated, the RVCA does consider the wetland and its ecological function as provincially significant. Accordingly, the RVCA will review any development which potentially impacts the hydrological function of the wetland, as if it were regulated and designed as a PSW. More specifically, it is reconfirmed that any development within 120 metres of the wetland will be assessed for impact by the RVCA;
2. The parking location and the trail system itself should similarly be assessed for impact and design

plans should address mitigation of any potential negative impact. This can include ensuring that tree removal necessary for the parking lot is a) minimized and b) felled material is piled nearby to enhance wildlife habitat for overwintering and shelter;

3. As it pertains to the trail system itself, protect sensitive features by designing with nature, retaining mature trees and maintaining existing large logs/downed trees, rock piles which are potential hibernaculum sites, as well as vernal pools. In addition, existing drainage patterns should be maintained. All such actions can assist in protecting sensitive habitat and can readily be incorporated as fundamental principles to inform both the design philosophy and the concept plan for the park;
4. With respect to any planned access to the wetland, the RVCA notes that the use of a boardwalk and platform will help minimize the loss and/or disturbance of large trees and vegetation. However, as the Study Team has reported, the gradient of the strip of land leading to the wetland is too steep to enable an accessible path as a low impact intrusion into the site. The presence of the solar farm fencing and the property boundary to the west makes it challenging to achieve an acceptable design for an accessible board walk. Design likely requires a switch-back to minimize the impact of the grade differential to the required acceptable standard; and

5. Develop a Park Management Plan to ensure the environmental integrity of the park, as planned for in the original design, is maintained through the operation of the park itself.

Woodlot Inspection

Subsequent to the publishing of the draft report, and as recommended in the draft report, further work was undertaken to better understand the composition, health and sensitivity of the existing woodlot as it pertains to the development of a low impact pedestrian trail and interpretive areas.

A review was undertaken by professional staff of the Mississippi Valley Conservation Authority with expertise in forest management. The results of this on-site investigation as summarised below:

- The assessment broke the lands into two areas of hardwood – an upper area and a lower area to the south;
- The forest along the North boundary against the Solar Farm consists of upland hardwoods with species composition of “**Mh7 Aw1Oh2**” or 70% Hard Maple, 10% White Ash and 20% other mixed hardwoods;
- The stand is fully stocked with complete crown closure and appears to be uniformly in the 70 year old range. The spacing and individual tree form suggests the stand has been well managed in the past;
- From the Upland Hardwood the land sloped slightly to the South and the tree composition and

stocking change to “**Mr 40, Po20 Ew10 Aw10Oh10**” or 40% Red Maple, 20% Poplar, 10% White Elm 10% White Ash and 10% other hardwoods;

- Several patches in this area that were formerly open areas have been planted to conifers, appear to be about 30 to 40 years old and are growing well. Both patches would benefit from thinning but due to the wide spacing this is not a requirement;
- Part of the southwest of the site is designated as Rare Species within the Township Official Plan. The basis for that designation was not apparent from earlier discussions but as a result of the on-site forest stand review, it is believed that the designation could be due to the presence of Bitternut Hickory. This species is associated with hardwood forests and although never a large part of the composition, it is not uncommon;
- It is noted that this species is not rare in hardwood forests. In addition, there is evidence of this species in the northwest corner of the site; and
- It is recommended not to open up the canopy too much as this will promote the development of an understory of Prickly Ash and Buckthorn, already significantly present in the northern parts of the site.

Based on the foregoing, an appropriately designed trail system can very likely ensure that there are no negative impacts on the health and sustainability of the forest stands. Furthermore, the evidence suggests strongly that the addition of a trails system is an opportunity to

showcase woodlot composition and ecosystems, including the man-made nature of some of the forest which has been established and managed over the last 70 years.

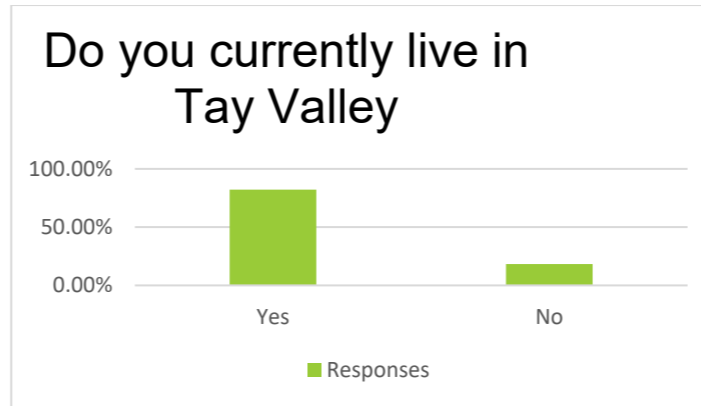
3. Public Engagement

3.1 Overview of Engagement Process

Letters were sent to the neighbouring properties notifying them of the project and the consultation process. In addition, a public survey was made available to the public for a 22 day period.

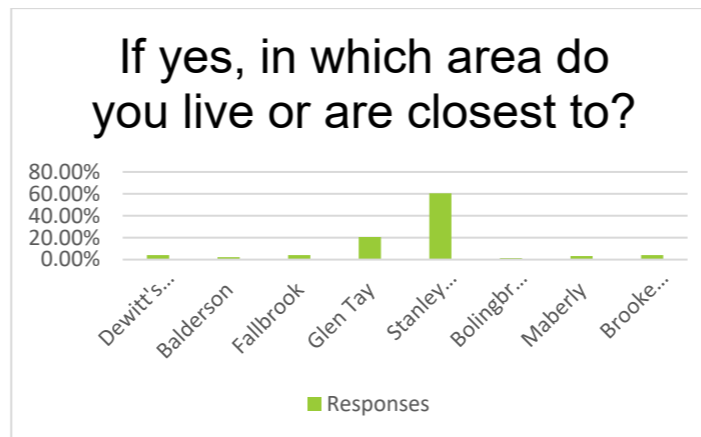
3.2 What We Heard from the Community

Of the 264 respondents, 48 indicated that they do not live in Tay Valley, 18 either own seasonal residence or family property in Tay Valley.

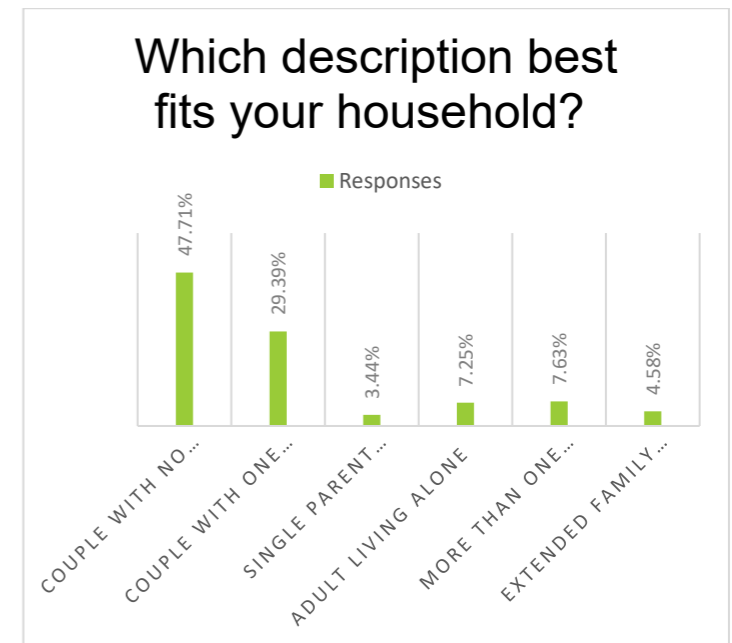


Answer Choices	Responses	
Yes	82.13%	216
No	18.25%	48

135 of the 223 that responded to the next question live in Stanleyville.

