

Trails Master Plan

August 2022



Portugal Cove
St. Philip's

Acknowledgments

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With Special Thanks To

Residents of Portugal Cove-St. Philip's

Portugal Cove-St. Philip's Chamber of Commerce

Portugal Cove-St. Philip's Advisory Committee on the Environment

Portugal Cove-St. Philip's Heritage Committee

Portugal Cove-St. Philip's Tourism Working Group

Portugal Cove-St. Philip's Inclusion Committee

Portugal Cove-St. Philip's Hiking and Walking Club

East Coast Trail Association

Avalon Mountain Bike Association

Scouts Canada

Recreational ATV users

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Contents

Introduction	1
Guiding Principles	2
Planning Process	4
Understanding the Context	5
The Need for Trails	5
Benefits of Trails	6
Planning Context	8
Community Engagement	15
Stakeholder Meetings	15
Community Open House	15
Online Survey	16
Key Themes	16
Trail Inventory & Analysis	19
Existing Trail Analysis	19
Key Findings in the Field	20
Recommendations	21
Design Standards & Best Practices	21
Trail Network Development	53
Trail Network Overall Map	56
Trail 1: Broad Cove River	59
Trail 2: Skinners Road	60
Trail 3: Dogberry Hill Road Pole Line	61

Trail 4: Rainbow Gully Park Extension	63
Trail 5: Rainbow Gully Park to Healys Pond	64
Trail 6: Little Powers Pond Road to Little Powers Pond	65
Trail 7: Old Broad Cove Road to Tuckers Hill Road	67
Trail 8: Knapps Road to Witch Hazel Drive	68
Trail 9: Beachy Cove Brook and Conservation Area	69
Trail 10: Beachy Cove Hill to Nearys Pond Road	70
Trail 11: Nearys Pond and Western Round Pond Loop	73
Trail 12: Nearys Pond Road to Mercers Road	74
Trail 13: Princes Mountain Lookout	75
Trail 14: Main River	77
Trail 15: Blast Hole Ponds Conservation Area	78
Trail 16: Blast Hole Ponds Mountain Biking Area	79
Trail 17: Blast Hole Ponds to Bauline Line	79
Trail 18: Portugal Cove Road to Windsor Heights	83
Trail 19: Portugal Cove Road Pole Line	84
Implementation	86
Roles and Responsibilities	86
Detailed Design Process	88
Setting Priorities	93
Partnerships and Funding Opportunities	98
Post-Trail Construction	103
Other Resources	106
Appendices	107
Appendix A - Raw Engagement Data	107

Introduction

“A sustainable and complete community, offering residents and visitors access to connected and safe neighbourhoods, natural open spaces, agricultural lands and soaring coastlines. A vibrant heritage combined with increased economic opportunities create a preferred place for people to live and grow, to be close to work, to pursue recreation, to invest and to visit.”

- Our Vision

Since amalgamating in 1992, the Town of Portugal Cove-St. Philip's has maintained a steadfast commitment to preserving its natural environment, strong sense of place, and rural quality of life. To further this position and to ensure the community remains a desirable place in which to live, work, and play well into the future, the Town has committed to providing high-quality recreation infrastructure and community services for its residents. This is evident in the significant investment already made in public facilities such as Rainbow Gully and Voisey's Brook Parks.

The community's trails are another of its strongest assets and provide residents and visitors with access to picturesque landscapes and outstanding nature-based and outdoor experiences. As such, the Town has identified expansion and development of its trail network as a priority. A planned and thoughtful approach to trail development is needed, however, to ensure that the desire to enjoy the community's incredible landscapes is carefully balanced with the need to protect them. We must avoid doing anything that inadvertently takes away from the very qualities we love about these spaces and ensure that they remain protected and enjoyable for future generations.

The purpose of this plan will be to develop a road map or guiding document for the future development, improvement, and enhancement of the trail network in Portugal Cove-St. Philip's over time. It also provides a framework for future investment in the trail network by ensuring that funding is allocated where most beneficial to the community and its residents. And, perhaps most importantly, it defines a vision for trail development that protects and enhances the cherished cultural landscapes of Portugal Cove-St. Philip's well into the future.

Guiding Principles

Guiding principles are a set of strategic statements that summarize the focus and desired outcomes for the project. They represent the fundamental things that must be kept top of mind moving forward and become the yardstick upon which recommendations are based and projects are prioritized. The following guiding principles have been developed for this Trails Master Plan:



Improve connectivity and access to local destinations and surrounding communities.

- Map important destinations within the community and determine where new trail routes can be developed to facilitate safe access;
- Consider trail routes that connect to existing trails in neighbouring communities;
- Identify connectivity gaps in the community, and ensure that the new trail network serves those areas and contributes to closing those gaps.



Protect the natural environment and the community's rural sense of character.

- Use the Town's mapping data to inform trail routes such that sensitive landscapes including steep slopes, wetlands, and water bodies are preserved;
- Provide formal routes that encourage users to stick to the trail, therefore protecting the surrounding natural environment;
- Within the trail network, provide access to existing natural features and destinations.



Create a trail network that provides year-round recreation opportunities for different user groups.

- Based on community feedback, priority user groups should include walkers, hikers, mountain bikers, skiers, and snowshoers. ATV and snowmobile routes should be included in the plan, but should not be prioritized as highly as the other user groups;
- For hikers and walkers, prioritize trails that help fulfill Guiding Principle #1 (above) - community feedback made it clear that new destination trails (like the East Coast Trail) should not be the priority;

- For mountain bikers, focus on the development of a destination trail system that can serve the entire region;
- Incorporate shared-use trails where possible;
- Consider signage to improve trail accessibility and use in the winter months when the trail route may not be clearly visible.



Prioritize sustainability.

- Follow trail design best practices and standards to ensure trails are built to a high quality, are inclusive, and sustainable;
- Consider trail maintenance and longevity during the trail planning process;
- Consider financial resources when prioritizing trail developments.

Planning Process

The development of this Master Plan included several project stages as follows.

Information Gathering & Background Review

This phase represents the foundational work necessary to guide future project phases and included assembling community mapping; reviewing current municipal planning documents; performing desktop trail analyses; field work; and reviewing emerging trends and best practices in trail development.

**Information Gathering &
Background Review**

Community Engagement

This phase included engagement sessions with key informants, trail users, and residents of Portugal Cove-St. Philip's to gain an understanding of opportunities and challenges that existed with the current trail network. Due to the ongoing pandemic, all engagement sessions were completed online.

Community Engagement

Development of Recommendations

Strongly informed by the findings of the previous phases, this project phase included development of specific strategies and action plans that will allow the community to achieve its trail development goals over time.

**Development of
Recommendations**

Submission of Final Report to Council

This final stage included the compiling and presenting of all information in a report to be used as an essential planning tool by Council and Town Staff.

**Submission of Final
Report to Council**

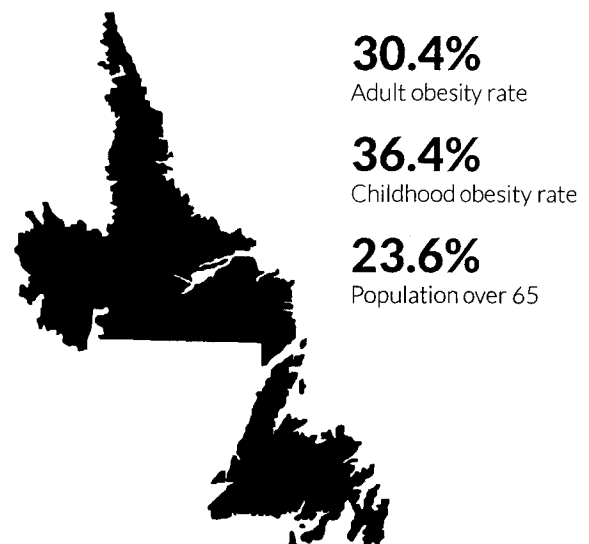
Understanding the Context

The Need for Trails

The rationale for investing in trails is well-researched and documented. Ample evidence exists that suggests developing trails promotes a healthy, active lifestyle and has been shown to provide a number of social, health, environmental, and economic benefits, which are summarized in this section. According to recent research, perhaps no other province stands to gain as much from these numerous benefits as Newfoundland and Labrador.

Statistics Canada data (2018) has suggested that Newfoundland and Labrador's rates of adult obesity (30.4%) and childhood obesity (36.4%) are both higher than the national average. In fact, according to Statistics Canada, 1 in 3 Newfoundlanders and Labradorians are considered obese. This trend is significant and alarming as obesity has been shown to contribute to several serious health risks and weight-related diseases, such as diabetes and heart disease, as well as increase the burden on the healthcare system. Further, obesity has been linked with psychological and performance disorders such as anxiety and depression. Research suggests there may be several reasons for this trend, however most agree that an increase in sedentary lifestyles and simultaneous decrease in physical activity have been contributing factors. Obesity, however, is a preventable disease and one of the most effective ways to reduce obesity rates is through increasing physical activity. Trails promote active living by providing flexible, enjoyable recreation opportunities that allow users to participate at their own pace and skill level.

Newfoundland and Labrador has also been noted as having the country's oldest and most rapidly-aging population. As of 2021, 23.6% of the provincial population was over the age of 65, and this is expected to continue to grow in the coming years. This trend requires a shift in the way we think about developing age-friendly communities that accommodate a safe, healthy, and independent lifestyle. People are living longer and are seeking ways to maintain their health. Further, people are preferring to age in place, meaning they are staying longer in their communities. Studies



have shown that a significant factor for healthy aging is an active lifestyle. Trail access provides a low-cost, easily-accessible opportunity for seniors to exercise regularly, maintain independence and mobility, and reduce feelings of isolation or depression through socializing with other members of the community.

Benefits of Trails

Trails are a vital part of a community. These are important public spaces where residents and visitors gather, socialize, and recreate. When designed and implemented thoughtfully, trails become an extension of the community itself, highlighting values such as personal and economic health and well-being and creating a distinct sense of place. Trails encourage and enable an active lifestyle by providing opportunities to increase physical activity, offsetting some of the alarming trends previously discussed. They encourage alternative methods of transportation, such as walking, jogging, and cycling, which contribute to improvements in physical and mental health and less wear and tear on infrastructure like roads. The many environmental benefits of trails include carbon reduction, stormwater retention, air and water pollution reduction, and increased environmental awareness and stewardship.



Social Benefits

- Trails provide users with the opportunity to connect with other trail users in their community, fostering social interactions and relationships;
- Due to their low cost and low barrier to entry, trails are socially equitable and accessible to all members of a community;
- Trails can tie together several parts of a community, encouraging residents to explore and increasing awareness of a community's amenities, services, and attractions;
- Trails can showcase a community's natural and cultural character and history;
- Trails adjacent to residential areas often become sources of pride for a community;
- Trail stewardship encourages resident ownership and can provide a sense of place attachment;
- Trails can help to increase the overall appeal, quality of life, and identity of a community.



Health & Well-Being Benefits

- Trails promote a healthy and active lifestyle by providing access to recreational opportunities such as walking, jogging, or cycling;
- Active living has been shown to significantly reduce mental and physical health issues such as obesity, stress, and depression, while positively increasing feelings of well-being, satisfaction, and morale;
- Trails allow users to exercise at their own pace and comfort level.



Environmental Benefits

- Trails that connect with parks, open spaces, and environmentally sensitive areas increase exposure to nature and promote environmental awareness and stewardship;
- As part of a larger green space network, trail corridors can provide valuable ecosystem services such as carbon capture, heat island mitigation, rainwater infiltration, and increasing habitat and biodiversity;
- Trails can reduce greenhouse gas emissions by encouraging alternative modes of transportation such as walking and cycling.



Economic Benefits

- Residential properties with convenient access to trails and open spaces have been shown to be more desirable in the housing market which can lead to increased property values;
- Higher property values can lead to increased tax revenues for a municipality;
- Trails can help to improve the overall appeal of a community to visitors which can lead to increased tourism. When connected to cultural or natural community assets, trails themselves can become a tourism attraction and lead to increased tourism-based economic activity;
- By encouraging active living, trails can lead to indirect savings on healthcare services;
- Studies have shown that trail users are likely to spend money adjacent to trails if the option is there;

- Businesses that set up adjacent to trails or provide access to trail connections can experience increased economic activity;
- Trails provide meaningful recreational opportunities which may lead to decreased instances of vandalism, loitering, or other illicit activity;
- There is evidence that trails will play an important role in helping revive the tourism industry post-pandemic.

Planning Context

To gain an understanding of the existing municipal and regulatory environment, trail planning work that has already been completed, and to ensure the Trails Master Plan remains aligned with previous goals and objectives related to trail development, several previous planning documents and studies were reviewed.

Portugal Cove-St. Philip's Municipal Plan (2014-2024)



The Portugal Cove-St. Philip's Municipal Plan establishes guidelines and policies for managing future growth and development of the Town by providing a land use strategy for the ten year period 2014 to 2024. It outlines Council's policies for overall land use development, for provision of community amenities, and for watershed and environmental protection, with the primary intent being to encourage and to work towards a healthy, safe, economically prosperous, and a more complete and sustainable community.

Priorities for trail development identified within the Municipal Plan include:

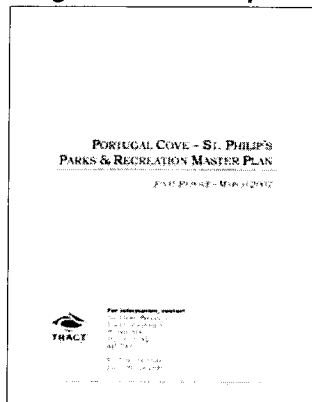
- **Policy GLU-12:** Council supports the development of the East Coast Trail as delineated on the Generalized Future Land Use Map and shall encourage landowners along the proposed route to cooperate in facilitating the trail's development.
- **Policy GLU-13:** Within the constraints of municipal resources, Council shall work with trail proponents, residents, and landowners to develop the East Coast Trail through the town.

- **Policy GLU-14:** Council may encourage, and sometimes shall require, lands to be set aside from active development in order to protect, maintain, or improve an environmental resource or sensitive natural feature. These lands may be used for uses such as woodlands, fields, walking trails, and passive recreational facilities, but shall not include structures such as buildings, tennis courts, parking lots, or other impervious land uses.
- **Development Scheme Area #3: Carew Drive/Old Cart Road:** Integration of watercourse from Western Pond into community design; and, Connection to trail system on Greyman's Beard Hill and Princess Lookout.
- **Development Scheme Area #4: Neary's Pond/Western Round Pond:** Public access to Neary's Pond and Western Round Pond shorelines; Connections to trail system on Beachy Cove Hill, Greyman's Beard Hill and Princess Mountain Lookout; and, Site design that is sensitive to steep slopes.
- **Development Scheme Area #8: St. Thomas Line:** Public access to the coastline and integration with the East Coast Trail; and, Site design that is sensitive to steep slopes and scenic coastal views.
- **Development Scheme Area #9: Tucker's Hill:** Public access to the coastline and integration with the East Coast Trail; and, Site design that is sensitive to steep slopes and scenic coastal views.
- **Policy TC-3:** Council shall pursue the development of appropriate recreational facilities such as parkland and trails near the Bell Island Ferry Terminal, on the south side of Portugal Cove, north of the small craft harbour in St. Philip's, and along the coastline.
- **Policy TC-8:** Council shall pursue a program of identifying and preserving traditional walking trails and hiking trails in the Traditional Community designation. Particular attention will be paid to preserving public access to beaches and shoreline areas.
- **Policy ROS-1:** Council shall encourage uses such as parklands, sports fields, playgrounds, trail systems, and conservation initiatives as primary permitted uses.
- **Policy ROS-3:** It shall be a policy of Council to explore the development of a linear park system for Portugal Cove-St. Philip's to accommodate a range of recreational activities such as hiking, mountain biking, cross country skiing, rock climbing, canoeing, and photographic tours. Facilities such as rest areas, picnic areas and interpretation signage are envisioned to be included. The trail system will incorporate

a series of linear spaces parallel to the shorelines of Broad Cove River, Main River, and Beachy Cove River, as well as incorporating the trails for the expanded Voisey's Brook Park. The linear system will also facilitate walking trails to scenic viewpoints and seek to expand and enhance pedestrian mobility opportunities within the historical communities of Portugal Cove and St. Philip's. Many traditional local trails and pathways will be connected to the linear park system.

- **Policy ROS-4:** Council shall support opportunities to integrate the linear park system with the East Coast Trail as much as possible.
- **Policy ROS-5:** Council will encourage local residents, landowners and private developers to cooperate with trail developers by facilitating access through and adjacent to private properties.
- **Policy ROS-6:** Within the constraints of municipal resources, it shall be a policy of Council to assist and facilitate trail development.
- **Policy ROS-7:** Where possible, Council will encourage a buffer on either side of an inland trail in order to provide a right-of-way that is appropriate to its context within the community.
- **Policy PW-3:** Council shall additionally refer all proposed land and resource discretionary uses for antenna, forestry, passive recreational uses such as hiking trails, and any other development activity, proposed to be located within the designated watershed areas to the Department of Environment and Conservation for prior approval.