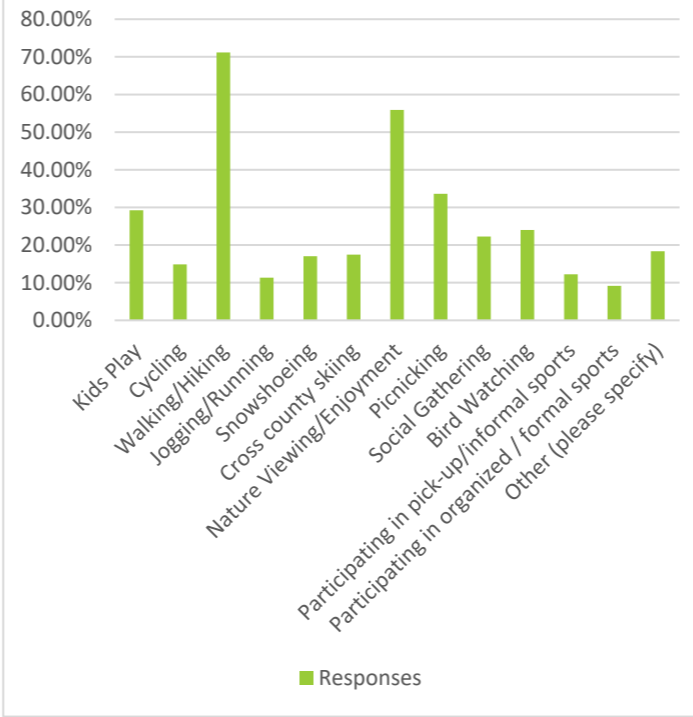


Answer Choices	Responses	
Dewitt's Corners	4.04%	9
Balderson	2.24%	5
Fallbrook	4.04%	9
Glen Tay	20.63%	46
Stanleyville	60.54%	135
Bolingbroke	1.35%	3
Maberly	3.14%	7
Brooke Valley	4.04%	9



Answer Choices	Responses	
Couple with no dependent children	47.71%	125
Couple with one or more dependent children	29.39%	77
Single parent with one or more dependent children	3.44%	9
Adult living alone	7.25%	19
More than one adult sharing a residence	7.63%	20
Extended family living together	4.58%	12

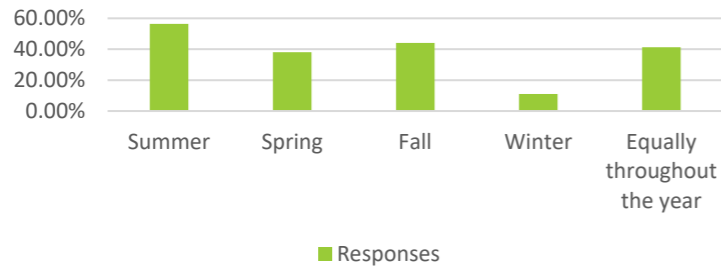
What types of activities do you and other members of your household currently undertake in parks in Tay Valley Township (including school properties)?



What types of activities do you and other members of your household currently undertake in parks in Tay Valley Township (including school properties)? Please select all that apply.

Answer Choices	Responses	
Kids Play	29.26%	67
Cycling	14.85%	34
Walking/Hiking	71.18%	163
Jogging/Running	11.35%	26
Snowshoeing	17.03%	39
Cross county skiing	17.47%	40
Nature Viewing/Enjoyment	55.90%	128
Picnicking	33.62%	77
Social Gathering	22.27%	51
Bird Watching	24.02%	55
Participating in pick-up/informal sports	12.23%	28
Participating in organized / formal sports	9.17%	21
Other (please specify)	18.34%	42

What season(s) do you typically use parks in Tay Valley? Check all that apply.



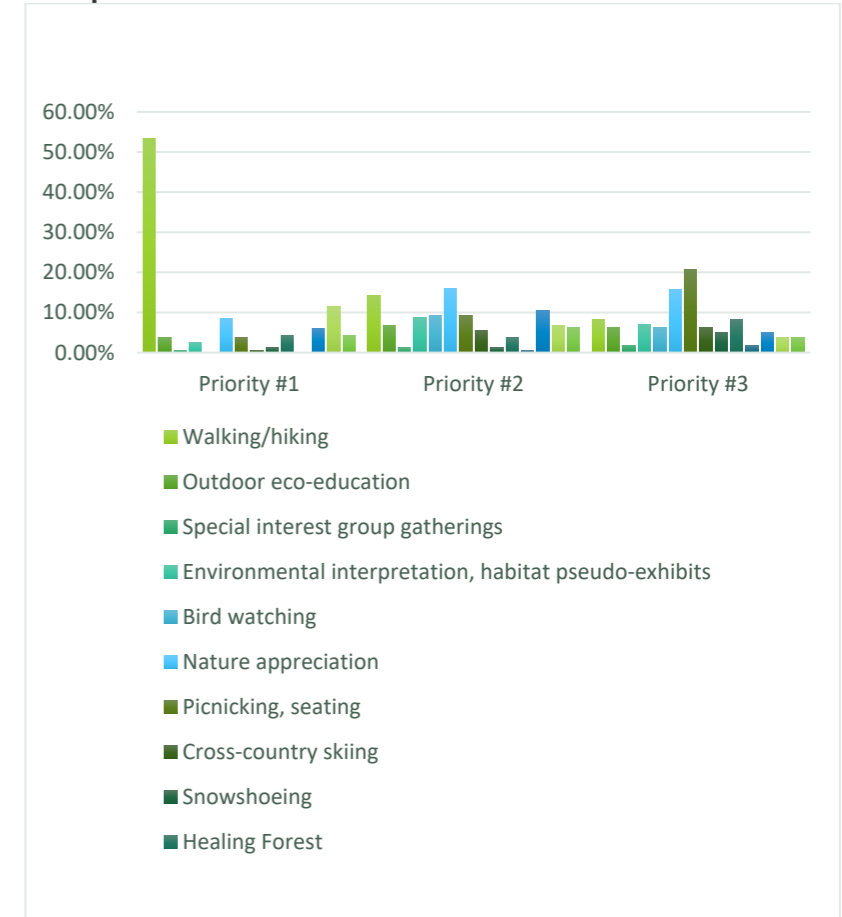
What season(s) do you typically use parks in Tay Valley? Check all that apply.

Answer Choices	Responses
Summer	56.42% 123
Spring	38.07% 83
Fall	44.04% 96
Winter	11.01% 24
Equally throughout the year	41.28% 90

What types of activities and amenities would you like to be included in the new park? Check all that apply.

Answer Choices	Responses
Walking/hiking	67.59% 146
Outdoor eco-education	33.80% 73
Special interest group gatherings	13.43% 29
Environmental interpretation, habitat pseudo-exhibits	25.93% 56
Bird watching	35.19% 76
Nature appreciation	50.00% 108
Picnicking, seating	42.59% 92
Cross country skiing	28.24% 61
Snowshoeing	33.33% 72
Healing Forest	23.61% 51
Public art	15.28% 33
Dog walking	31.94% 69
Playground	26.85% 58
Outdoor fitness equipment	17.13% 37
Other (please specify)	34.26% 74

Please indicate your top 3 priorities for the amenities you would like to see included in the new park?

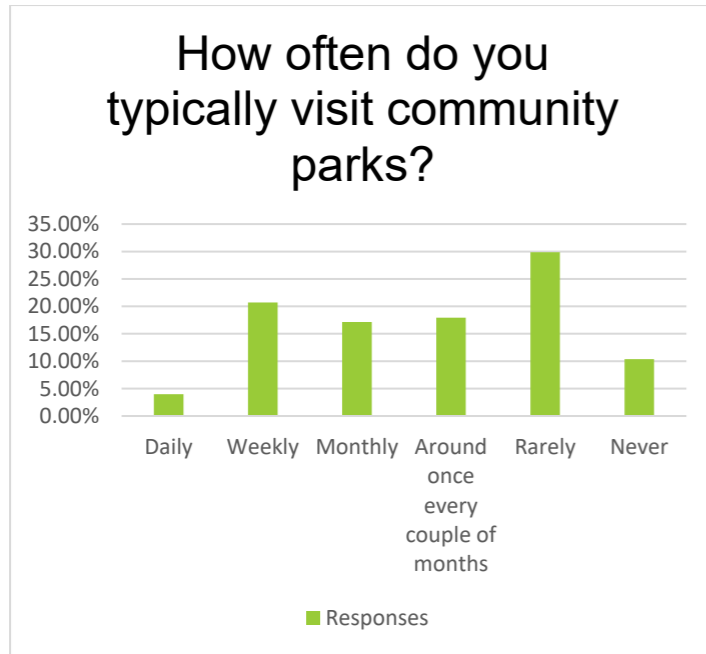


	Priority 1		Priority 2		Priority 3	
	%		%		%	
Walking/hiking	53.33	88	14.20	23	8.18	13
Playgrounds	11.52	19	6.79	11	3.77	6
Nature appreciation	8.48	14	16.05	26	15.72	25
Dog walking	6.06	10	10.49	17	5.03	8
Healing Forest	4.24	7	3.70	6	8.18	13
Outdoor fitness equipment	4.24	7	6.17	10	3.77	6
Outdoor eco-education	3.64	6	6.79	11	6.29	10
Picnicking, seating	3.64	6	9.26	15	20.75	33
Environmental interpretation, habitat pseudo-exhibits	2.42	4	8.64	14	6.92	11
Snowshoeing	1.21	2	1.23	2	5.03	8
Special interest group gatherings	0.61	1	1.23	2	1.89	3
Cross-country skiing	0.61	1	5.56	9	6.29	10
Bird watching	0	0	9.26	15	6.29	10
Public Art	0	0	0.62	1	1.89	3

- Comfort station
- Suitable parking
- Bicycling
- Please be aware of common problem for small parks especially, of cyclists and people going off path for their own reasons. This problem is damaging many natural areas in and around the City of Ottawa.
- Public art
- Dog walking
- A place to buy hotdogs, drinks, etc.
- Well thought out hiking trails will translate into winter trails

Other Categories:

- Equestrian Trails
- Nature appreciation in itself can encompass many listed elements
- Indigenous history engagement
- Keep plain and rustic – closed off
- Good trail markers and site maps
- No dogs
- The environmental plan for the area has rare tree species. I would like this highlighted and protected
- Power sports
- Splash pad



Answer Choices	Responses	
Daily	3.98%	10
Weekly	20.72%	52
Monthly	17.13%	43
Around once every couple of months	17.93%	45
Rarely	29.88%	75
Never	10.36%	26

There were a total of 264 respondents to the survey 101 of which rarely or never use park facilities in Tay Valley

Township. From those that rarely/never use park facilities, 30 were opposed, 8 were in favour and 8 were indifferent.

3.3 The Concerns of Local Residents

We also analysed the range of comments provided as open-ended comments at the end of the questionnaire. There were a total of 112 such comments. While the content varied, we have categorised the responses into either: positive or negative. For positive comments, we have further subdivided the responses into “positive with conditions” referring to comments that were generally supported but that support being conditional in some manner. The majority of those conditions were comments in support of the plan and identification of important considerations in its planning such as protection of the forest, involvement of indigenous heritage and proper park maintenance and upkeep, amongst other noteworthy comments.

Similarly, for negative comments, we have attempted to categorize these into the general thrust of comments. Accordingly, we have categories of negative comments including 1) financial concerns related to either the cost of a park of the financial priorities of the Township lying elsewhere; 2) a preference for alternative locations for the park; and 3) focus should be on other priorities of the Township.

The results of the **ADDITIONAL COMMENTS** open-ended responses (**not inclusive of all survey respondents**) were as follows:

- Supportive: 49 open ended comments
- Supportive with conditions stated: 22 of the 49 comments (44%)
- Unsupportive: 63 open ended comments
- Unsupportive based on financial concerns: 21 of the 63 comments (33%)
- Unsupportive based on preference for another location: 12 of 63 comments (19%)
- Unsupportive based on other Township priorities: 8 of the 63 comments (13%)

Other comments both positive and negative were varied in nature.

Northland Power

Northland Power, owners of the solar farmlands to the north provided the following comments:

1. Concerned that the Wetland is maintained in pristine condition and that access preferably to the wetland from the peninsula of land to the west of the solar farm fence is limited;
2. Ensuring that the development of the park does not encourage vandalism of either fencing or the solar panels in proximity to the fence line (note a buffer exists between the panel line and the fencing); and

3. Similarly, ensuring that the parking lot is secured overnight to ensure against unwarranted gathering outside of park operating hours.

Comments received by Letter

A number of letters and emails were received in response to the study, including responses from a number of the adjacent landowners. These comments vary in terms of the issues that are raised and opinions expressed. At this stage in the process of assessing the value of the site for a proposed park, it is important to summarise this range of comments, both positive and negative and to recognize the value of some of the questions raised. For example, a number of comments either directly or indirectly itemize issues related to the operations of a future park – how it will be managed, cared for and maintained, policed, and what activities will be precluded. These are valid questions, but successful operation and protection of residential amenity are not necessarily insurmountable obstacles. It is therefore important that any approval to implement the park, brings with it the necessary operational resources to manage the park successfully and safeguard the property rights of the adjacent landowners and both their residential, commercial or agriculture operation of their lands.

Answering these questions begins, as it must, with the articulation of the possible configuration, design, and functioning of the park. The principles which underlie both the design and operation of the trails, the examples of best practice, and the proposed concept are provided later in this report. Questions regarding the operational risks

associated with the park are then relevant to adjustments to the design, amenities provided in the park, and location/siting of design elements. Concerns over operational challenges which could limit the enjoyment of property of the adjacent landowners begin with dialogue to determine design parameters to mitigate these risks.

Separate and apart, an operations plan for the successful management of the park and the entirety of the forest on this parcel is then required. The comments received are summarized in the following table.

Positive	Negative
<ul style="list-style-type: none"> ▪ Great Idea ▪ Commit to the real on-going maintenance requirements ▪ Huge need for public access to parks and recreational areas in our township ▪ A 3-4 km walking trail through this property, will not impact adjacent landowners. A wooded walking trail system would be a beneficial addition to Burgess and our Township. 	<ul style="list-style-type: none"> ▪ How will traffic be managed in the area? ▪ Would like the area patrolled by the OPP if a park is developed ▪ Township knows nothing about operating parks, just donate the land ▪ Wildlife movement has changed due to the 10 foot high fence ▪ People will allow dogs off leash ▪ Garbage left over the place ▪ We have numerous parks and trails close by in every direction ▪ Cutting trees, constructing a graveled parking lot and trails that most likely of a gravel substance in a heavily wooded area does not seem to be sustainable use. ▪ Walking trail in a better suited area would seem a better choice. ▪ How many trees will have to be cut from this green space to accommodate a parking lot, to accommodate the walking trail ▪ How are abutting properties going to be protected from vandalism and trespassers ▪ How are trespassers going to be kept from crossing over fence and upsetting the livestock ▪ How does this site align with the kind of nature conservation the Township so proudly speaks off on their website? ▪ Worry about my safety ▪ Seems redundant when Murphy’s Point Park is 20 mins down the road and has trails for walking, cross-country skiing, bird watching and more already developed. ▪ More than enough recreation facilities in the area

4. Options Development

4.1 Township Vision for a New Public Park

The new public park is envisioned as a low-key, barrier-free trail amenity primarily for the local community. Proposed amenities are to support and enhance concepts of healthy living and well-being while providing opportunities for environmental education and interpretation and Indigenous Placemaking. The proposed trail is to be designed to accommodate walking, running, off-road family cycling, on-leash dog walking, snow shoeing, cross country skiing and other typical non-motorized trail uses. Complementary features such as an outdoor classroom area, informal nature play areas and/or resting and seating areas are to enhance the trail experience.