Portugal Cove-St. Philip's Parks & Recreation Master Plan (2007)



The purpose of the Parks & Recreation Master Plan is to provide long-range parks and recreation planning guidelines, prepare conceptual plans for park infrastructure and identify recreation programming priorities, and to clearly articulate recreation development strategies for the Town, keeping in mind annual funding available for such services and facilities.

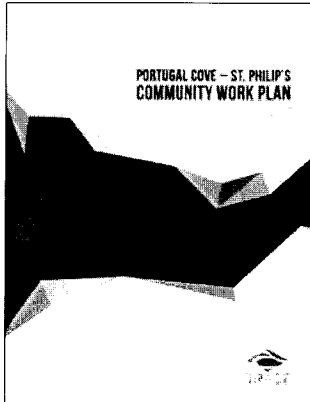
Priorities for trail development identified within the Parks & Recreation Master Plan include:

- The “most important” outdoor facilities were neighbourhood playgrounds (87%), walking trails (82%), and Town park (79%).
- Considering both indoor and outdoor facilities, the highest rated amenities were walking trails (49%), a swimming pool (37%), and a multipurpose facility (30%).
- There are numerous informal walking trails, and trails for ATVs and snowmobiles. These need to be refined, formalized, signed, and connected to recreation facilities.
- Integrating parks and open spaces with new residential developments is very important to maintain the character of the community.
- Enshrining access to linear parks systems and trails, particularly along the coastline and ponds, is critical.
- Generally parks and open spaces are located on the perimeter of the community. Integrate these spaces better throughout.
- A series of linked trails should be developed to connect major parks and recreation facilities. Generally speaking, multi-purpose trails for snowmobiles and ATVs should be developed along the community's southeast boundary. A bicycle trail link is proposed as a connection between the community and the Beachy Cove Edu-Rec Centre. The East Coast Trail is proposed as the predominant coastal hiking trail with links to most facilities. Specific trails loops and courses for BMX and mountain bikes, etc. are proposed for the northern section of the community and link to the Adventure Centre.
- A series of localized walking and bicycle trails should be developed to link to the community-wide trail system. The Town should make better use of its abundance of ponds. The riparian corridor around each pond in the town's developed areas should be secured and walking trails around select ponds constructed. Trail gateways and staging areas would be developed at neighbourhood parks and play areas. The trail system would be developed as a component of all new residential developments and would be systematically integrated and expanded as the community grows.
- **Rainbow Gully:** Creating an internal footpath system in the park and more pedestrian access points by developing: an internal pathway system and a pathway connection to Rotary Sunshine Park; an asphalt trail linking to the river and recreation facilities; a “Trouter's Loop” connecting the three ponds south and east of the site; a trail to the northwest that follows the brook to St. Philip's Marina; trail links to existing

and proposed residential areas.

- **Voisey's Brook Park:** Develop a looped / internal pathway system around the park including: an internal walkway system with fitness stations; a paved link to the children's playground.
- **Greyman's Beard:** This high point of land overlooking the community is a key site for trail development. Recommended improvements include creating a view point including a formal lookout and an on-site park services building. The lookout would connect via trail to a series of lookouts on the neighbouring hills. These lookouts would in turn link into the trails around Holy Rosary Roman Catholic Church.
- **St. Philip's Anglican Church:** Creating a trailhead and trail linking church grounds to the marina via a looped trail that takes in a lookout near the pump house at West Point South.
- **Holy Rosary Roman Catholic Church:** Developing the site as a trail staging area for walkers accessing Greyman's Beard Lookout and creating connecting walks to residential neighborhoods, especially to the ferry terminal via the roadway through the older part of Portugal Cove. This development would support the existing B&B operators, restaurants at the terminal site and encourage visitors to go to the proposed Gateway facility.
- **Neary's Pond Swimming Area:** Trail development linking to existing and proposed trails and lookouts to Beachy Cove Hill and Greyman's Beard. The trails would be used for hiking and cycling.
- **Blast Hole Pond:** An "Outdoor Adventure Centre" is proposed for an area near Blast Hole Pond. The facility would be developed to support adventure and extreme sport enthusiasts, with a focus on youth programs. It would cater to hikers, mountain and BMX bikers, cross-country skiers, and fishing. It would be linked via a bicycle trail to the Beachy Cove Edu-Rec Centre, Voisey's Brook Park, Rotary Sunshine Park and the Rainbow Gully Recreation Complex. It would also be linked to the East Coast Trail. The opportunity exists to develop the centre to accommodate corporate retreats and rentals for special events.

Portugal Cove-St. Philip's PlaceBuilder Community Work Plan (2015)



The Council of Portugal Cove-St. Philip's embarked on PlaceBuilder in 2014 to create a planning and development tool that would carry the town into the long term. This resulted in a planned strategy for sustainable community building, growth management, economic development, the promotion and preservation of heritage or environmentally sensitive areas, and community engagement with a goal of long-term sustainability of Portugal Cove-St. Philip's.

Priorities for trail development identified within the PlaceBuilder Community Work Plan include:

- Create a Community Multi-use Trail Network Master Plan that outlines a development programme for community trails designed for active transportation. A 64 km multi-use trail forms the major spine of this proposed trail and will integrate the trail system existing at Voisey's Brook Park. The trail system will be three meters-wide where possible, and will allow for multiple uses, catering to the different demographics and desires in the community.
- Preserve environmentally sensitive lands such as Blast Hole Pond and Voisey's Brook Park and others as identified.
- Ensure that potential developments are approved and permitted by provincial departments with legislative authority to control development.
- Position the East Coast Trail as a community hub and provide amenities such as parking, information kiosk with public washroom, and canteen or convenience store.
- Re-establish the historical trail link between Portugal Cove and St. Philip's, and provide interpretation of the historical significance. Connect this historical trail to Greyman's Beard, Beachy Cove Hill and Brock Head to create day use hikes that can result in increased need for accommodations and meals.
- Blast Hole Pond is proposed as a soft adventure centre for a variety of low impact developments that take advantage of the terrain, coastline and natural resources in this area of the Town. The area can

easily become the focus of outdoor recreation for the community, and beyond. The site is designated as a Provincial Habitat Conservation Area. Care has been taken to ensure developments are low impact, and that most of the mountain bike trails are located outside this designated area. Central to the proposed developments is a state-of-the-art fully equipped mountain biking facility. This will require a significant investment but has the potential to position the Town of Portugal Cove-St. Philip's as the go to place in Eastern Newfoundland and Labrador and Canada for Mountain Biking. The design concept for the facility provides opportunities for youth to experience mountain biking and other nature-based activities such as hiking, canoeing, trout fishing (the area has three licensed Rainbow Trout Ponds), remote camping and bird watching. Winter opportunities exist for ice fishing, snowshoeing and cross-country skiing.

- A water-based recreation facility at Miller's Pond should be considered to support the Town's offering of water based recreation programs. Like Blast Hole Pond, this habitat offers wildlife interpretation with a focus on bird watching and wetland interpretation. The site can also be used as a hub for the proposed multi-use recreation trail network for the Town that links to Blast Hole Pond.
- Existing trails at Neary's Pond should be linked to Greyman's Beard, Beachy Cove Hill and St. Philip's Marina, allowing the area to become a hub for multi-purpose trail development.

Community Engagement

Engagement is a critical step in the planning process, as information gathered through engagement is used to inform decision-making and shape the direction of the project. Several engagement methods were used in the development of this Master Plan. Due to the ongoing pandemic, all sessions were completed online.

Stakeholder Meetings

Several community groups were identified as having important information or special interest in trail development in Portugal Cove-St. Philip's. In February and March of 2022, meetings with representatives of each of the following groups occurred:

- Town Council;
- Town Staff;
- Portugal Cove-St. Philip's Chamber of Commerce;
- Portugal Cove-St. Philip's Advisory Committee on the Environment;
- Portugal Cove-St. Philip's Heritage Committee;
- Portugal Cove-St. Philip's Tourism Working Group;
- Portugal Cove-St. Philip's Inclusion Committee;
- Portugal Cove-St. Philip's Hiking and Walking Club;
- East Coast Trail Association;
- Avalon Mountain Bike Association;
- Scouts Canada;
- Recreational ATV riders.

Community Open House

COVID-19 remained prevalent at the time of this project, so in-person engagement activities were not possible. On the evening of March 15, 2022, a virtual open house occurred via the Zoom Webinars platform. The session was free and open to all members of the public. Twenty-eight individuals attended the session which consisted of a presentation and interactive tools that allowed participants to provide feedback.

Online Survey

Survey Monkey was used to develop and launch an online survey to collect further public input. The survey was open for approximately two weeks and had 40 participants, 92% of whom were residents. In total, 417 responses to the survey questions were received.

Key Themes

Several key themes emerged across all engagement activities. These are not direct excerpts of the feedback received but rather key ideas that came up time and again, representing the most likely priorities among all stakeholder groups.



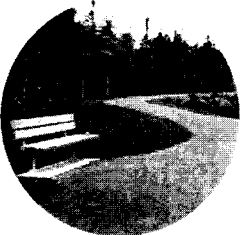
Trail Diversity

- The trail network should be diverse and provide opportunities for different user groups to experience purpose-built trails.



Accessibility & Inclusion

- The trail network must be as accessible, inclusive, and welcoming as possible.
- Trails should provide equitable opportunities for all users regardless of age, background, or ability.



Amenities

- Trails should provide basic infrastructure such as benches, waste receptacles, trailheads, lookouts, etc. that are aimed at improving the user experience.



Maintenance

- Trails must be upkept and remain within the Town's capacity to maintain in the future.



Four Season Use

- The trail network must be considered a year-round amenity and wherever possible provide different uses as the season change.



Protecting the Environment

- There are many natural areas within the community that are not only beautiful, but contribute to the town's rural character and sense of place. Trails should be respectful and sensitive of these landscapes.



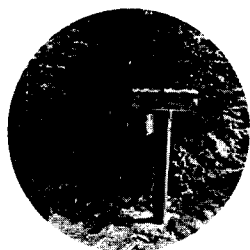
Trails as a Transportation Network

- Trails are not just recreation infrastructure, but should also function as a valuable part of the community's active transportation network.



Celebrating Heritage

- The trail network should connect the community's important cultural and historic destinations.



Signage & Wayfinding

- As the trail network grows, it will be important to ensure that trail users can easily find and navigate the trails.

Trail Inventory & Analysis

Existing Trail Analysis

The objective of the trail inventory and assessment is to form a snapshot of the trail network and its current condition, to confirm mapping accuracy and location of existing trails, as well as to identify places of significance, character-defining elements, and opportunities and challenges for future development.

During the community engagement phase, the design team was made aware of many locations within the town that held potential for trail development. Some of these areas had existing footpaths or wood cutting paths, and some were untouched wilderness. These locations were visited over a span of three days to determine their potential and priority level for development.

When visiting these locations, the design team focused on the following existing conditions:

- Vegetation including variety, density, and ground cover;
- Topography including any low spots or challenging slopes;
- Natural features including ponds, brooks, rivers, wetlands, and rock formations;
- Built features such as bridges or noteworthy structures;
- Infrastructure including roads and power lines;
- Signs of existing wildlife;
- Views of water bodies and other picturesque landscapes;
- Intersections of transport systems including roads and other trails;
- Access points such as entry points or secondary access points.

In many cases, the design team followed the potential trails until they became inaccessible due to wet conditions, dense vegetation, or steep slopes. Feedback from the community engagement and the Town's mapping resources were used to assess parts of the trail network that were not easily accessible due to time and accessibility constraints. The Town's mapping included detailed information such as aerial imagery, property information (private versus Crown), 1m contours, water bodies and protection buffers, roads, and points of interest. This information was very valuable for analyzing inaccessible trails.

Key Findings in the Field

Trail Conditions

The trails that were analyzed included a mix of existing developed trails, existing footpaths that have upgrade opportunities, and trails that are fully undeveloped. A majority of the trails that are highly desired by residents are undeveloped at this time. This means that a significant investment will be required by the Town to develop these trails to meet their full potential and create a connective trail network.

Connectivity Challenges

It became evident during the field work and the desktop analysis that land ownership presents challenges in developing a connected trail network. Many north-south connections through the community are infeasible due to large areas of private property. Many of the highly desired trails are feasible using Crown and Town-owned land, as well as the river and pond protection buffers. However, Crown land availability is limited, so the road systems will likely have to be used to help make connections. The community engagement findings outlined that many residents don't feel comfortable walking on the existing roads due to narrow shoulders, so recommendations will be included to help improve the pedestrian experience on roads that are required as a part of the connective trail system.

Preservation of PCSP's Natural Character

It is evident that residents value the town's natural and rural character and that they wish to see the trail system celebrate this aspect of the town. When visiting the numerous trails, it was evident that these locations will indeed celebrate the town's special natural landscape. There was a great mix of serene wooded trails, trails along ridges with great ocean views, and peaceful walks next to ponds and rivers.

Recommendations

Design Standards & Best Practices

This section provides an overview of standards and guidelines that are used in trail development. These are meant to provide a benchmark for trail development and provide a resource that the Town may use to develop its trails over time.

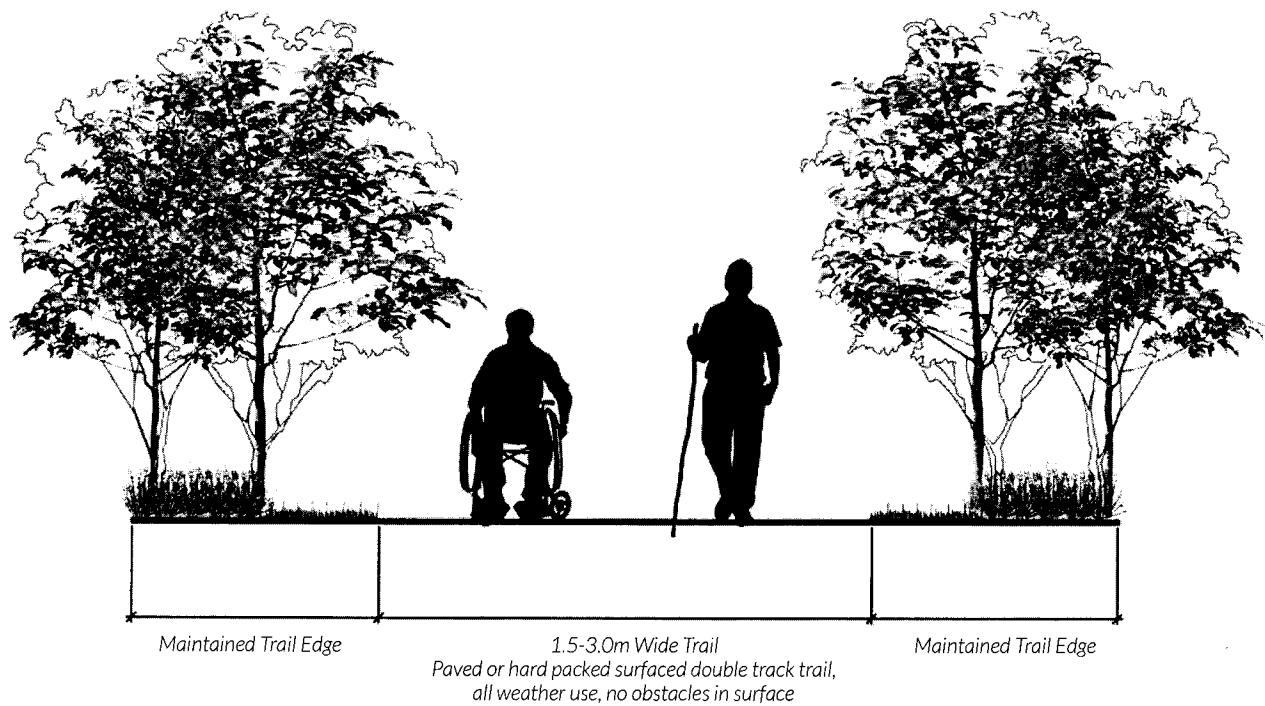
Trail Classification System

The Trail Classifications (based on Parks Canada and other resources) on the following pages can be used by the Town to help with asset management, resource conservation, and visitor experience management. They are a guide for the trail developer to ensure that the trail is built and maintained in a way that will meet the requirements and expectations of different user groups. Different levels of technical construction and service vary depending on the trail classification and are detailed in the charts on the following pages. When developing trails, different enhancements can occur in phases. Not every item in these charts needs to be achieved at once, but they represent an idea of the highest standard of trail development that may be achieved over time.

As each individual trail is slated for development, a chart similar to those on the following pages should be created and details for that trail should be included in each applicable section. This document then becomes a record of the planned level of development and maintenance for that trail.