It is important to note that the intent is to add the trail and complementary features ‘gently’ on the land, preserving as much existing vegetation, trees and surface conditions as possible.

4.2 Precedent Examples of Forest Parks

Precedent projects selected for this site focus on ‘trail parks’ that are smaller in scale, meaning that the trail loops run from 300-400m to 1.2km. The precedents also include barrier-free trails which is a key priority for the Township.

Baird Trail, Lanark Highlands

The Baird Trail in [Lanark Highlands](#) is a highly rated 0.8 km circular trail. Various points are marked with ecological values including the largest maple and beech trees in the area. Old rail fences indicate farming practices of long ago and the forty year old red pine plantations under a Lanark County Forest Agreement provide a quiet sanctuary from the outside world. A sedge wetland in the middle of the property is halved by a boardwalk, affording a good view of typical wetland attributes. The trail is a combination of compacted soil with segments of boardwalks. Parking, picnic areas, washrooms and designated rest areas are also provided.

<https://www.ontariotrails.on.ca/index.php?url=trails/view/baird-trail>

Purdon Bog Trail, Lanark Highlands

Purdon Bog, in the Dalhousie Ward in Lanark Highlands, is famous during three or four weeks in June/July for its great display of showy ladies slippers (orchids). The boardwalk trail (there are two interconnected loops) is

wheelchair accessible and gives one a close-up of not only the pink orchids but yellow lady slipper, pitcher plant and many other woodland flora. The trail accesses a lookout over a small beaver-build lake and provides a meandering alignment through a variety of habitats that is frequented by birdwatchers. The trail is a combination of compacted soil with segments of barrier-free boardwalks. Parking and picnic areas are also provided.

<https://www.ontariotrails.on.ca/index.php?url=trails/view/purdon-bog-trail/>

Rondeau Provincial Park – Tulip Tree Trail, Morpeth, Ontario

This barrier free trail travels through a mature Carolinian forest and is mostly board-walked for handicap accessibility. [Hikers](#) will have an opportunity to see examples of Carolinian trees that are rare in Ontario such tulip trees, sassafras, and shagbark hickory.

This trail consists of many boardwalks with lookout points where sloughs and the wildlife that inhabit them are visible. Birdwatchers flock to this trail in May to enjoy the songbird migration and hope to catch a rare glimpse of the endangered Prothonotary Warbler in its prime breeding habitat. During the summer months, it’s not uncommon to see a common five-lined skink or eastern spiny softshell turtle, call Rondeau home. The site includes parking, potable water, picnic areas, washrooms, designated rest areas and camping.

<https://www.ontariotrails.on.ca/index.php?url=trails/view/tulip-tree-trail>

Key Take-aways From Precedent Review

- Each trail park/forest park has a unique theme or element that becomes part of the ‘trail brand’.
- Interpretive and educational information is provided.
- Trail loops of varying lengths are available, lengths are well marked.
- Barrier-free access is provided to all or segments of trails through the site.
- Parking is provided.
- Picnic and rest areas are provided.
- Washrooms and potable drinking water are not always provided.

4.3 Principles Guiding Design, Operation & Stewardship

- a) Develop park property as a passive, low-key trail amenity for the local community that provides features that support and enhance the trail use experience. At a minimum, the plan should provide:
- Vehicular access from Narrows Lock Road (County Road 14) and parking on site.
 - Connectivity to local cycling routes.
 - Primary access route through the site for emergency and maintenance circulation and for barrier-free circulation.
 - Looped trail segments of varying lengths, ensuring that all or most segments are

barrier-free. Provide clear signage describing loop lengths.

- Opportunities for outdoor education and nature appreciation.
 - Opportunities for resting, seating and picnicking.
 - Opportunities for low-key children’s nature play.
 - Features to support on-site, on-leash dog walking.
 - Connection to the wetland area.
- b) Integrate features and programming that are environmentally focused and can be integrated ‘gently’ to minimize interruption to drainage patterns, wildlife movement, vegetation etc.
- c) Work with the local Indigenous organizations to develop an appropriate placemaking concept for the site.
- d) Introduce trail features that encourage use of the site during all seasons of the year.
- e) Respect the proximity of adjacent private properties by establishing agreeable setbacks for new features and creating buffer planting areas that will screen trail uses from sight and reduce noise from trail users.
- f) Develop identity for the property that differentiates the proposed trail from other nearby trail properties. Capitalize on the unique site-specific environmental characteristics such the presence of Milksnake, rare tree species, wetland and Indigenous ‘high-ground’. Explore options for

site amenities that are not offered at other trail properties.

4.4 Potential Opportunities

Preliminary Site Analysis

Please note that the following site analysis section is based on information that was available to the consultant at the outset of the project. This information, as summarized earlier in this report was produced between 2010 and 2012. The analysis is not based on more current site investigations or inventories. As such, impressions of the site outlined in this section would be subject to any new information.

No Development Areas

There are some areas of the property where development may not be appropriate. For example, the swath of land between the pockets of private residential lots would place publicly accessible features too close to the properties. Additionally, the areas to the north and south of the proposed driveway access and parking area would be too close to views and noise from County Road 14 and may not be conducive to a forest trail experience. ‘No Development Areas’ could undergo invasive species management, hazardous tree repairs or removals and naturalization plantings.

Site Access and Parking

An application for a new driveway entrance has been approved by the Lanark County Public Works Department.

The location is indicated in the permission and is approximately 155m north from the Stanley Road / Narrows Lock Road intersection. The installation of the driveway would require a culvert. The access drive would provide a direct connection to a parking area close to the road but far enough away to screen the parking from view.

This location is approximated on Drawing EX-2 Preliminary Site Analysis.

Constrained Development Area

There are two ‘Constrained Development Areas’ noted on the drawing. This term refers to areas where site development could occur, however a specialized approach would be required. For example, there is a pocket of rare tree species in the south-west corner of the site. Site development could occur here, however, would need to be carefully implemented so as not to damage tree canopies or root systems.

The second area is noted as the narrow portion of the property that accesses the wetland. To the north-west. Contour mapping indicates that slopes are in the area of 1:10, which would mean that a direct path to the wetland would exceed 10% and would not be considered a barrier-free surface. Should barrier-free access be desired, a switch-back walkway would be required. Also, as this portion of the site is near the wetland, an elevated boardwalk may be required to minimize impact on the sensitive environment.

Regeneration Area

An approximately 20-30m wide swath of land immediately south of the fence line to the Burgess Solar Farm is an area that is in active regeneration. It is recommended that this area be left alone – over time, it is anticipated that natural progression will result in a vegetated buffer area.

Buffers

As per the guiding principles, it will be important to respect the proximity of adjacent private properties by establishing agreeable setbacks for new features and creating buffer planting areas that will screen trail uses from sight and reduce noise from trail users. Fencing may also be required and will be subject to consultation with the property owners.

Algonquian Indigenous Placemaking

Initial consultation with The Tay River Algonquian Community (TRAC) has provided a number of opportunities to integrate Indigenous heritage and cultural interpretation. Furthermore, the TRAC has provided an Indigenous perspective and has provided suggestions on how this new trail park site may respond to satisfies some of the truth and reconciliation recommendations.

It is highly recommended that the Township work with this group to develop a deeper understanding of the site characteristics and work towards developing an appropriate placemaking features.