Type 1 Trail Classification

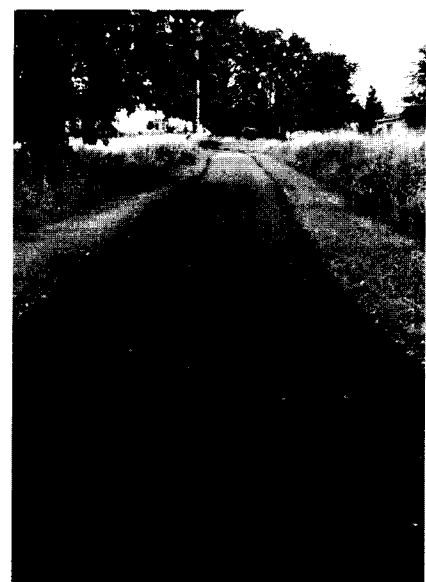
Technical Details	Definition	<ul style="list-style-type: none"> Paved or hard packed surfaced double track trail, all weather use, with no obstacles in surface Use compacted crushed rock, asphalt or chip-seal coat surface Provide interpretive and directional signs, benches, and viewing areas where appropriate Machine and or hand-built and maintained
	Distance	<ul style="list-style-type: none"> Typical distance does not exceed 10km
	Trail Profile	<ul style="list-style-type: none"> Flat to gently rolling Typical elevation gain of 0-100m
	Trail Surface	<ul style="list-style-type: none"> Paved or surfaced Hard packed and stable Typical average width of 1.5-3.0 m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> Trailhead information Interpretive panels Route markers Trail orientation maps Maximum information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> Few or no obstacles No stairs or minimal use of stairs
	Facilities and Amenities	<ul style="list-style-type: none"> Parking lot Washroom Bridges Benches Maximum user facilities
Level of Service	Inspection	<ul style="list-style-type: none"> Frequently or upon user comment
	Deadfall Clearing	<ul style="list-style-type: none"> As required
	Infrastructure	<ul style="list-style-type: none"> Major (bridges, boardwalks, viewing platforms)
User Safety	Risk Mitigation	<ul style="list-style-type: none"> Maximum effort made to reduce risk
	Risk Identification	<ul style="list-style-type: none"> Highly detailed explanation of risk - typically provided at trailhead, on maps, and at areas of risk along the trail
	Risk Inspection	<ul style="list-style-type: none"> Weekly/monthly or upon user comment Can occur at the same time as service inspections



Type 1 Trail in Rainbow Gully Park



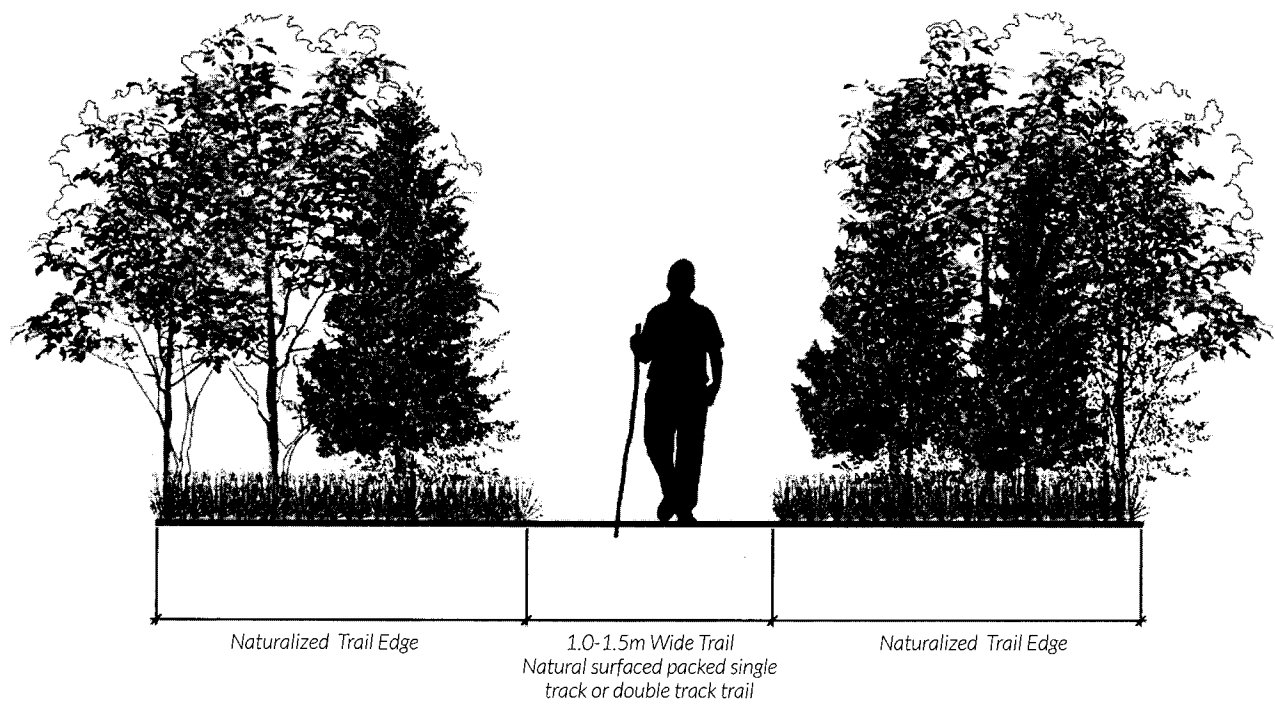
Type 1 Trail in Voisey's Brook Park



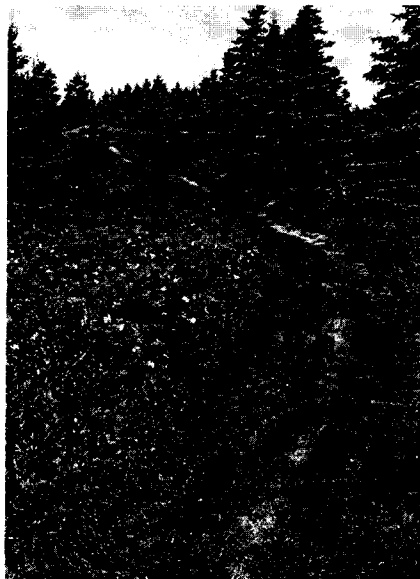
Type 1 Trails can also be paved (Prein & Newhof)

Type 2 Trail Classification

Technical Details	Definition	<ul style="list-style-type: none"> Natural surfaced packed single track trail or double track trail Use rock for surfacing, or native material from site. May be a paved surface Provide interpretive and directional signs, benches, viewing areas where appropriate Machine or hand-built and maintained
	Distance	<ul style="list-style-type: none"> Typical distance does not exceed 20km
	Trail Profile	<ul style="list-style-type: none"> Gently rolling with short steep sections Typical elevation gain of 0-1,000m
	Trail Surface	<ul style="list-style-type: none"> Surfaced or natural Firm and stable Typical average width of 1.0-1.5 m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> Basic trailhead information Route markers Trail orientation maps Moderate information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> Infrequent obstacles Stairs may be present
	Facilities and Amenities	<ul style="list-style-type: none"> Parking lot Outhouse/pit toilets Bridges Benches Moderate user facilities
Level of Service	Inspection	<ul style="list-style-type: none"> Seasonal or upon user comment
	Deadfall Clearing	<ul style="list-style-type: none"> As required/seasonal
	Infrastructure	<ul style="list-style-type: none"> Moderate (bridges, boardwalks, viewing platforms)
User Safety	Risk Mitigation	<ul style="list-style-type: none"> Moderate effort made to reduce risk
	Risk Identification	<ul style="list-style-type: none"> Moderate detailed explanation of risk - only significant risks identified Information typically provided at trailhead and at areas along the trail
	Risk Inspection	<ul style="list-style-type: none"> Seasonal or upon user comment Can occur at the same time as service inspections



Existing Princes Mountain Lookout trail



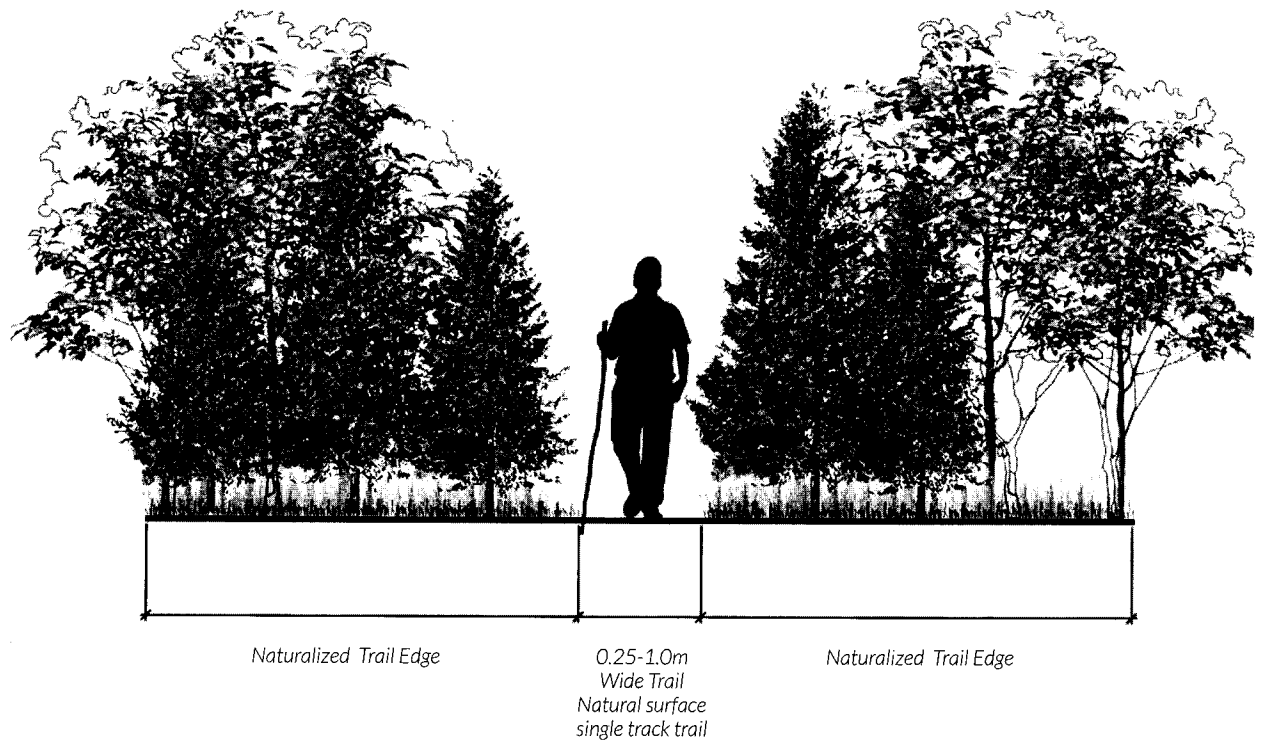
Type 2 Trails can be natural or native material (Bitstop)



Existing Dans Road trail

Type 3 Trail Classification

Technical Details	Definition	<ul style="list-style-type: none"> Natural surface single track trail Trail tread may be constructed or established by clearing a corridor and marking the route Whenever possible use natural native material from site Provide minimal signage Hand-built and maintained
	Distance	<ul style="list-style-type: none"> May exceed 20km
	Trail Profile	<ul style="list-style-type: none"> Rolling with steep sections that continue for long periods Typical elevation gain of 0-1,000+m
	Trail Surface	<ul style="list-style-type: none"> Natural May be loose in areas Typical average width of 0.25-1.0 m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> Basic trailhead information Minimal route markers Minimal information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> Obstacles common Stairs may be present
	Facilities and Amenities	<ul style="list-style-type: none"> Bridges or other water crossings Minimal user facilities
Level of Service	Inspection	<ul style="list-style-type: none"> Annually or upon user comment
	Deadfall Clearing	<ul style="list-style-type: none"> Annually
	Infrastructure	<ul style="list-style-type: none"> Low (bridges, boardwalks)
User Safety	Risk Mitigation	<ul style="list-style-type: none"> Low effort made to reduce risk
	Risk Identification	<ul style="list-style-type: none"> Low detailed explanation of risk - only site-specific or unusual risks identified Information typically provided at trailhead
	Risk Inspection	<ul style="list-style-type: none"> Annually or upon user comment Can occur at the same time as service inspections



East Coast Trail stairs at Beachy Cove



Existing trail at Beachy Cove Hill

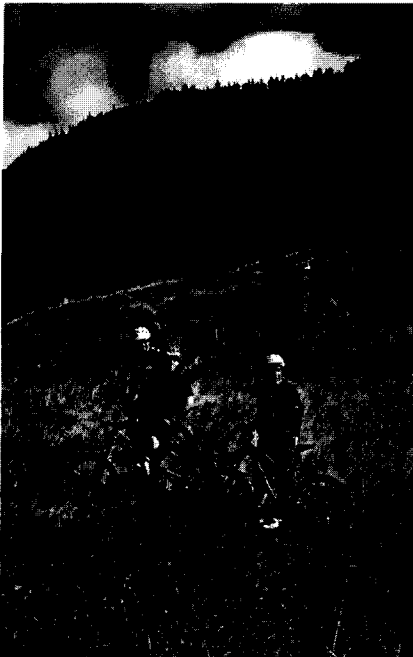


Wetland crossing example (The Boston Globe)

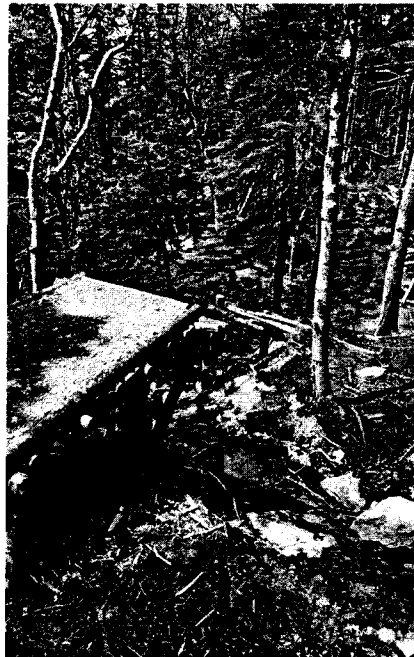
Mountain Bike Trail Classification

During the community engagement phase, it was clear that Portugal Cove - St. Philip's has potential to become a mountain biking destination on the Avalon. A large number of survey respondents expressed the desire to see a mountain biking trail system purpose-built in the community. Although the scope of this plan was to focus on hiking and walking trails, consideration has been given to mountain biking trails within the trail network. When it comes to mountain bike trail standards, the Avalon Mountain Biking Association (AMBA) should be engaged, as there are different types of mountain biking trails that require different infrastructure. AMBA can help determine the most suitable types of trails within the highlighted trail areas.

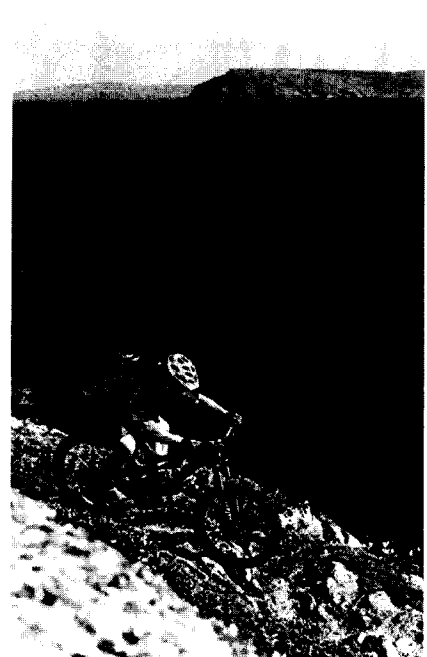
Mountain biking could also become an economic driver for the Town. Mountain biking tourism is becoming more and more popular in North America. Mountain Bike Atlantic was established as a collaborative effort to promote the Atlantic region as a global destination for mountain biking. It is supported by an Advisory Committee of local experts from all Atlantic provinces and they engage with trail communities to collaborate on enhancing mountain biking products and experiences that help promote and sustain visitation and improve the visitor experience for residents and tourists alike.



(MTB Mag)



Mountain biking infrastructure at Skinners Road



(Red Bull)

ATV Trail Classification

During the community engagement phase, the lowest number of respondents were ATV trail users. The feedback from this small user group indicated that they wish to be able to use the existing ATV trails within the community into the future. They do not want to see their current trails turned into pedestrian-only trails. Fortunately, many of the existing ATV trails that the design team were made aware of exist on the outskirts of the community, heading towards the airport and Torbay, and from Dan's Road towards Paradise and Pippy Park. These trails do not necessarily add to the Town's connected trail network goal, therefore they can remain as ATV trails. No new ATV trails are being proposed as a part of this plan, so specific trail design standards have not been provided.

A small percentage of respondents requested that the Town roads become ATV-friendly, referencing the City of Corner Brook as a precedent, but a review of that type of transportation network is outside the scope of this current project.



(Crossing Newfoundland by ATV)

Trail Rating System

Trail Ratings are a simplified version of the classifications. While the classifications are intended for use by the Town, the ratings are intended for public consumption. This rating system of Easy, Moderate, and Difficult is used by Parks Canada and other trail networks across the country. It is recognized and understood by trail users and the Town should consider adopting a similar rating system as well. The tables on the following pages outline the information that should be communicated to trail users about the difficulty level of each trail. This information can be posted on trailhead signage and on an online trail map. The information can also be included when marketing the trails to allow users to plan their trips.