Key Plan

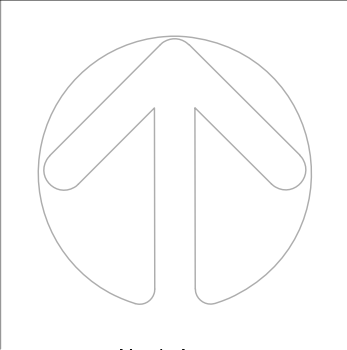
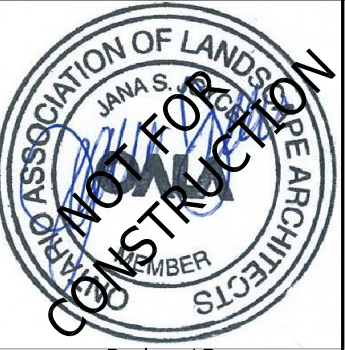


Legend

-  SITE BOUNDARY
-  CONSTRAINED AREA - SLOPES, SENSITIVE ENVIRONMENT
-  NO DEVELOPMENT AREA
-  SITE ACCESS AND PARKING AREA
-  REGENERATION AREA
-  TRAIL DEVELOPMENT AREA
-  BUFFER AREA
-  SENSITIVE DEVELOPMENT AREA - RARE FOREST

No	Date	Revisions	By

This drawing, as an instrument of service, is provided by, and is the property of the MBTW Group. The contractor shall check and verify all dimensions and report all errors and omissions to the Landscape Architect whose seal is affixed to this drawing before proceeding with the work. This drawing is not to be scaled.



Designed By

 225 Wickfield Ave., Unit 14 | Toronto, Ontario, Canada M6M 1S8
 T: (416) 468-7767 | F: (416) 468-1883 | www.mbtw-og.com

Project Name:
Tay Valley Parks Plan
 Municipality: Tay Valley Township, ON

Sheet Title:
Site Analysis

Designed:	Drawn:	Scale:	Drawing No.:
JSJ	XX	1:1000	SA-1
Date of Drawing:	Job No.:		
May 2021	SPM002		

Park/Trail Interpretive Themes

Background document review has revealed potential unique site elements that could be used to develop an identity for the park site. They include but are not limited to:

- Wildlife Interpretation:
 - Mammals – Deer, coyote, fox, racoon, porcupine, rabbits
 - Water fowl – Geese, ducks, herons, swans
 - Birds – Songbirds, robins, grouse, hawks, owls crows, woodpeckers
 - Invertebrates, amphibians – Milksnake, frogs, turtles
- Sugar bush
- Rare forest
- Alternative Energy Interpretation given proximity to the solar farm.

Forest Bathing & Healing Forest

The site may be a good location for a Healing Forest or Forest Bathing areas, in support of health and mental well-being. Incorporation of this type of activity could assist in making this site unique and distinct from other trail parks in the area. Infrastructure would be modest and may include elements such as tree planting, signage, sitting platforms and access paths.

[Healing in the forest: a guide to forest bathing \(ontarioparks.com\)](https://ontarioparks.com)

Proposed Program Elements

The public online survey for the site indicated which activities and features the community would like to see incorporated into the site. The following is a brief description of the key elements:

Parking

- Gravel or other permeable surfacing
- Non-invasive to drainage patterns
- Geometry to permit bus turning movements
- Quantity of spaces to be determined
- Securable gates at entrance
- Perimeter barrier (i.e. post and paddle fence) to contain vehicles

Trailhead

- Immediately adjacent to parking
- Seating and resting space
- Site wayfinding map
- Rules and regulation sign
- Community posting board
- Gate for maintenance or emergency access
- Litter / recycling container

Nodes

- Small scale gathering areas with resting/seating opportunities
- Wayfinding maps
- Interpretive theme
- Connected to trail at key decision making locations

- Litter/recycling collection (TBD)

Short Loop

- 1.85m in width – compacted granular material
- Max 5% longitudinal slope
- Approximately 700m in length
- Optional exercise stations along the way
- Trail signage and distance markers

Long Loop

- Primary access route for maintenance vehicles
- 1.85m in width – compacted granular material
- Max 5% longitudinal slope
- Approximately 1000m in length
- Trail signage and distance markers

Forest Boardwalk

- 100% barrier-free
- Slightly raised wood boardwalk feature with railings in areas where required
- Small looped alignment – distance? Connected to the Short Loop and Nodes
- Integrated outdoor learning area – closer to parking
- Integrated informal nature play area – closer to parking

Wetland Trail and Boardwalk

- Combination compacted earth trail and raised boardwalk – railings in areas where required
- Viewing **platform** at wetland

- Note: Not barrier-free
- Interpretive signage
- Seating and resting areas

Rare Forest Ramble

- Compacted earth trail

Screening & Buffers

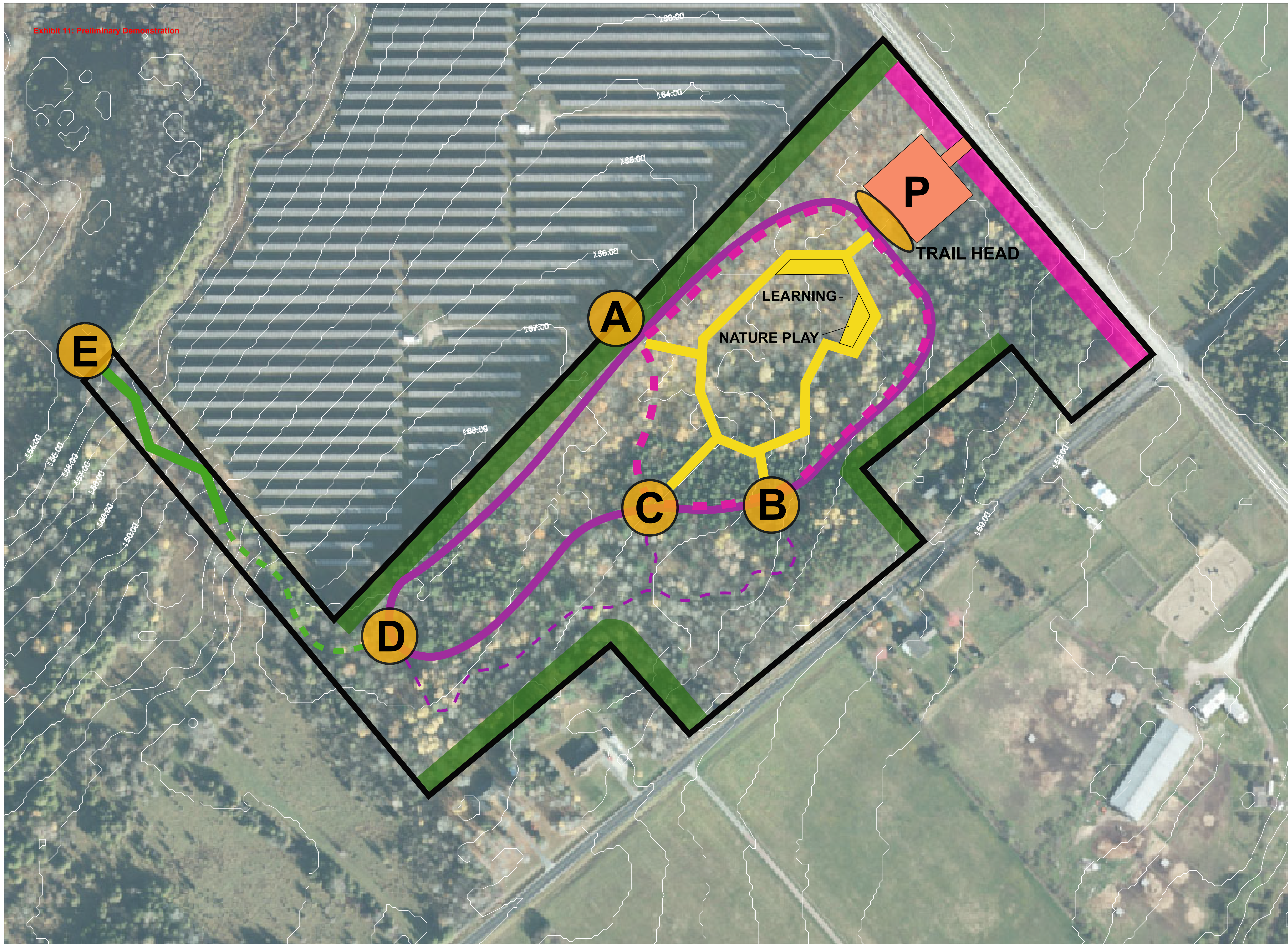
- Width to be determined
- At minimum, vegetative screening planting including conifers, deciduous trees and shrubs
- May include fencing upon consultation with private property owners

It is expected that Council and community feedback along with additional on-site investigations will cause adjustments to the Demonstration Plan. It is anticipated that even more adjustments will be required as the detailed design stage progresses, and proposed program elements are ground-truthed on site.