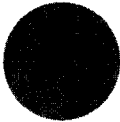


Route marker highlighting trail difficulty level
(Pinterest)




Route marker highlighting trail difficulty level
(Pinterest)


Easy Trail Rating

Trail Rating Definition	Definition	<ul style="list-style-type: none"> Suitable for all users including those with no trail experience. Visitor may be prepared for trail or may not be prepared Hard packed surface with no obstacles and minimal stairs Estimated time to complete the trail is no longer than two hours Little or no elevation gain or loss
	Symbol	<ul style="list-style-type: none"> Green Circle 
Rating Details	Distance (return)	<ul style="list-style-type: none"> 0-5km
	Trail Profile	<ul style="list-style-type: none"> Flat to gently rolling Typical elevation gain of 0-100m
	Trail Surface (material surface and average width)	<ul style="list-style-type: none"> Paved or surfaced Hard packed Typical average width of 1.0-3.0m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> Trailhead information Interpretive panels Route markers Trail orientation maps Maximum information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> Few or no obstacles Minimal use of stairs
	Facilities or Amenities	<ul style="list-style-type: none"> Parking lot Washroom Bridges Benches
	Recommended Experience	<ul style="list-style-type: none"> Little or no experience required

Moderate Trail Rating

Trail Rating Definition	Definition	<ul style="list-style-type: none"> Suitable for most users who have some basic trail experience and are generally prepared Mostly stable surface with infrequent obstacles, stairs may be present Estimated time to complete the trail is no longer than five hours May experience moderate elevation gain with some short steep sections
	Symbol	<ul style="list-style-type: none"> Blue Square 
Rating Details	Distance (return)	<ul style="list-style-type: none"> 0-15km
	Trail Profile	<ul style="list-style-type: none"> Gently rolling with short steep sections Typical elevation gain of 100-500m
	Trail Surface (material surface and average width)	<ul style="list-style-type: none"> Surfaced or natural surface Firm and stable Typical average width of 0.5-1.5m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> Basic trailhead information Route markers Trail orientation maps Moderate information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> Infrequent obstacles Stairs may be present
	Facilities or Amenities	<ul style="list-style-type: none"> Parking lot Outhouse/pit toilets Bridges Benches
	Recommended Experience	<ul style="list-style-type: none"> Some experience recommended

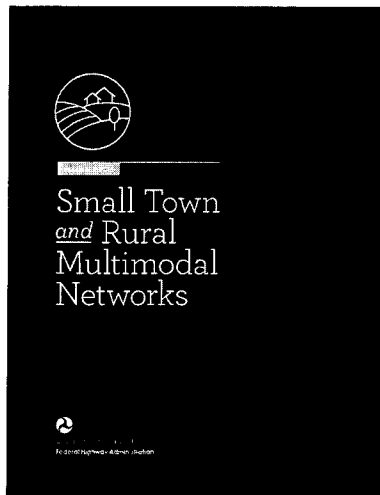
Difficult Trail Rating

Trail Rating Definition	Definition	<ul style="list-style-type: none"> • Suitable for users who have trail experience and are prepared • Variety of surface types including non-established surface • Estimated time to complete the trail may exceed five hours • May experience major elevation gain with long steep sections
	Symbol	<ul style="list-style-type: none"> • Black Diamond 
Rating Details	Distance (return)	<ul style="list-style-type: none"> • 0-15+km
	Trail Profile	<ul style="list-style-type: none"> • Rolling with many steep sections that may continue for long periods • Typical elevation gain of 500+m
	Trail Surface (material surface and average width)	<ul style="list-style-type: none"> • Natural surface • May be loose or may not exist • Typical average width of 0.25-1.0m
	Signage (general signage and information provided)	<ul style="list-style-type: none"> • Basic trailhead information • Minimal route markers • Minimal information provided
	Obstacles or Stairs	<ul style="list-style-type: none"> • Obstacles common • Stairs common
	Facilities or Amenities	<ul style="list-style-type: none"> • Bridges or other water crossings
	Recommended Experience	<ul style="list-style-type: none"> • Experience recommended

Roads as Route Connectors

During the trail inventory and analysis phase it became clear that the road network will play an important part in creating a connected trail and walking network within the town. A connected network is not developed by a single trail, sidewalk, or bike lane but is comprised of many facilities that support walking and bicycling throughout the community. Developing networks in rural settings can be challenging due to a number of factors:

- **Auto Oriented Roadways** - With lower densities and greater distances, many small towns have developed in a more auto-oriented fashion than urban areas. A strong focus on automobile mobility results in a lack of facilities for people walking and bicycling, making travel by these modes difficult and less safe.
- **Constrained Terrain** - Rural highways often have physical constraints that make the provision of cost-effective facilities for bicycling and walking difficult.
- **Safety** - Pedestrian crossings are often not defined and may be difficult to warrant based on low existing use; however, not providing pedestrian crossings makes streets act as barriers that divide communities.
- **Highway as a Main Street** - Local highways often pass through the heart of small towns and may prioritize through traffic over local access. Some may be wide and over designed, and some may be constrained and hard to change.
- **Climate and Maintenance** - Many small towns do not have adequate resources to pay for special equipment to clear certain types of active transportation facilities.



Solutions to these challenges are addressed in the Small Town and Rural Multimodal Networks guide created by the United States Federal Highway Administration. A summary of the tactics that the Town can use for their road networks is highlighted in this section.

The proposed trail network includes a number of road upgrades to improve the pedestrian experience, since these road corridors are required to make certain connections. While specific upgrades for each road are not identified in this Plan, an overview of different solutions that the Town can consider is provided. The Town can refer to the Guide for more details of the outlined solutions.

If the Town wishes to develop some of these opportunities within the community, they can aim to develop synergies among Capital Works projects. Pairing these types of projects with ongoing infrastructure projects such as sewer and street upgrades makes them more achievable. It is typically more economical to implement the infrastructure this way and minimizes construction disruptions for residents.

Roads that are important route connectors:

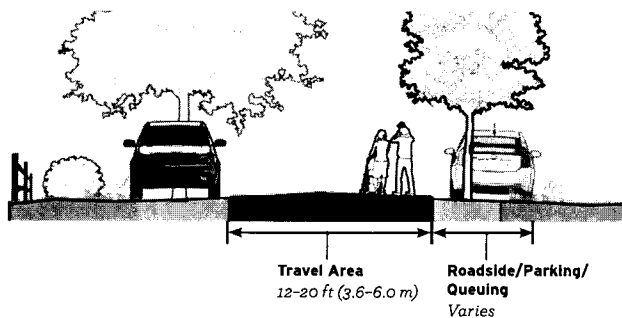
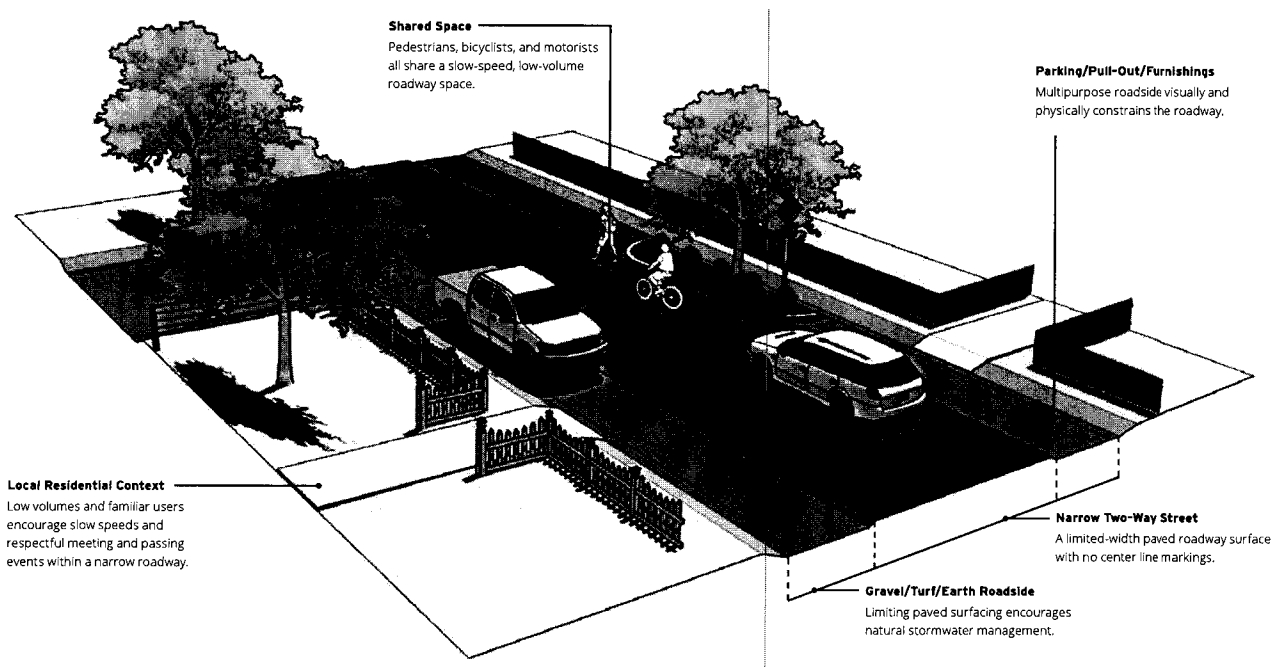
- Dogberry Hill Road
- Tuckers Hill Road
- Thorburn Road
- St. Thomas Line
- Old Broad Cove Road
- Round Pond Road
- Beachy Cove Road
- Portugal Cove Road
- Anglican Cemetery Road
- Indian Meal Line
- Tolt Road
- Bennetts Road
- Nearys Pond Road

See the maps starting on page 60 for a visual indication of the portions of these roads that will play an important part in connecting trail routes.

Mixed Traffic Facilities

(a) Yield Roadway

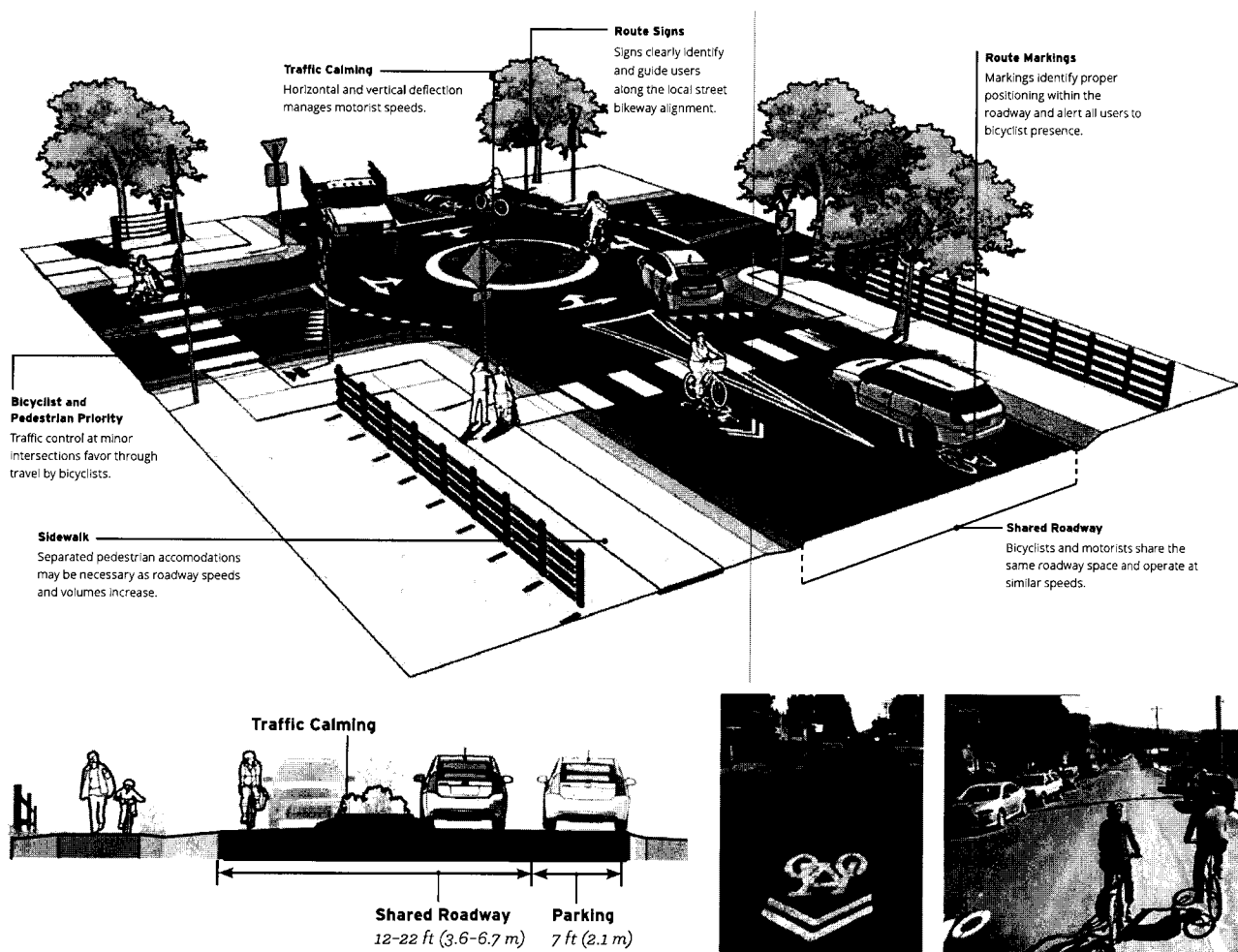
A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow-speed travel area. Yield roadways serve bidirectional motor vehicle traffic without lane markings in the roadway travel area. They are meant to be used in built-up areas, particularly near residential land uses where most traffic is familiar with prevailing road conditions. They are meant for local residential roadways and not through motor vehicle traffic, where there is very low traffic volumes and speeds.



(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

(b) Bicycle Boulevard

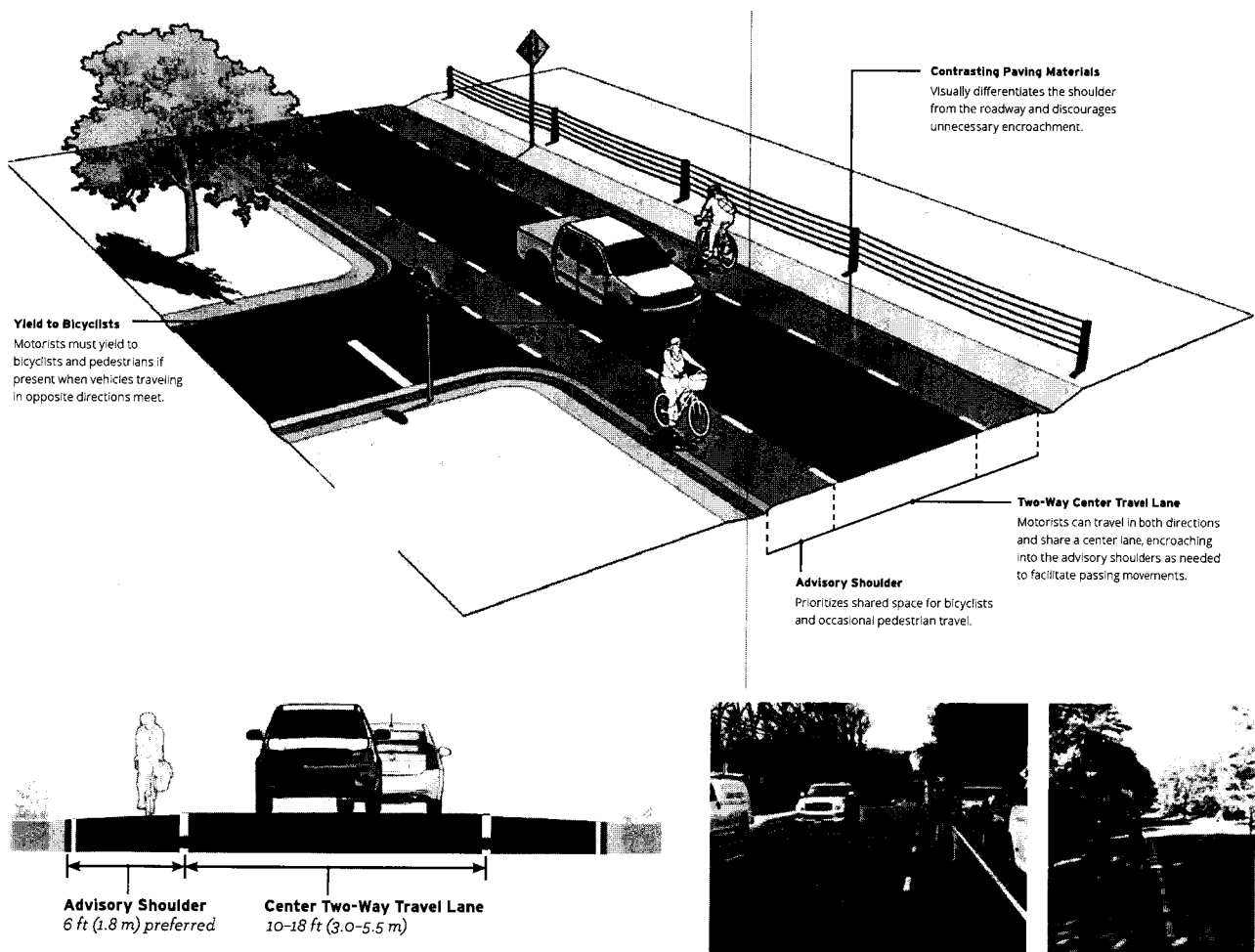
A bicycle boulevard is a low-stress shared roadway bicycle facility, designed to offer priority for bicyclists operating within a roadway shared with motor vehicle traffic. They are meant to be used in built-up areas to connect biking and walking routes in small town street networks. They are meant for local residential roadways and not through motor vehicle traffic, where there is very low traffic volumes and speeds. Speed and volume management may be necessary to create desired operating conditions.