4.5 Demonstration Plan

The Demonstration Plan combines a preliminary understanding of the existing site conditions and site analysis with a spatial overlay of the established guiding principles. The Demonstration Plan graphically shows one approach to site organization for the purpose of generating meaningful discussion on how the site should be designed; it does not represent the final design.

Minimum trail and boardwalk widths are proposed as 1.85m (ft) which is in accordance with AODA standards and satisfies the requirements of emergency servicing via side-by-side UTV's. Trail widths could exceed 1.85m in areas where existing tree locations do not conflict with trail alignment. The removal of healthy trees for any site development shall be minimized.



Key Plan

Legend

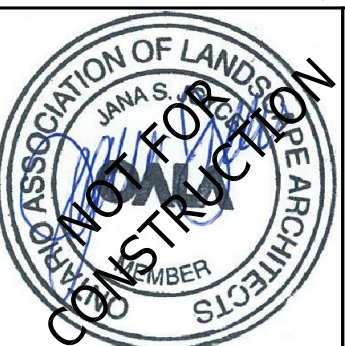
- SITE BOUNDARY
- FOREST BOARDWALK - 3M WIDTH
- 1KM TRAIL - 1.85M WIDTH
- 700M TRAIL LOOP WITH FITNESS EQUIPMENT
- RARE TREE WALK - 2M FOOT PATH
- WETLAND TRAIL - 2M WIDTH
- WETLAND BOARDWALK - 2M WIDTH
- NODE / TRAILHEAD
- GRAVEL PARKING
- EDGE TREATMENT
- SCREENING / BUFFER PLANTING

NODE THEMES

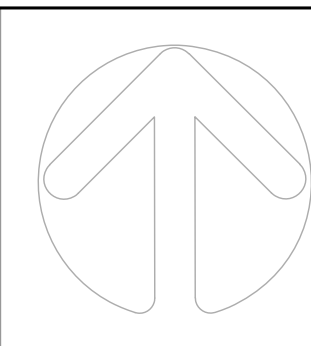
- ALTERNATIVE ENERGY
- WOODLAND CREATURES
- RARE FOREST
- INDIGENOUS PLACEMAKING
- WETLAND

No	Date	Revisions	By

This drawing, as an instrument of service, is provided by, and is the property of The MBTW Group. The contractor shall check and verify all dimensions and report all errors and omissions to the Landscape Architect whose seal is affixed to this drawing before proceeding with the work. This drawing is not to be scaled.



Designed By



North Arrow

the mbtw group
landscape architecture | urban design | design assistance | construction | golf design | leisure design
 235 Wilsford Ave., Unit 1A | Toronto, Ontario, Canada M6M 1S8
 T: (416) 449-7767 | F: (416) 449-1803 | www.mbtw.ca

Project Name:
Tay Valley Parks Plan
 Municipality: Tay Valley Township, ON

Sheet Title:
Preliminary Demonstration Plan

Designed: JSJ	Drawn: XX	Scale: 1:1000	Drawing No.: L-1
Date of Drawing: May 2021	Job No.: SPM002		

5. Capital Cost

The consulting team and Township staff undertook an order of magnitude cost estimating exercise for the project. These costs estimates are based on the design concepts put forward as part of this report and are reflective of the scale of amenities, lengths and types of trails, their nodes and other features expressed in the design ideas. As such, these cost estimates are subject to change should the design specifics change in any significant way.

Project costs are estimated at approximately \$840,000 including all expected hard construction, design and other soft costs as well as an allocation for contingency costs. At this scale of cost, it is essential to present capital outlays in a manner that aligns with a predictable capital funding strategy. Accordingly, the project is broken out into a series of logical phases – five in total. This break-out is based on achieving a logical and progressive development of the park from its inception to enable public access through to the development of interpretive nodes and boardwalks over time once the park, its operation and benefit to the community is firmly established in practice. In addition, phasing is further reconciled based on likely funding sources which avoid the necessity of tax-supported funding.

Exhibit 12: Estimate of Construction Costs - Phase 1

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
1.0	Trails					
1.1	Primary Trail - 1000m (1.85m width) (Stabilized Granular)	1850	m2	\$ 35.00	\$ 64,750.00	ICIP Grant
1.2	Fitness Trail - 150m (1.85m width)	280	m2	\$ 35.00	\$ 9,800.00	ICIP Grant
2.0	Parking Area					
2.1	Driveway Entrance	75	m2	\$ 60.00	\$ 4,500.00	Development Charges
2.2	Culvert	1	ea	\$ 2,000.00	\$ 2,000.00	Development Charges
2.3	Gravel Parking Area (10 Parking Spaces)	325	m2	\$ 43.00	\$ 13,975.00	Development Charges
2.4	Site Identification Sign	1	ea	\$ 1,000.00	\$ 1,000.00	COVID Funds
2.5	Site Map/Orientation Sign	1	ea	\$ 7,500.00	\$ 7,500.00	COVID Funds
4.0	Vegetation & Planting					
4.1	Fencing (Back of Residential Properties)	300	m	\$ 125.00	\$ 37,500.00	COVID Funds, Development Charges
5.0	Furnishings					
5.1	Fitness Equipment	6	LS	\$ 5,000.00	\$ 30,000.00	ICIP Grant, COVID Funds
5.2	Benches	3	LS	\$ 1,200.00	\$ 3,600.00	COVID Funds, Donations
5.3	Picnic Tables	2	LS	\$ 1,200.00	\$ 2,400.00	COVID Funds, Accessibility Reserve
5.4	Waste/Recycling Receptacle	1	LS	\$ 3,500.00	\$ 3,500.00	COVID Funds
5.5	Bike Rack	1		\$ 1,700.00	\$ 1,700.00	ICIP Grant, COVID Funds
	Subtotal				\$ 182,225.00	
	Consulting Fees (15%)				\$ 11,182.50	Based on construction costs only 1.0
	Construction Start Up Allowance (Incl. mobilization, control measures, tree				\$ 2,236.50	3% of construction
	Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing,				\$ 2,982.00	4% of construction
	Additional Studies & Permitting Allowance				\$ 2,500.00	Estimated
	Subtotal Incl. Allowances				\$ 201,126.00	
	Contingency (15%) Excl. Allowances				\$ 11,182.50	Based on construction costs only 1.0
	SUBTOTAL =				\$ 212,308.50	

- Notes: 1 All costs are an estimate of probable cost and will be subject to further study, approvals and detailed design.
 2 Unit prices are as per 2021 costs.
 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 4 All funding for Phase 1 has already been retained.

The entire project costing by phase is contained in Appendix B. Exhibit 1 shows the capital costs for items that comprise Phase 1 and which can be implemented in the immediate term. The funding sources for this phase are also shown. Exhibit 2 shows the summary of all phases as currently configured.

Should capital funds become available over and above the amounts from known funding sources, it is possible that phasing will be reassessed and the number of phases reduced to enable full build-out of the park earlier.