(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

(c) Advisory Shoulder

Advisory shoulders create usable shoulders for bicyclists on a roadway that is otherwise too narrow to accommodate one. The shoulder is delineated by pavement marking and optional pavement colour. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic. They are meant to be used outside, between, and within built-up areas with bicycle and pedestrian demand and limited available paved roadway surfaces. They are only meant for constrained connections between built-up areas and are most appropriate on streets with low volumes and moderate speeds.

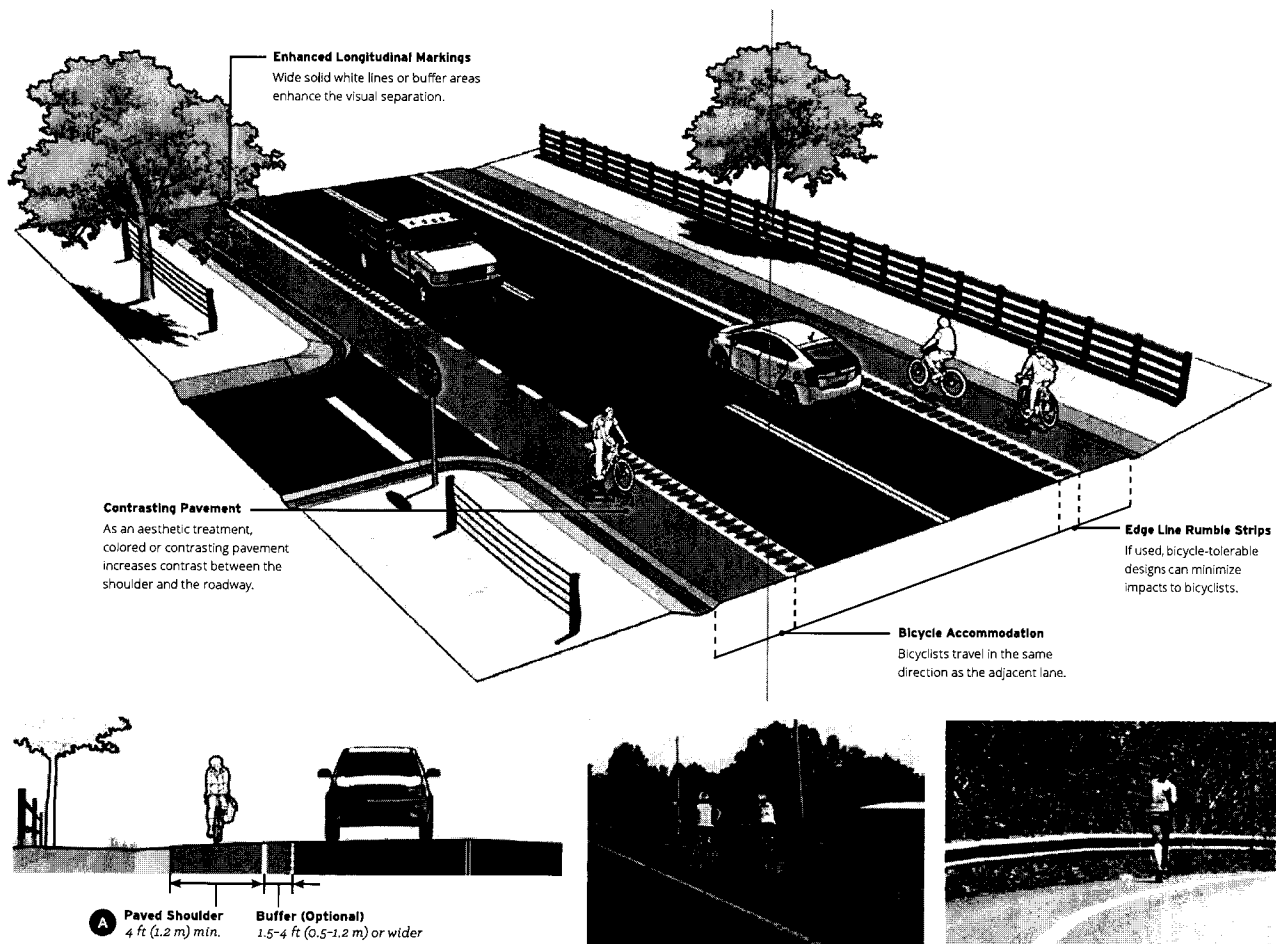


(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

Visually Separated Facilities

(a) Paved Shoulder

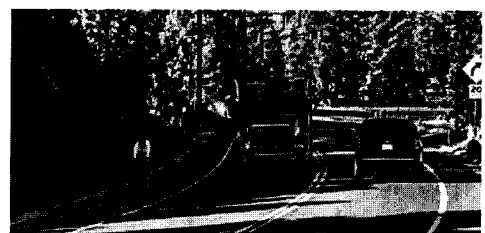
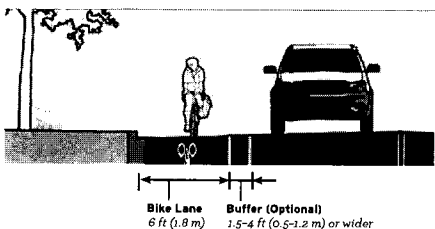
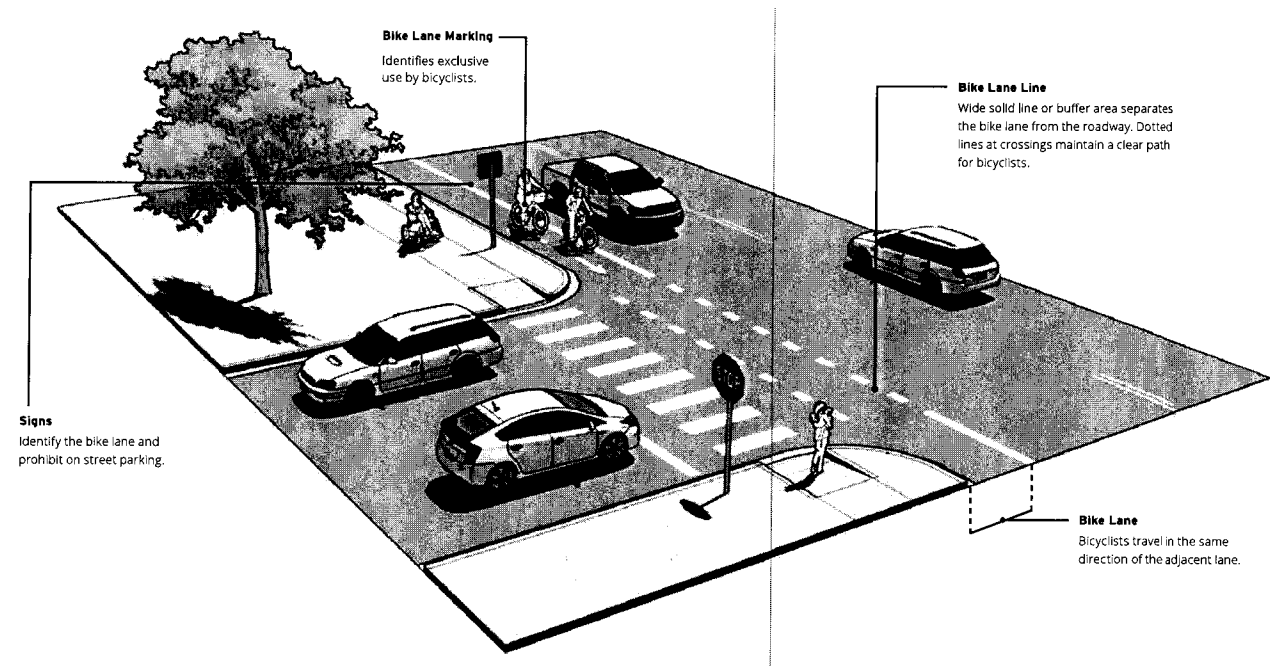
Paved shoulders on the edge of the roadways can be enhanced to serve as a functional space for bicyclists and pedestrians to travel in the absence of other facilities with more separation. They are meant to be used outside and within built-up areas, near school zones and where there is expected pedestrian and bicycle activity. Walkable shoulders should be provided along both sides of rural roads and highways routinely used by pedestrians. They are meant to serve long-distance and regional travel and are appropriate for roads with moderate to high vehicle volumes and speeds. They may function on roads with heavy traffic, but will fail to provide a low-stress experience in those instances. This infrastructure is similar to the Green Mile project that the Town put off in the past.



(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

(b) Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and optional signs. A bike lane is located directly adjacent to motor vehicle travel lanes and follows the same direction as motor vehicle traffic. They are meant to be used inside or between built-up areas where increased pedestrian and bicycle activity is present or expected. They are meant to serve moderate distance trips connecting local bikeway routes to regional corridors. They are appropriate on streets with moderate volumes and moderate speeds. They may function on roads with heavy traffic, but will fail to provide a low-stress experience in those instances.

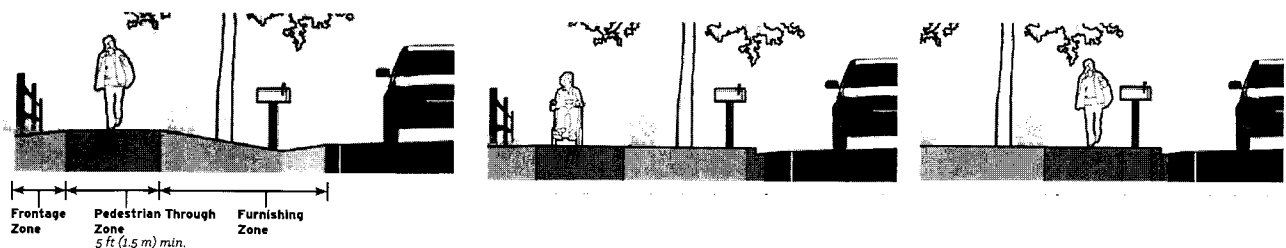
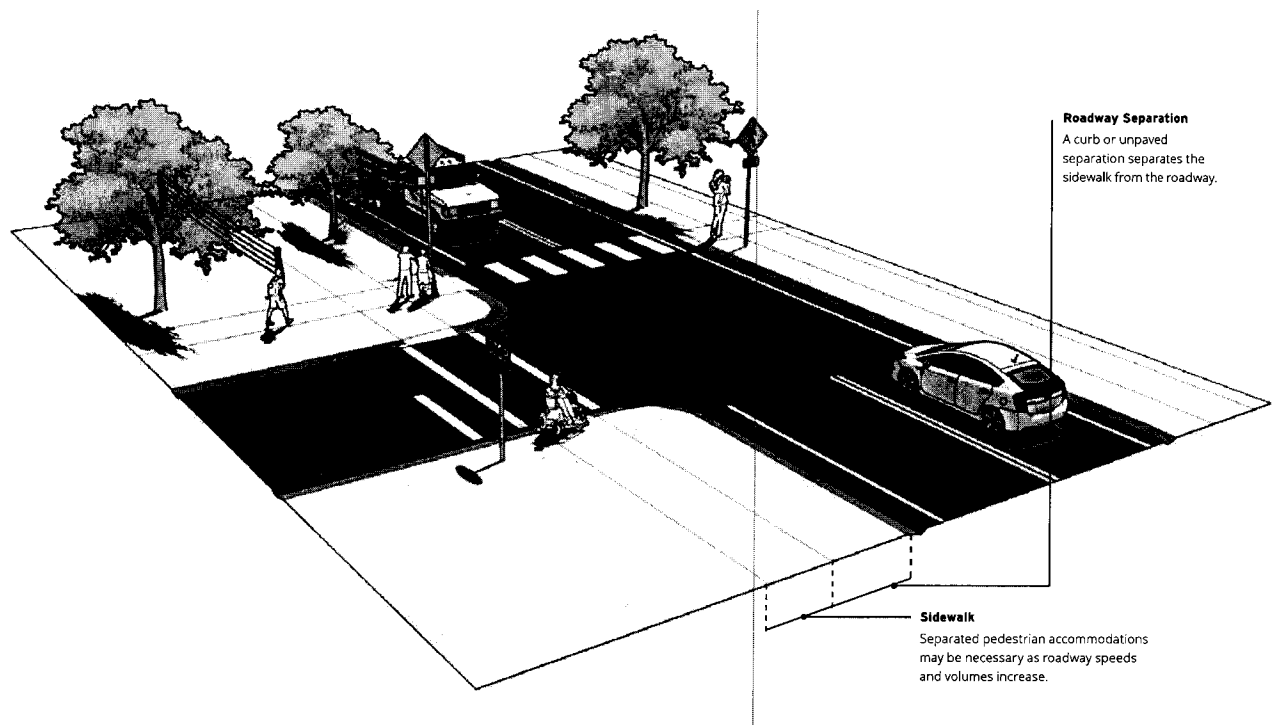


(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

Physically Separated Facilities

(a) Sidewalk

Sidewalks provide dedicated space intended for use by pedestrians that is safe, comfortable, and accessible to all. Sidewalks are physically separated from the roadway by a curb or unpaved buffer space. They are appropriate inside of built-up areas and may serve short distance travel between built-up areas. They are appropriate on all types of roadways where pedestrian activity is likely, and they are recommended on all but the most low-speed and low-volume roadways.



(Small Town and Rural Multimodal Networks Guide, United States Federal Highway Administration)

Trail Safety

Intersections between trails and roads represent one of the biggest potential challenges for any trail network. It is here that vehicular and pedestrian conflict is at its greatest, and when trail users are most likely to feel unsafe or uncomfortable due to the risk of being struck by a vehicle. If not treated carefully, these intersections also have the potential to seriously disrupt or impede vehicle traffic on the roads as well as pedestrian traffic on the trails. It becomes very important that attention is paid in these instances to ensure pedestrian safety and driver awareness are both considered.

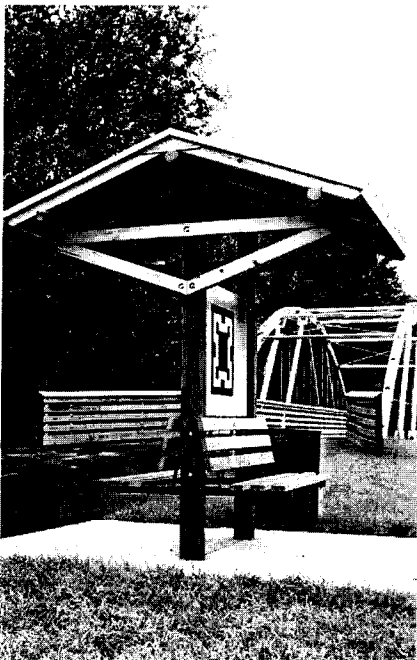
Crosswalks are an essential trail planning tool in these cases. As a rule of thumb, trail users should be able to safely traverse all road crossings. Crosswalks should be provided and clearly marked with signage, pavement markings, and push buttons (where appropriate) so that it is intuitive for the pedestrian and visible for the driver.



Example of a painted crosswalk with a flashing light and signage (Traffic Safety Supply Company)

Trailhead Development

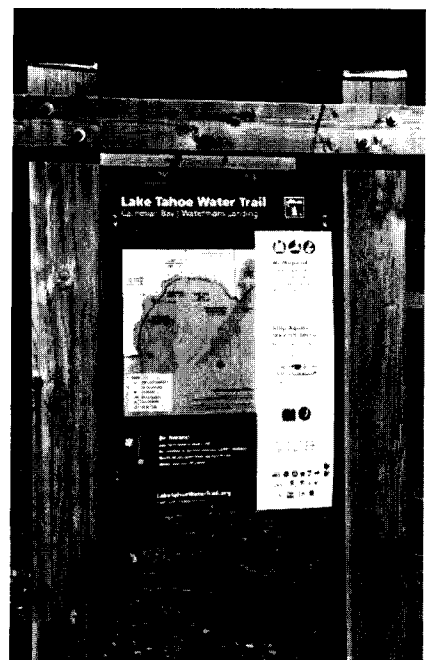
Simply put, trailheads refer to trail access and entry points. This is where the trail user enters the trail network and is where they generate their first impression of the trail system. As such, it represents an opportunity to create a gateway or sense of arrival. Trailheads set the tone for the rest of the trail system, so it is important that they receive appropriate attention and careful design consideration. Trailheads can include rest areas, parking areas, small plaza spaces, mapping, signage, landscaping, bike racks, public art, lighting, or any other number of design elements. The addition of a land acknowledgment of traditional territory on the sign can also be considered.



*Trailhead signage, seating, and shelter
(Ekistics Design Studio)*



Trailhead signage (The Great Trail)



Trailhead signage (Lake Tahoe Water Trail)

Accessibility & Inclusion

It is important that all trail users have equal opportunity to enjoy the trail, at their own pace and skill level, and that they feel safe and comfortable when doing so. *Ontario's Accessibility Standard* outlines best practices to ensure that recreational trails are accessible. The Town should consider following this standard wherever possible:

- meet minimum clear width (1 m) and height (2.1 m) specifications;
- have a firm and stable surface (but does not necessarily have to be paved);
- meet restrictions on the size of surface openings (must not allow passage of an object that has a diameter of more than 20 mm), and orient elongated openings perpendicular to the direction of travel;
- meet specifications on edge protection (50 mm) when located beside water or a drop-off, except where a protective barrier already exists;
- provide minimum clear width at its opening (0.85 m to 1 m), regardless of entrance design (e.g., gate, bollard, etc.);
- meet requirements for tonal contrast and font type to be used for the signage, and
- ensure online platforms (such as digital trail maps) are as accessible as possible.

While no such standard currently exists in Newfoundland and Labrador, the Ontario guidelines can be used as a best practice. Before developing a new trail or redeveloping an existing trail for pedestrian use, the Town should consider consulting with Inclusion NL or other accessibility advocates including local senior's and inclusion groups.



Boardwalk with side barriers to improve accessibility (Parks Canada)



Level, well-graded granular trails can meet accessibility guidelines, trails do not necessarily have to be paved

Wayfinding & Signage

A wayfinding system is much more than simply a series of strategically placed signs along a trail. It should be carefully designed to be visually appealing, legible, consistent, and most importantly, to facilitate movement in a clear and intuitive manner. A successful wayfinding system provides a positive first impression and allows visitors to orient themselves, draw a mental map, and confidently and easily navigate to where they want to go.

From a design perspective, the Town has recently been involved in the *Northeast Avalon Regional Wayfinding Program*. This program will address signage and wayfinding throughout the community and broader region. The Town has recently also installed new community welcome signs. Should a trails signage program become a priority for the Town, it should consider professionally designed trail signage to complement these larger initiatives.

There are typically several key types of signs on a trail network that work together to help users orient and guide themselves.

(a) Trailhead Signage

Trailhead signage is located at trail access points and provides trail users with all of the information that they need to know before starting their hike. The trailhead signage should include:

- length of trail and a time estimate to hike it;
- trail rating (easy, moderate, or difficult);
- notes on any rules, regulations, risks or hazards; and
- a trail map showing location of noteworthy features or stopping points.

(b) Route Markers

Route markers are used to remind trail users which trails they are on and instill confidence that they are heading in the right direction. It is important to place markers at decision points, to inform hikers of the trail route or direct them towards other intersecting trails. On trails that are rated Difficult, route markers might be simple icons mounted to trees (similar to the East Coast Trail). On Easy trails though, they can be more descriptive, potentially marking a km/distance or providing a time estimate to the next destination.

(c) Trail Orientation Maps

Trail orientation maps give users a visual idea of where they are on the broader trail system and how close they are to other trails or destinations. These maps are useful at the trailhead, but can also be helpful at destinations or rest stops so trail users can check their progress before continuing on the trail.

(d) Regulatory Signage

Regulatory signage is used to communicate important rules, regulations, or risks to trails users.

(e) Interpretive Signage

Interpretive signage is used to tell stories about the surrounding area. They can focus on everything from local wildlife to history and they come in many different shapes and sizes. Interpretive planning is a recognized profession and these professionals can assist in developing themes, content, and delivery methods for the interpretive signage. The Town has recently embarked on a storyboard design project. Interpretive signage on trails should be designed to complement this initiative.

(f) Accessibility Considerations

Providing clear signage can help users decide how best to enjoy the trail experience according to their needs and abilities. The trailhead should have signage containing information about the physical characteristics of the trail, including:

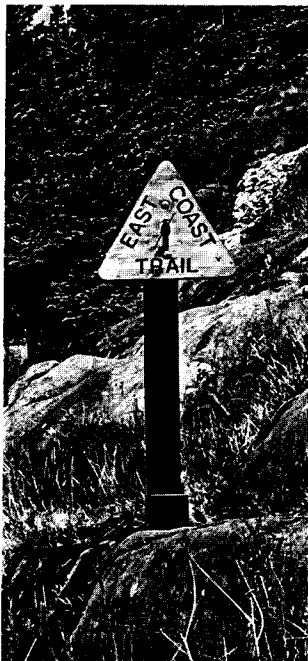
- length of trail;
- type of surface of which the trail is constructed;
- average and minimum trail width;
- average and maximum running slope and cross slope; and
- location of amenities, where provided.



Interpretive signage can be installed in many different sizes and designs, depending on the content and context (Drumminhands Design)



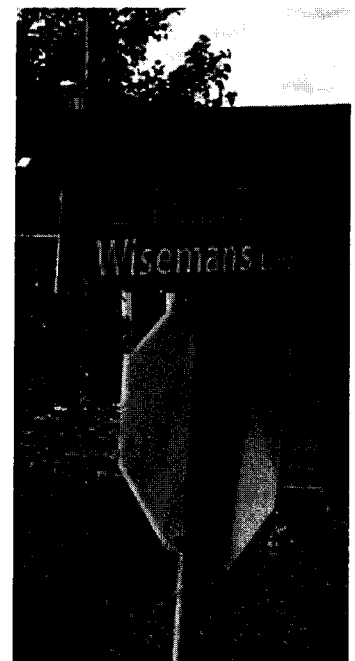
Freestanding Route Marker (Fitzpatrick Woolmer)



East Coast Trail route marker



Trail orientation map at Voisey's Brook Park



Road signs can indicate where trail access exists (Google Maps)

Trail Features & Amenities

Successful trails must provide amenities that accommodate comfort and convenience of a variety of trail users. Typical trail amenities to consider include benches, waste receptacles, bike racks, and more. These amenities should be thoughtful, complementary of one and other, and prescribed. These items may seem somewhat inconsequential, however they serve important functions and, when considered holistically across the entire trail, create a positive experience for trail users. Further, objects that do not visually relate to one another can seem haphazard or disorganized, diminishing the overall character and experience of the trail.

(a) Site Furniture

Site furniture includes items such as benches, seating, waste bins, bollards, and planters that stand in the landscape and help create comfortable, functional, and enjoyable spaces. When choosing site furniture, styles should be chosen that complement one another to help create continuity across the trail network. Simple wooden designs may be used for cost savings as long as they are maintained properly.

Benches are necessary on trails to provide spaces for users to sit and rest. Different trails should provide more benches than others, depending on the trail rating. For example, Easy trails should provide benches frequently, with a minimum of 1 bench every 500m. Waste receptacles should be provided at the same locations. On a Moderate trail, benches will be provided less frequently, with potentially only a few located on the entire trail, at key lookouts or rest areas.

It is also a good idea to include pet waste bag dispensers throughout the trail network, especially along Easy trails. This will help cut down on pet waste along the trails which is an issue that occurs across many different trail networks.

(b) Parking

Parking areas should be strategically located throughout the trail network so that users have many opportunities to access the trails. Most trailheads should have a small parking area if the space is available. Larger parking lots may be provided at popular trails and destinations where more space may be available.

Granular parking areas are acceptable and will likely help reduce construction costs. They are also generally more appealing in rural settings. If granular parking areas are used, some means of delineating parking spaces can be explored such as precast curbs or pavers/markers inset in the granular.

(c) Other Infrastructure

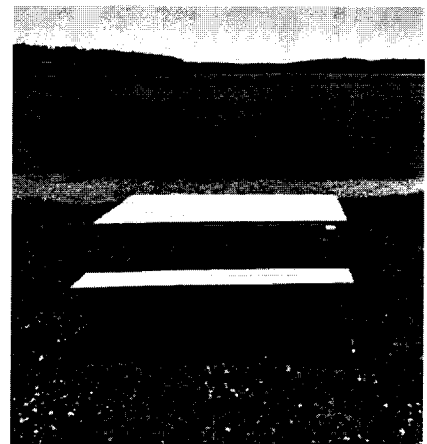
Depending on the type of trail, different infrastructure may be installed to address obstacles on the trail. On an Easy trail, wide bridges, railings, and ramps may be used to address grade changes or water crossings. On a Difficult trail, less robust infrastructure may be used such as log bridges or wooden steps (similar to what's seen on sections of the East Coast Trail).



Existing waste bin in Voisey's Brook Park



Existing bench in Voisey's Brook Park



Existing picnic table at Nearys Pond



Precast concrete curbs used to delineate parking spaces in a granular parking area (Pinterest)



East Coast Trail stairs at Beachy Cove



A robust bridge may be required for well-used trails (Interior Trails)

Maintenance

To ensure the sustained success of the trail network, it is critical that trails are managed and maintained in a safe, accessible, and visually appealing condition. Currently, the Town does not have a scheduled maintenance program for its trails and repairs are generally completed on an as-needed basis. The Town should consider implementing an ongoing trail maintenance program.

Ongoing maintenance is recommended as a preventative measure. It ensures the trail system is kept in its best condition and that small issues are identified and corrected prior to becoming bigger problems which may result in substantial repairs or closing sections of the trail network. A list of general tasks has been provided as a starting point however this may be expanded upon by Town staff. Staff may also decide to focus maintenance efforts along high priority sections of trail that are more frequently used.



Knowledgeable trail construction crews should be used for critical construction and maintenance activities (Appalachian Mountain Club, Pacific Northwest Association)



Community cleanup days and maintenance outings are organized on the East Coast Trail and a similar format could be adopted in PCSP (CBC)

Item	Maintenance Task	Frequency		
		Type 1 Trails	Type 2 Trails	Type 3 Trails
Drainage	Inspect known low points, wet spots, and drainage infrastructure (such as culverts)	Pre-season, then monthly	Pre-season	Pre-season
	Remove debris build up and blockages in culverts	Pre-season	Pre-season	Pre-season
	Repair major damage such as ponding or washouts	As needed, inspect after rain events	As needed, inspect after rain events	As needed, inspect after major rain events
Vegetation	Remove branches that obstruct trail clearance	Pre-season, then as needed	Pre-season, then as needed	Pre-season
	Remove deadwood that poses a hazard	Pre-season, then as needed	Pre-season, then as needed	Pre-season
Turf Management	Mow grass along trail edges to a height of 50 to 75mm (where applicable, such as at trailheads, or along easy trails)	As needed	Likely not applicable	Likely not applicable
Trail Surface	Inspect trail surface for failures such as cracking, settlement, root intrusions, and other hazards and repair as needed	Pre-season, then as needed	Pre-season, then as needed	Pre-season
	Repair broken wooden boards or steps	Pre-season, then as needed	Pre-season, then as needed	Pre-season
Signage	Ensure all signage is visible and free of obstructions	Pre-season, then as needed	Pre-season, then as needed	Pre-season, then as needed
	Replace deteriorated or damaged signs	Pre-season, then as needed	Pre-season, then as needed	Pre-season

Item	Maintenance Task	Frequency		
		Type 1 Trails	Type 2 Trails	Type 3 Trails
Trash	Perform a trail-wide cleanup to collect accumulated winter debris	Pre-season	Pre-season	Pre-season
	Empty waste receptacles	Bi-weekly	Bi-weekly	Bi-weekly (at trailheads)
Lighting	Perform visual inspection of all trail lighting and replace failed lamps	Pre-season, if applicable	Likely not applicable	Likely not applicable
Amenities	Inspect benches for broken, damaged, or deteriorated boards and replace as needed	Pre-season, then monthly	Pre-season, then as needed	Pre-season
	Paint benches, waste receptacles, and other trail amenities, if applicable	Pre-season	Pre-season	Pre-season
	Restock dog waste bag dispensers	Monthly	Monthly	Likely not applicable
	Inspect handrails, stairs and ramps and repair as needed	Pre-season, then as needed	Pre-season	Pre-season
	Replace amenities that have been stolen or severely damaged	As needed	As needed	As needed

Trail Network Development

Upgrades to Existing Trails

The Town has a number of established and developed trails including Voisey's Brook Park and Rainbow Gully Park. These trails form the foundation of a successful trail network. During the community engagement phase, residents suggested further improvements as summarized below.

Voisey's Brook Park

- More Trails (18 responses)
- Biking (15 responses)
- Better Wayfinding Signage (11 responses)
- Nordic Ski Trails (2 responses)
- No Changes Required (10 responses)
- Lighting (9 responses)
- Better Maintenance (6 responses)
- Snow Clearing (4 responses)
- Dog Clean-up Rules (3 responses)
- ATV Friendly (2 responses)
- Parking at Jera Street (1 response)
- More Garbage Cans (1 response)
- Public Art (1 response)
- More Rest Spots (1 responses)
- Better Accessibility (1 response)
- Skating Trail (1 response)
- Food Forest (1 response)

Rainbow Gully Park

- More Trails (27 responses)
- Biking (10 responses)
- Connect to Dans Road ATV Trails (9 responses)
- Lighting (4 responses)
- No Changes Required (4 responses)
- Dog Park (1 response)
- Nordic Ski Trails (1 response)
- Public Art (1 response)
- Better Maintenance (1 response)
- Snow Clearing (1 response)
- Better Drainage (1 response)
- Boardwalk Near School (1 response)
- Tennis Court (1 response)
- More Parking (1 response)

Future Trail Development

Throughout the inventory and analysis phase, the design team visited a number of trails that had been highlighted by the public as potential routes. These potential routes were assessed based on a number of factors and those that were found to have potential have been included in the proposed trail network.

Disclaimers

- The routes of these proposed trails are currently conceptual in nature. The full route of the trail was visited where possible, however time and physical constraints did not allow for scouting out the entirety of each trail as part of this project. As each trail is developed, the exact route will have to be determined as part of the detailed design phase. More details can be found in the Implementation section of this report.
- The proposed trail network has been checked against the NL Public Land Inquiry database and the Town's mapping data. The proposed routes avoid the use of any private land and stick mostly to Crown Land, Town-owned land, and river and pond protection buffers (which allow trail development within the buffer). That being said, during the detailed design phase, land ownership will have to be confirmed for each trail. The trail routes were developed with the assumption that the Town does not currently have the desire to acquire additional private land for the trail network. If the Town does have that desire, that could positively change the direction of the trail network development, as many connections throughout the community are limited due to the vast amount of private property.

While developing the proposed trail network, the Guiding Principles informed decision-making.

- Improve connectivity and access to local destinations and surrounding communities.
- Protect the natural environment and rural sense of character within the community.
- Create a trail network that provides year-round recreation opportunities for different user groups.
- Prioritize sustainability.

User Groups

On the following charts outlining the different proposed trails, “targeted user groups” have been identified. These user groups were determined based on community feedback during the engagement phase and were approved by Council. The priority user groups include walkers, hikers, bikers, cross-country skiers, and snowshoers. ATVs and snowmobiles are considered and included in the plan, but should not be prioritized as highly as the other user groups.

For **hikers and walkers**, trails have been prioritized that help fulfill Guiding Principle #1 (improve connectivity and access to local destinations and surrounding communities). Community feedback made it clear that new destination trails (like the East Coast Trail) should not be the priority. The group being called “walkers” in this report also includes trail users traveling with strollers and wheelchairs. Trails marked as suitable for “walkers” are meant to be accessible for a wide number of pedestrians.




















For **snowshoers and cross-country skiers**, thought has been given to which trails have terrain that would be suitable for those uses in the winter.