Exhibit 13: Costing Summary of All Phase

ITEM NO	ITEM DESCRIPTION	TOTAL COST
1.0	Phase 1	\$ 212,308.50
2.0	Phase 2	\$ 67,986.00
3.0	Phase 3	\$ 110,731.25
4.0	Phase 4	\$ 363,500.00
5.0	Phase 5	\$ 86,070.00
Grand Total All Phases		\$ 840,595.75

- Notes:
- 1 All costs are an estimate of probable cost and will be subject to further study, approvals and detailed desi
 - 2 Unit prices are as per 2021 costs.
 - 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 - 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.
 - 5 All funding for Phase 1 has already been retained.

6. Implementation

6.1 Next Steps

The present report represents the consolidation of relevant background research, survey research, analysis of planning policy and the development of an approach and philosophy to meeting the goals of balanced public access and protection of natural habitat. As presented, the demonstration of possible trail locations are themselves subject to revision and refinement, and dependent on the next steps in the work that is required to arrive at a plan which meets the following objectives:

1. Successfully implements the longstanding commitment of the municipality to develop a public accessible trail in this location;
2. Meet the goals of the recently approved Parks and Recreation Master Plan for the Township;
3. Maintain effective stewardship of the lands dedicated to the Township in this location, including the potential for effective forest management planning;
4. Mitigate impacts associated with perceived or actual loss of residential or other property amenity as a result of the park.
 - a. As noted, this begins with ongoing engagement with adjacent and nearby landowners;

- b. The production and iteration on effective design of trail elements;
- c. a clear strategy with community support regarding the appropriate level of basic amenities located at the site (parking area; information signage/trailhead, best practice with respect to restroom provisions on seasonal or permanent basis);
- d. boundary treatment to ensure protection of residential amenity;
- e. and consideration of traffic management related to access and egress from the site;

3. Upon final receipt of project funding approvals, consider in detail an effective operations plan and present to council along with required operating budget.

In order to meet these objectives, the following steps are to be considered:

1. Conduct a public review of the current draft report to solicit community feedback and comment; upon receipt of comment host a public meeting to consider the nature and impact of comments on the overall concept and feasibility of the park, with a view to achieving satisfactory design and operational plans;
2. Follow -up with existing invitations to provide comment with all indigenous organizations and communities to ensure that the opportunity for input is provided and that any comments can be



Appendix A

APPENDIX A: Baird Trail - Lanark Highlands – Draft for Discussion

LANARK COUNTY

COMMUNITY FOREST

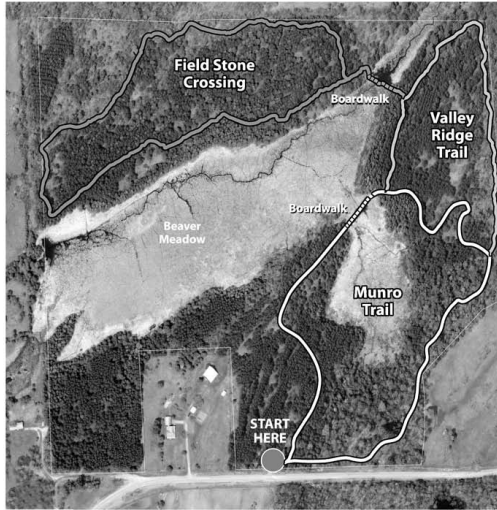
Baird Trail

1024 Herron Mills Road (County Road 8)

Welcome to Baird Trail featuring three distinct loops, each offering a different picture of the natural and cultural features of the Baird Property.

-  **Munro Trail**
(1220m) Easy
-  **Valley Ridge Trail**
(620m) Easy
-  **Fieldstone Crossing**
(1335m) Moderate

For more information call 1 888 452 6275 or visit www.lanarkcountytourism.ca



ONTARIO
MINISTRY OF
NATURAL RESOURCES
AND FORESTRY



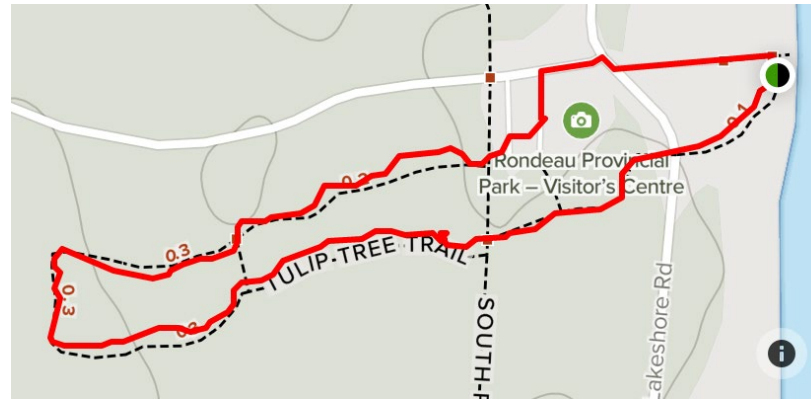
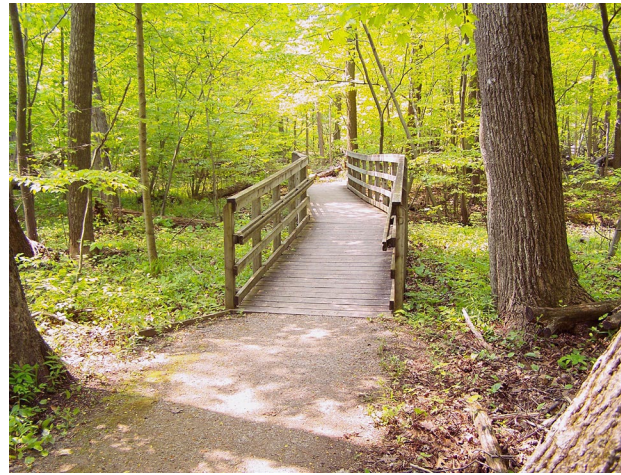
EASTERN ONTARIO
MODEL FOREST
PARTNER



APPENDIX A: Purdon Bog Trail – Lanark Heights – Draft for Discussion



APPENDIX A: Rondeau Trail – Morpeth – Draft for Discussion





Appendix B

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Project Breakdown

PHASE 1

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
1.0 Trails						
1.1	Primary Trail - 1000m (1.85m width) (Stabilized Granular)	1850	m2	\$ 35.00	\$ 64,750.00	ICIP Grant
1.2	Fitness Trail - 150m (1.85m width)	280	m2	\$ 35.00	\$ 9,800.00	ICIP Grant
2.0 Parking Area						
2.1	Driveway Entrance	75	m2	\$ 60.00	\$ 4,500.00	Development Charges
2.2	Culvert	1	ea	\$ 2,000.00	\$ 2,000.00	Development Charges
2.3	Gravel Parking Area (10 Parking Spaces)	325	m2	\$ 43.00	\$ 13,975.00	Development Charges
2.4	Site Identification Sign	1	ea	\$ 1,000.00	\$ 1,000.00	COVID Funds
2.5	Site Map/Orientation Sign	1	ea	\$ 7,500.00	\$ 7,500.00	COVID Funds
4.0 Vegetation & Planting						
4.1	Fencing (Back of Residential Properties)	300	m	\$ 125.00	\$ 37,500.00	COVID Funds, Development Charges
5.0 Furnishings						
5.1	Fitness Equipment	6	LS	\$ 5,000.00	\$ 30,000.00	ICIP Grant, COVID Funds
5.2	Benches	3	LS	\$ 1,200.00	\$ 3,600.00	COVID Funds, Donations
5.3	Picnic Tables	2	LS	\$ 1,200.00	\$ 2,400.00	COVID Funds, Accessibility Reserve
5.4	Waste/Recycling Receptacle	1	LS	\$ 3,500.00	\$ 3,500.00	COVID Funds
5.5	Bike Rack	1		\$ 1,700.00	\$ 1,700.00	ICIP Grant, COVID Funds
Subtotal					\$ 182,225.00	
<i>Consulting Fees (15%)</i>					<i>\$ 11,182.50</i>	<i>Based on construction costs only 1.0</i>
<i>Construction Start Up Allowance (Incl. mobilization, control measures, tree</i>					<i>\$ 2,236.50</i>	<i>3% of construction</i>
<i>Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing,</i>					<i>\$ 2,982.00</i>	<i>4% of construction</i>
<i>Additional Studies & Permitting Allowance</i>					<i>\$ 2,500.00</i>	<i>Estimated</i>
Subtotal Incl. Allowances					\$ 201,126.00	
Contingency (15%) Excl. Allowances					\$ 11,182.50	<i>Based on construction costs only 1.0</i>
SUBTOTAL =					\$ 212,308.50	

- Notes:
- All costs are an estimate of probable cost and will be subject to further study, approvals and detailed design.
 - Unit prices are as per 2021 costs.
 - Donations have not been factored into the funding sources but are mentioned as a possibility.
 - All funding for Phase 1 has already been retained.