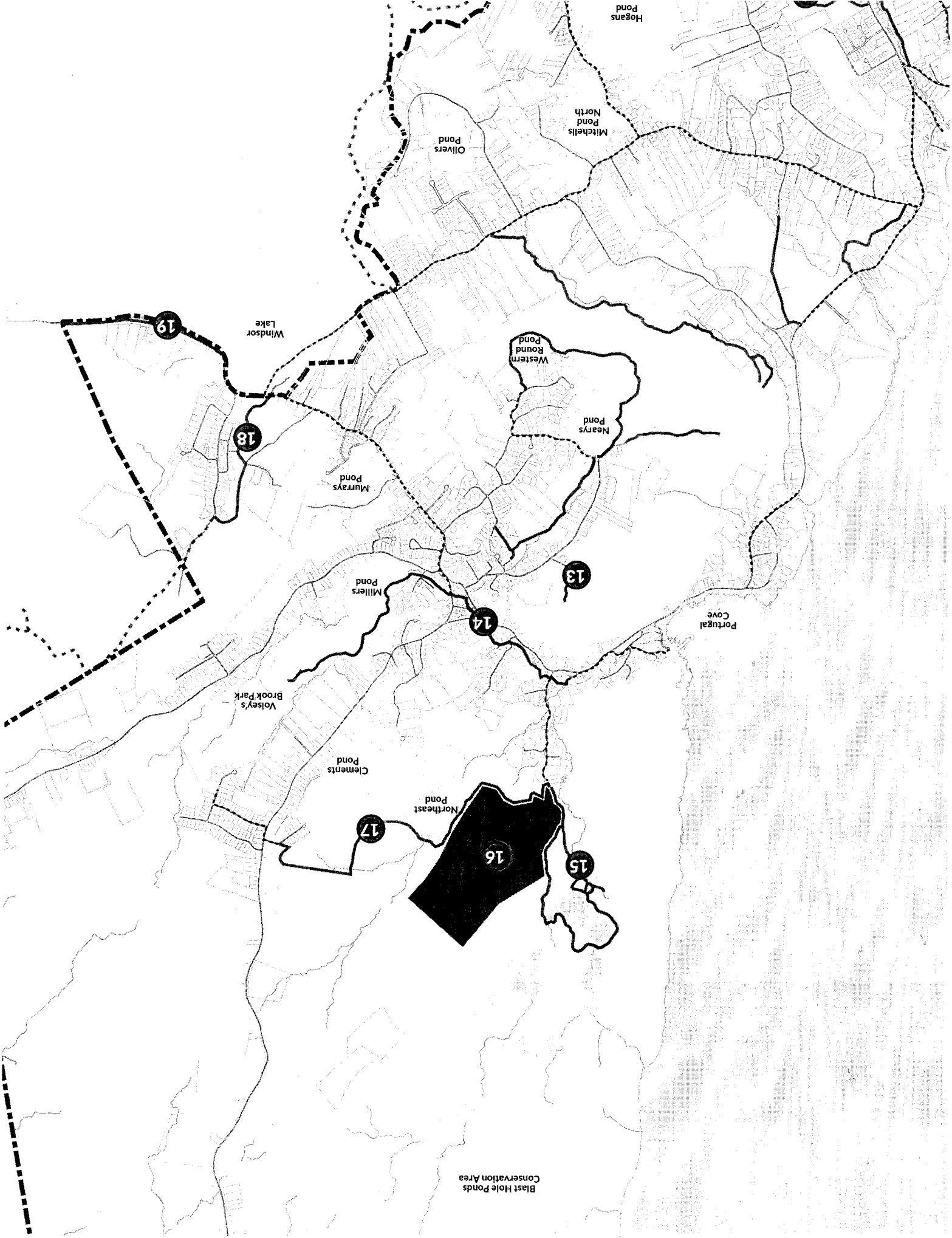
For **bikers**, the focus has been mostly on mountain biking trails, due to the high number of residents that expressed desire for those types of trails. However, in most cases, trails that have been marked as suitable for “bikers” would be suitable for both mountain bikes and other recreational bikes. Two areas have been identified as having potential specifically for mountain biking due to their terrain.

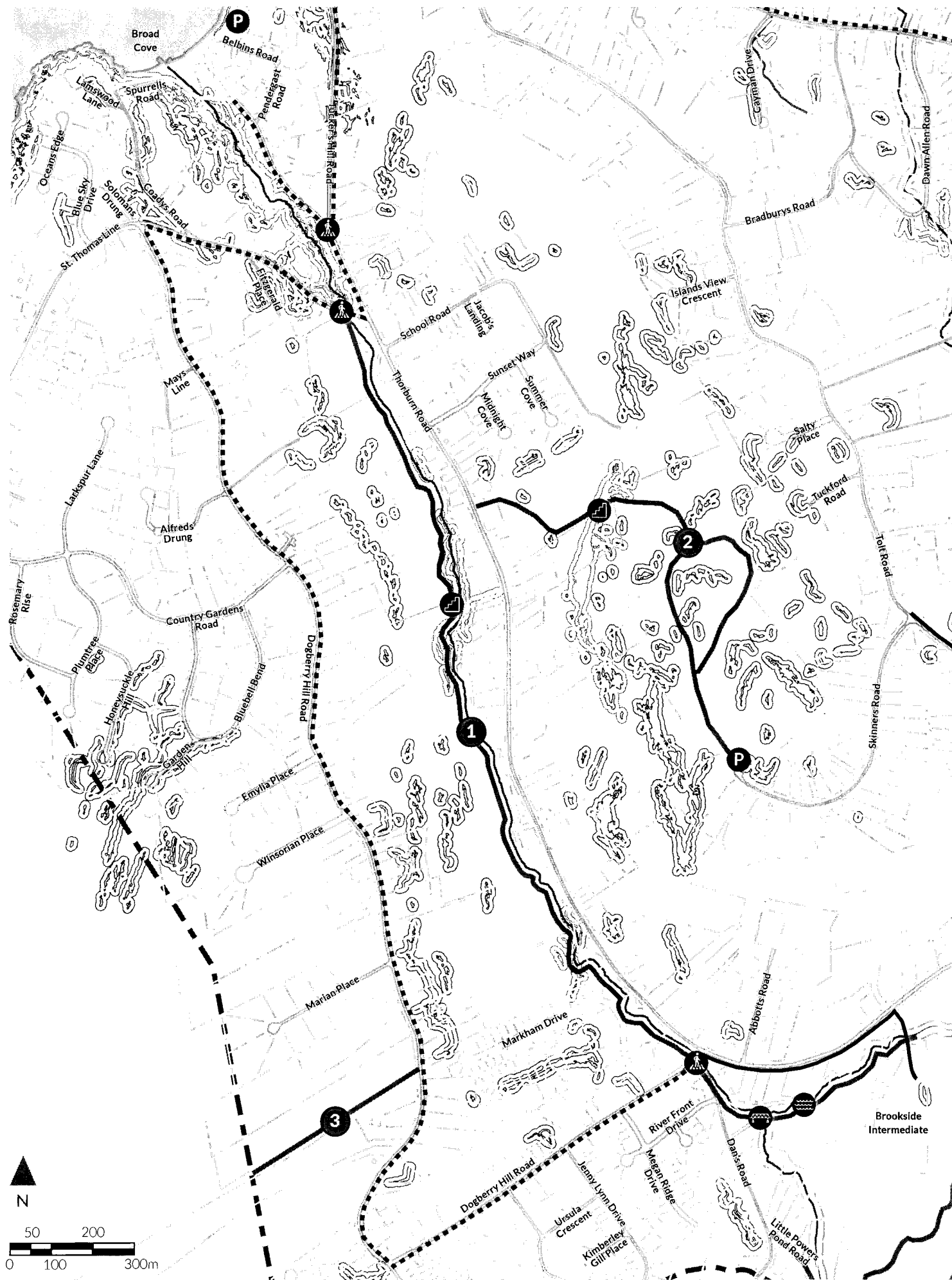
Trail Network Overall Map

Trail Number	Trail Name	Page Number
1	Broad Cove River	59
2	Skidders Road	60
3	Dogberry Hill Road Pole Line	61
4	Rainbow Gully Park Extension	63
5	Rainbow Gully Park to Healys Pond	64
6	Little Powers Pond Road to Little Powers Pond	65
7	Old Broad Cove Road to Tucker's Hill Road	67
8	Knapps Road to Witch Hazel Drive	68
9	Beachy Cove Brook Conservation Area	69
10	Beachy Cove Hill to Nearys Pond Road	70
11	Nearys Pond and Western Round Pond Loop	73
12	Nearys Pond to Mercers Road	74
13	Princes Mountain Lookout	75
14	Main River	77
15	Blast Hole Ponds Conservation Area	78
16	Blast Hole Ponds Mountain Biking Area	79
17	Blast Hole Ponds to Bauline Line	79
18	Portugal Cove Road to Windsor Heights	83
19	Portugal Cove Road Pole Line	84

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required





Trail 1: Broad Cove River	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	2.7km
Targeted User Groups	Walkers, Hikers, Snowshoers
Priority Level	High
Opportunities	This trail was highly desired by residents as it creates a route that runs parallel to Thorburn Road. It would offer pedestrians a safe and pleasant route along the river that would connect St. Thomas Line to Rainbow Gully Park. Broad Cove River is a protected Management Unit under the Municipal Habitat Stewardship Agreement. Trail development is allowed in these areas as long as they promote the protection of these areas and are respectful of the land during development.
Challenges	A high level of effort is required to construct this trail due to steep slopes and dense vegetation. This trail would have to be constructed within the river protection buffer and care would have to be taken creating a trail route that considers potential flood conditions. There is not much available space at either trailhead for parking.



Broad Cove River at St. Thomas Line



Broad Cove River at Dans Road



Existing trail along river in Rainbow Gully Park

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

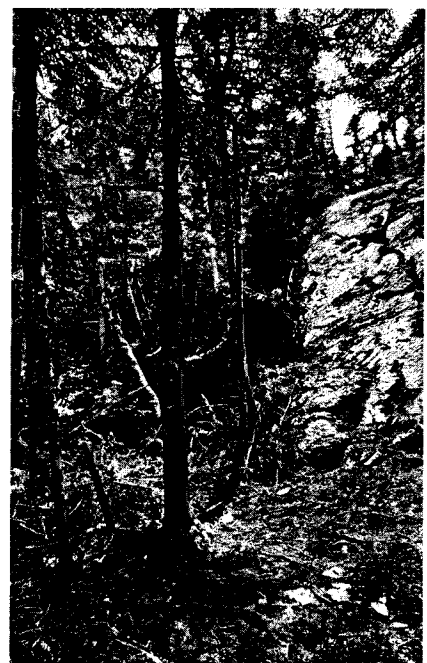
Trail 2: Skinners Road	
Trail Classification	Type 3 and Mountain Biking
Trail Rating	Moderate or Difficult
Approximate Distance	1.6km
Targeted User Groups	Hikers, Mountain Bikers, Snowshoers
Priority Level	Medium
Opportunities	This trail offers great ocean views and passes through a quiet and serene landscape. The area is partially developed with mountain biking infrastructure. A majority of the trail can be maintained as mountain biking, as it would be difficult to develop certain sections for hiking. A small hiking loop can be incorporated for local residents. There is space to develop a small parking area at the end of Skinners Road.
Challenges	It is believed that the land is Crown land, but a majority of the surrounding land is private, leaving only two public access points for the trail. There are some steep slopes and exposed rock faces which pose challenges for hiking trails, but can be utilized for mountain biking.



Existing trail with view of Conception Bay



Existing mountain biking infrastructure

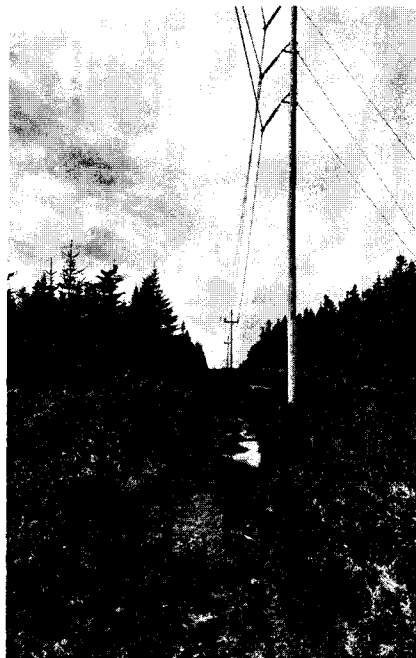


Steep rock faces pose development challenge

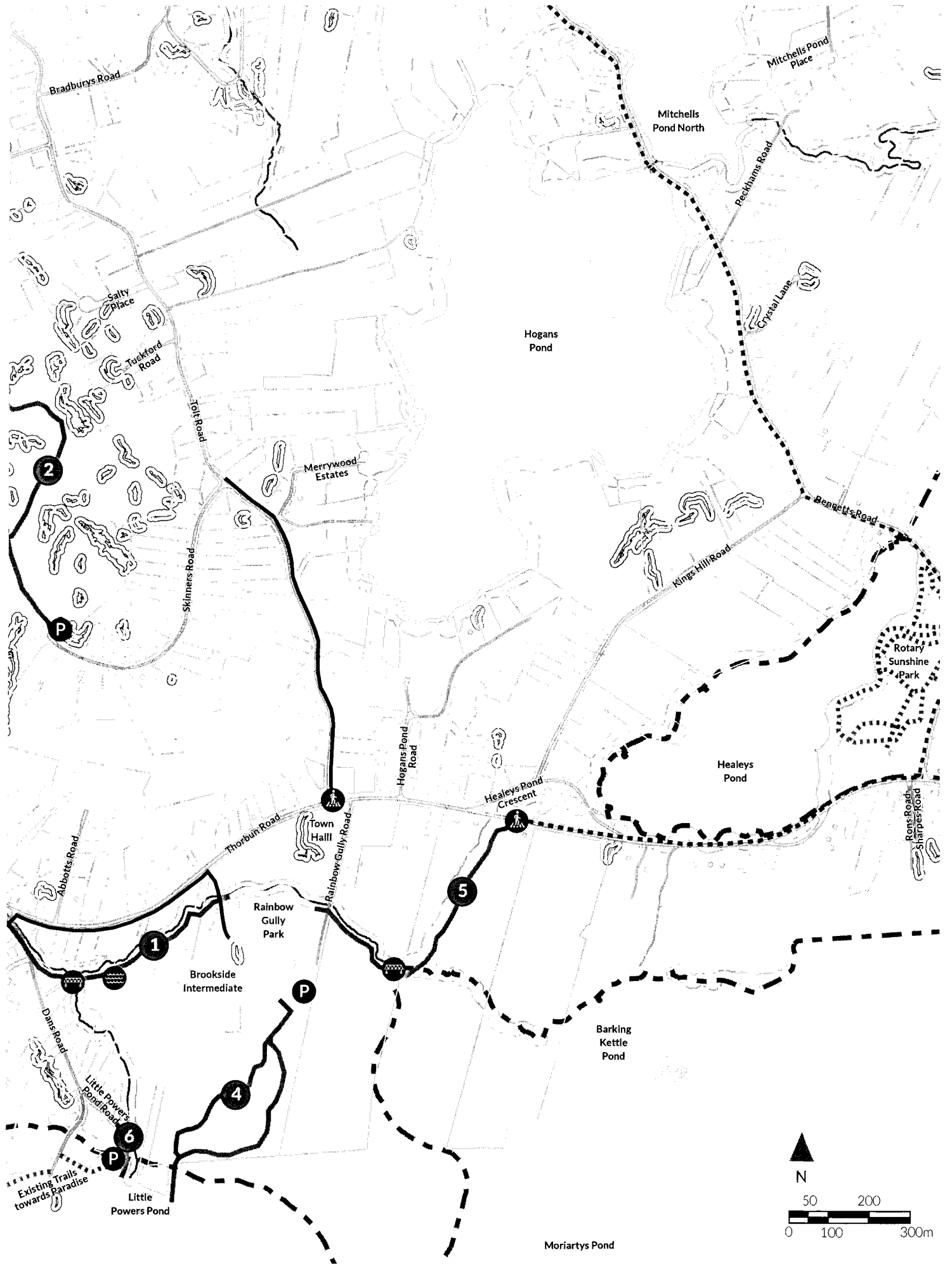
Trail 3: Dogberry Hill Road Pole Line	
Trail Classification	Type 2
Trail Rating	Moderate
Approximate Distance	0.5km
Targeted User Groups	Hikers, Mountain Bikers, ATVs, Snowshoers
Priority Level	Low
Opportunities	Residents expressed the desire to have trails that connect to surrounding communities, especially hiking and ATV trails. Along Dogberry Hill Road and in Country Gardens, there is little public land to use for a trail to connect to the Town of Paradise. This existing NL Power easement should be leveraged as an opportunity to connect to Paradise. It is worth noting that the Town should only develop the pole line to their boundary, and should encourage Paradise to complete the connection.
Challenges	The Town will have to work with NL Power to see what kind of trail development is suitable for this type of easement. The existing grade slopes up from Dogberry Hill Road dramatically which does not allow much space for trailhead development without significant retaining devices.



Existing trail at Dogberry Hill Road



Existing trail



Trail 4: Rainbow Gully Park Extension	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	1.0km
Targeted User Groups	Walkers, Snowshoers, Cross-country Skiers, Mountain Bikers, ATVs (only for access to Dans Road trails)
Priority Level	High
Opportunities	The land to the south of the existing parking lot can be developed into Type 1 trails that complement the existing park trails, in a more natural setting. Access can be provided to Little Powers Pond, which offers nice views, and access to more wooded trails that connect to neighbouring communities. Part of the trail can be shared use with ATVs to allow ATV access from the parking lot to the existing trails beyond Dans Road.
Challenges	An access road for the City of St. John's runs through the property. This road should be avoided, but the undeveloped land to the east of the road can be incorporated into a new trail system.