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Project Breakdown

PHASE 2

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
1.0	Trails					
1.6	Rare Tree Walk (1m wide wood chip path)	780	m2	\$ 10.00	\$ 7,800.00	Development Charges
3.0	Nodes					
3.1	Node A - Alternative Energy Theme	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Capital Reserve/ Donations
3.2	Node B - Woodland Creatures	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Capital Reserve/ Donations
3.3	Node C - Rare Forest	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Capital Reserve/ Donations
3.4	Node D - Indigenous Place	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Capital Reserve/ Donations
Construction Subtotal					\$ 47,800.00	
<i>Consulting Fees (15%)</i>					<i>\$ 7,170.00</i>	<i>Based on construction costs only</i>
<i>Construction Start Up Allowance (Incl. mobilization, control measures, tree protection, construction</i>					<i>\$ 1,434.00</i>	<i>3% of construction</i>
<i>Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing, invasive species</i>					<i>\$ 1,912.00</i>	<i>4% of construction</i>
<i>Additional Studies & Permitting Allowance</i>					<i>\$ 2,500.00</i>	<i>Estimated</i>
Subtotal Incl. Allowances					\$ 60,816.00	
Contingency (15%) Excl. Allowances					\$ 7,170.00	<i>Based on construction costs only</i>
SUBTOTAL 1.0 =					\$ 67,986.00	

- Notes: 1 All costs are an estimate of probable cost and will be subject to further study, approvals and detailed design.
 2 Unit prices are as per 2021 costs.
 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Project Breakdown

PHASE 3

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
1.0 Trails						
1.4	Wetland Boardwalk (1.5m width with railings)	195	m2	\$ 300.00	\$ 58,500.00	Recreation Capital Reserve, Grant
1.5	Wetland Trail (1.85m width)	275	m2	\$ 35.00	\$ 9,625.00	Cash in Lieu of Parkland
3.0 Nodes						
3.5	Node E - Wetland	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Capital Reserve, Donations
5.0 Furnishings						
5.2	Benches	2	LS	\$ 1,200.00	\$ 2,400.00	Recreation Fundraising Reserve, Donations
Subtotal					\$ 80,525.00	
<i>Consulting Fees (15%)</i>					<i>\$ 10,218.75</i>	<i>Based on construction costs only 1.0</i>
<i>Construction Start Up Allowance (Incl. mobilization, control measures, tree protection,</i>					<i>\$ 2,043.75</i>	<i>3% of construction</i>
<i>Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing, invasive</i>					<i>\$ 2,725.00</i>	<i>4% of construction</i>
<i>Additional Studies & Permitting Allowance</i>					<i>\$ 5,000.00</i>	<i>Estimated</i>
Subtotal Incl. Allowances					\$ 100,512.50	
Contingency (15%) Excl. Allowances					\$ 10,218.75	<i>Based on construction costs only 1.0</i>
SUBTOTAL 1.0 =					\$ 110,731.25	

- Notes:
- 1 All costs are an estimate of probable cost and will be subject to further study, approvals and detailed design.
 - 2 Unit prices are as per 2021 costs.
 - 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 - 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Project Breakdown

PHASE 4

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
1.0	Trails					
1.3	Forest Boardwalk (3m width)	1200	m2	\$ 200.00	\$ 240,000.00	Grant
3.0	Nodes					
3.6	Outdoor Learning Area	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Program Reserve, Grant
3.7	Nature Play Area	1	ea	\$ 10,000.00	\$ 10,000.00	Recreation Program Reserve, Grant
5.0	Furnishings					
5.2	Benches	1	LS	\$ 1,200.00	\$ 1,200.00	Cash in Lieu of Parkland, Donations
5.3	Picnic Tables	3	LS	\$ 1,200.00	\$ 3,600.00	Cash in Lieu of Parkland, Donations
				Subtotal	\$ 264,800.00	
				Consulting Fees (15%)	\$ 39,000.00	Based on construction costs only 1.0 & 3.0
				Construction Start Up Allowance (Incl. mobilization, control measures, tree protection, Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing, invasive	\$ 7,800.00	3% of construction
				Additional Studies & Permitting Allowance	\$ 10,400.00	4% of construction
					\$ 2,500.00	Estimated
				Subtotal Incl. Allowances	\$ 324,500.00	
				Contingency (15%) Excl. Allowances	\$ 39,000.00	Based on construction costs only 1.0 & 3.0
				SUBTOTAL 1.0 =	\$ 363,500.00	

- Notes:
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 - 2 Unit prices are as per 2021 costs.
 - 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 - 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Project Breakdown

PHASE 5

ITEM NO	ITEM DESCRIPTION	EST. QTY.	UNIT TYPE	UNIT PRICE	TOTAL COST	FUNDING SOURCE
2.0	Parking Area					
2.3	Gravel Parking Area Expansion (From 10 Parking Spaces to 20)	1	LS	\$ 21,000.00	\$ 21,000.00	Recreational Capital Reserve
5.0	Furnishings					
5.6	Shelter	1	LS	\$ 40,000.00	\$ 40,000.00	Grant
	Construction Subtotal				\$ 61,000.00	
	Consulting Fees (15%)				\$ 9,150.00	Based on construction costs only
	Construction Start Up Allowance (Incl. mobilization, control measures, tree protection, construction layout) (3%)				\$ 1,830.00	3% of construction
	Demolition & Site Works Allowance (Incl. demo., tree removals, pruning/limbing, invasive species removal, Additional Studies & Permitting Allowance)				\$ 2,440.00	4% of construction
					\$ 2,500.00	Estimated
	Subtotal Incl. Allowances				\$ 76,920.00	
	Contingency (15%) Excl. Allowances				\$ 9,150.00	Based on construction costs only
	SUBTOTAL 1.0 =				\$ 86,070.00	

- Notes:
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 - 2 Unit prices are as per 2021 costs.
 - 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 - 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.

Tay Valley Forest Park

Final Draft: 2021 08 23

Estimate of Construction Cost - Summary

PHASES 1-5

ITEM NO	ITEM DESCRIPTION	TOTAL COST
1.0	Phase 1	\$ 212,308.50
2.0	Phase 2	\$ 67,986.00
3.0	Phase 3	\$ 110,731.25
4.0	Phase 4	\$ 363,500.00
5.0	Phase 5	\$ 86,070.00
	Grand Total All Phases	\$ 840,595.75

- Notes:
- 1 All costs are an estimate of probable cost and will be subject to further study, approvals and detailed design.
 - 2 Unit prices are as per 2021 costs.
 - 3 Donations have not been factored into the funding sources but are mentioned as a possibility.
 - 4 Funding for Phases 2-5 has not yet been obtained. Funding sources may be subject to change over time.
 - 5 All funding for Phase 1 has already been retained.



Tay Valley Township