Start of proposed trail



Existing trail in Rainbow Gully Park

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

Trail 5: Rainbow Gully Park to Healys Pond	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	0.7km
Targeted User Groups	Walkers, Snowshoers
Priority Level	Medium
Opportunities	Continue the trail along the Broad Cove River, connecting Rainbow Gully Park to Thorburn Road. A sidewalk connection can then be used to connect on to Rotary Sunshine Park. This would provide a safe connection between Rainbow Gully Park and Rotary Sunshine Park, since none currently exists.
Challenges	This trail would have to be constructed within the river protection buffer, as it crosses private property. Care would have to be taken to create a trail route that considers potential flood conditions. There is also a lot of dense vegetation in the area. This trail would require a high level of effort to construct.

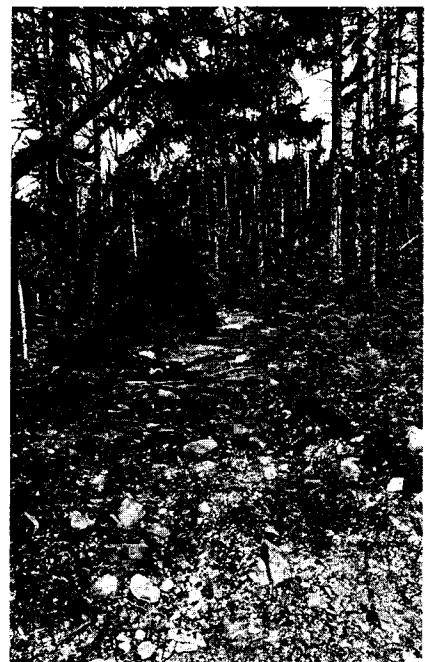
Trail 6: Little Powers Pond Road to Little Powers Pond	
Trail Classification	Type 2
Trail Rating	Easy
Approximate Distance	0.1km
Targeted User Groups	Walkers, Snowshoers, Mountain Bikers, Cross-country Skiers, ATVs
Priority Level	High
Opportunities	This is an existing trail that would take little effort to upgrade and provide access to Little Powers Pond, as well as the existing ATV, hiking and mountain biking trails that branch out from that point and connect to surrounding communities. There is space to develop a small parking area in this location as well.
Challenges	The trail passes by a residential property, and care should be given to provide as much as a buffer as possible between this property and the trail.



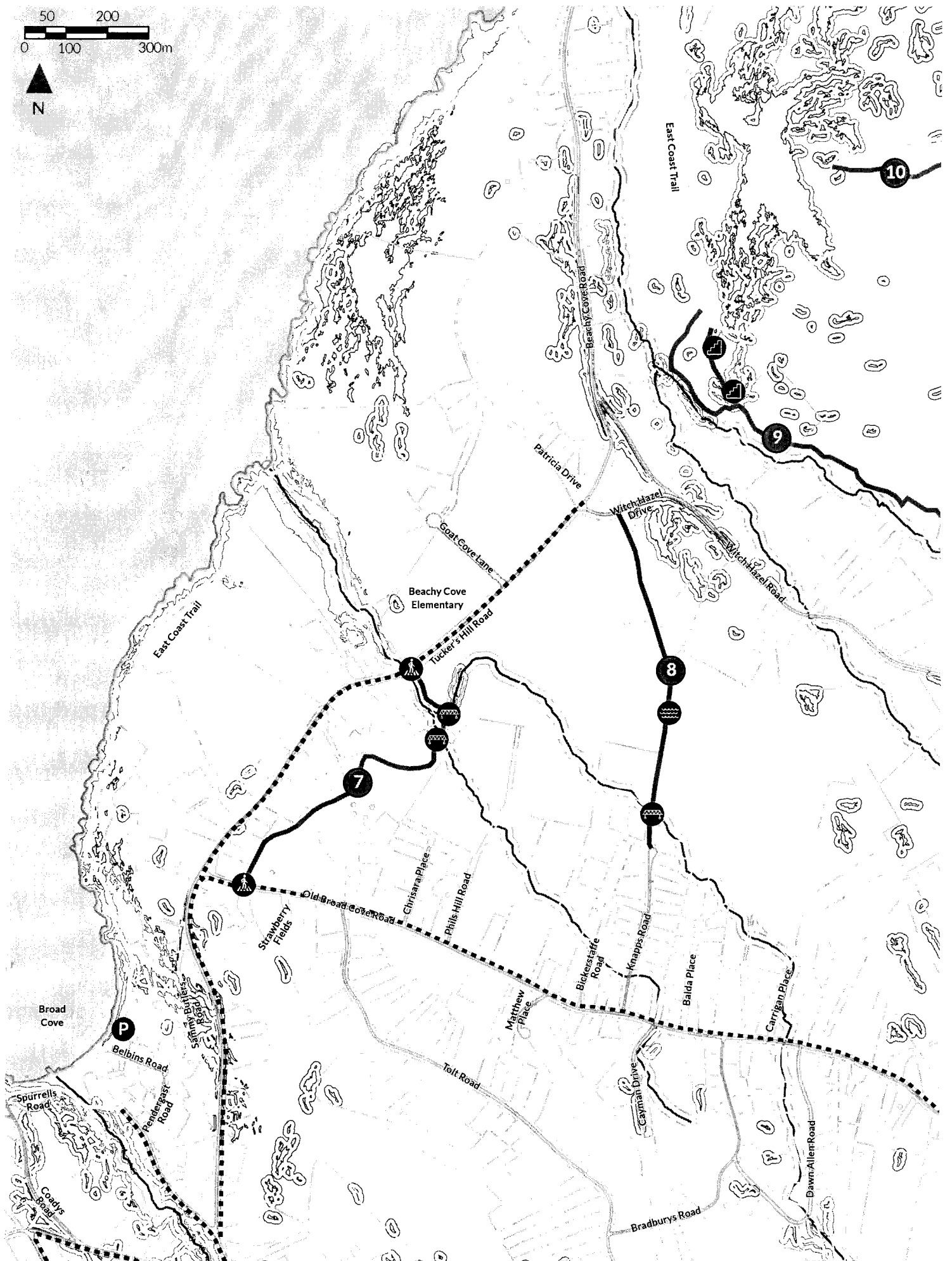
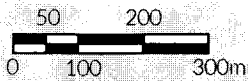
Existing Trail at Little Powers Pond Road



Little Powers Pond















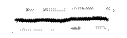






Existing trail branching out



Trail 7: Old Broad Cove Road to Tuckers Hill Road	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	0.8km
Targeted User Groups	Walkers
Priority Level	Medium
Opportunities	This trail can provide a safe connection from the residential neighbourhood to Beachy Cove Elementary. It can also provide access to Goat Cove Brook.
Challenges	The access point from Old Broad Cove Road may cross private property and may require re-routing if it does. This trail requires a high level of effort to develop due to the brook crossing and dense vegetation. The Town should also confirm with local residents if this trail would be useful. If they suggest an alternate route, consider their feedback. It was unclear during the analysis phase what the best route for a school connection would be without detailed resident input. Residents suggested that someone in the area had cleared a trail on their private property to allow children to access the school, but the exact trail route could not be confirmed. An alternate solution would be to improve the pedestrian experience on Tuckers Hill Road.

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

Trail 8: Knapps Road to Witch Hazel Drive	
Trail Classification	Type 2
Approximate Distance	0.9km
Trail Rating	Easy
Targeted User Groups	Walkers, Bikers, ATVs, Snowshoers, Cross-country Skiers
Priority Level	High
Opportunities	This trail is existing and would require a low level of effort to upgrade. The trail provides a connection from Old Broad Cove Road to Witch Hazel Road, creating a north-south connection.
Challenges	One bridge will be required to cross a brook.



Existing Trail near Witch Hazel Drive

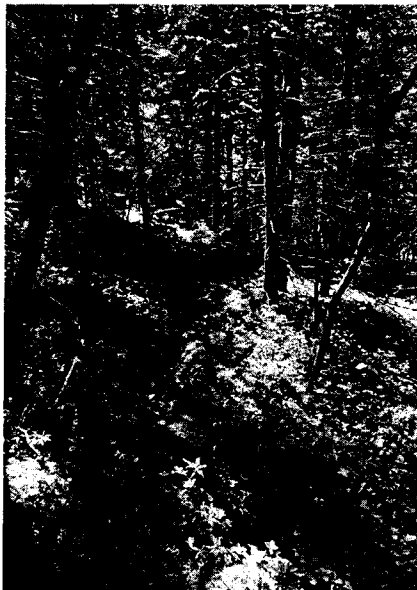


Existing Trail near Knapps Road



Existing Trail and old bridge

Trail 9: Beachy Cove Brook and Conservation Area	
Trail Classification	Type 3
Trail Rating	Moderate or Difficult
Approximate Distance	3km
Targeted User Groups	Hikers
Priority Level	Low
Opportunities	This trail would provide access to the natural areas along Beachy Cove Brook and would provide a connection from Old Broad Cove Road to the East Coast Trail. Beachy Cove Brook Gully is a protected Management Unit under the Municipal Habitat Stewardship Agreement. Trail development is allowed in these areas as long as they promote the protection of these areas and are respectful of the land during development.
Challenges	This area is currently undeveloped and would require a high level of effort to install a hiking trail similar to the East Coast Trail. There is dense vegetation and grade changes. Much of the trail would have to be constructed within the river protection buffer to avoid private property within the area. Feedback from the public engagement requested better connectivity within the community. While this trail provides connection between two main roads, the route would be similar to the East Coast Trail which may not be accessible for all residents. For this reason, the priority level has been stated as “Low”.

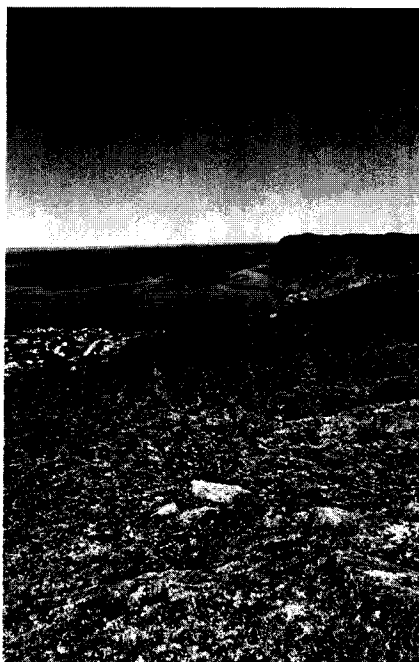


Start of proposed trail at East Coast Trail

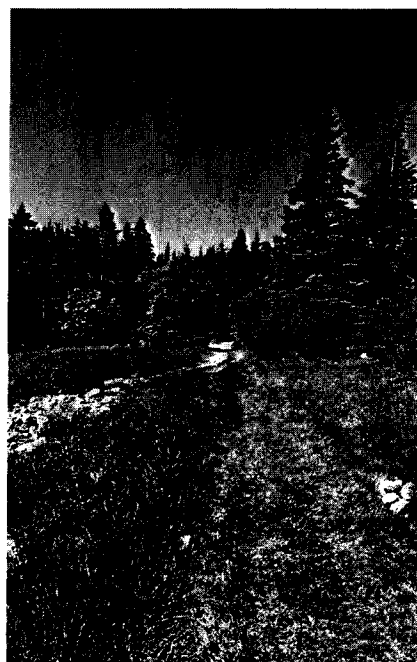


View of falls from proposed trail

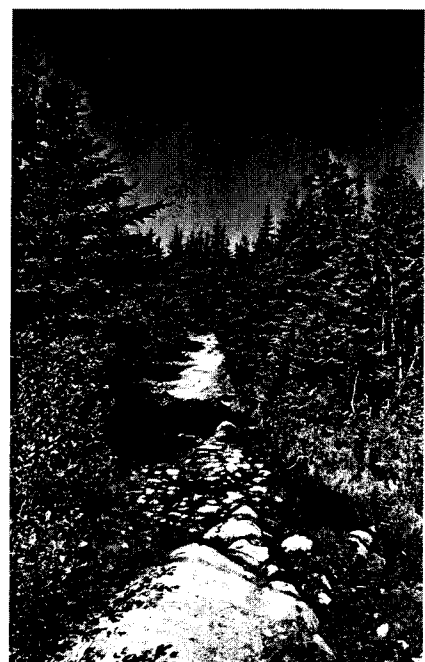
Trail 10: Beachy Cove Hill to Nearys Pond Road	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	0.8km
Targeted User Groups	Walkers, Snowshoers
Priority Level	High
Opportunities	This trail is existing and provides access to Beachy Cove Hill, which provides great views of the community and Conception Bay. Upgrading the trail to make it more accessible would allow more residents and visitors to appreciate the views without having to hike the East Coast Trail to access them. Since this trail is not a part of the East Coast Trail, upgrading it will not negatively impact the Trail.
Challenges	It is evident that ATVs are active in this area. The East Coast Trail does not permit ATV and bicycle use, so an upgraded connection to the East Coast Trail should also discourage these uses. There are many ATV trails that branch out from the existing trail. It does create confusion about which trail to follow to Beachy Cove Hill, so wayfinding signage should be installed to help guide trail users to the lookout.



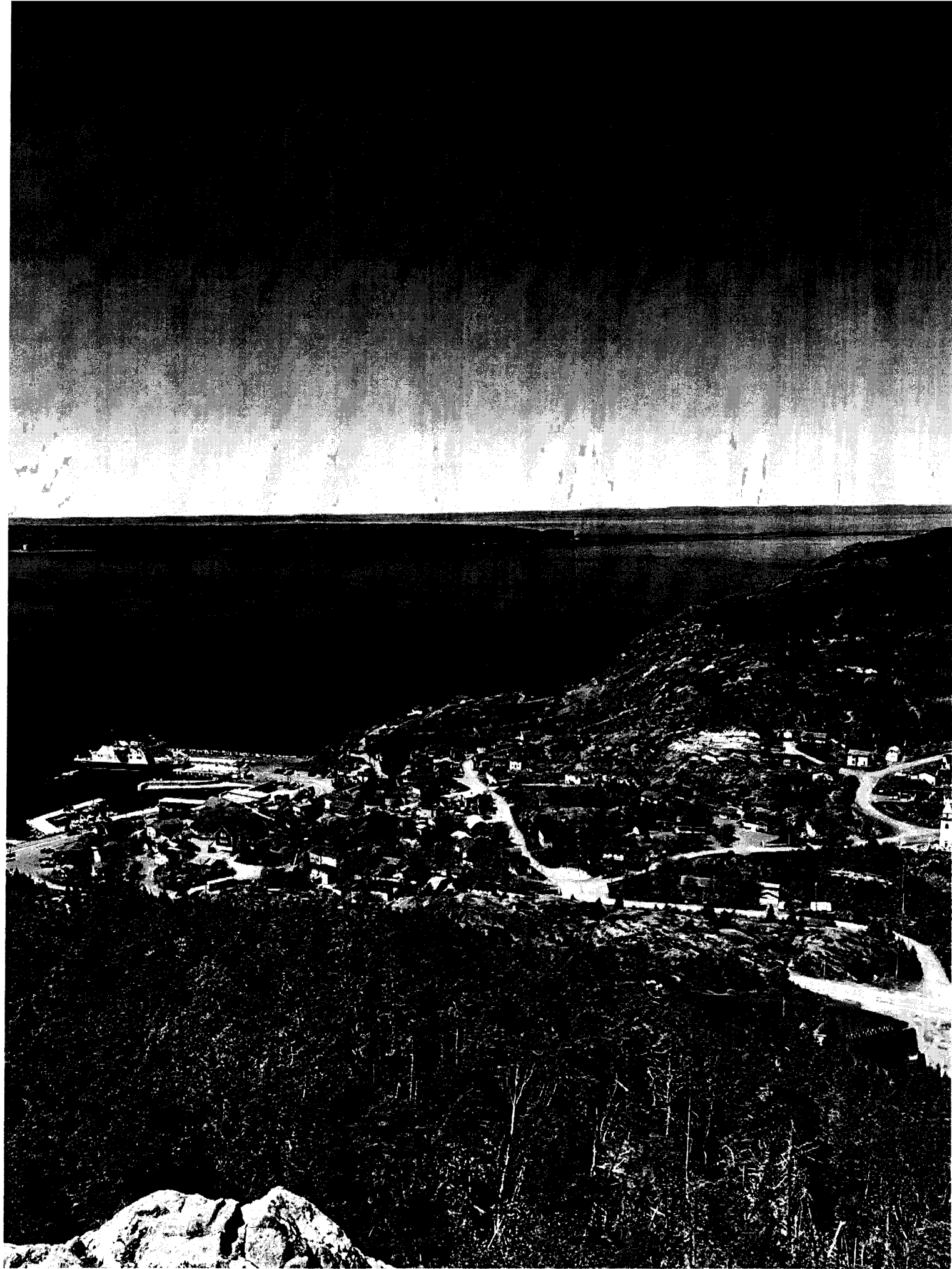
View from Lookout on East Coast Trail

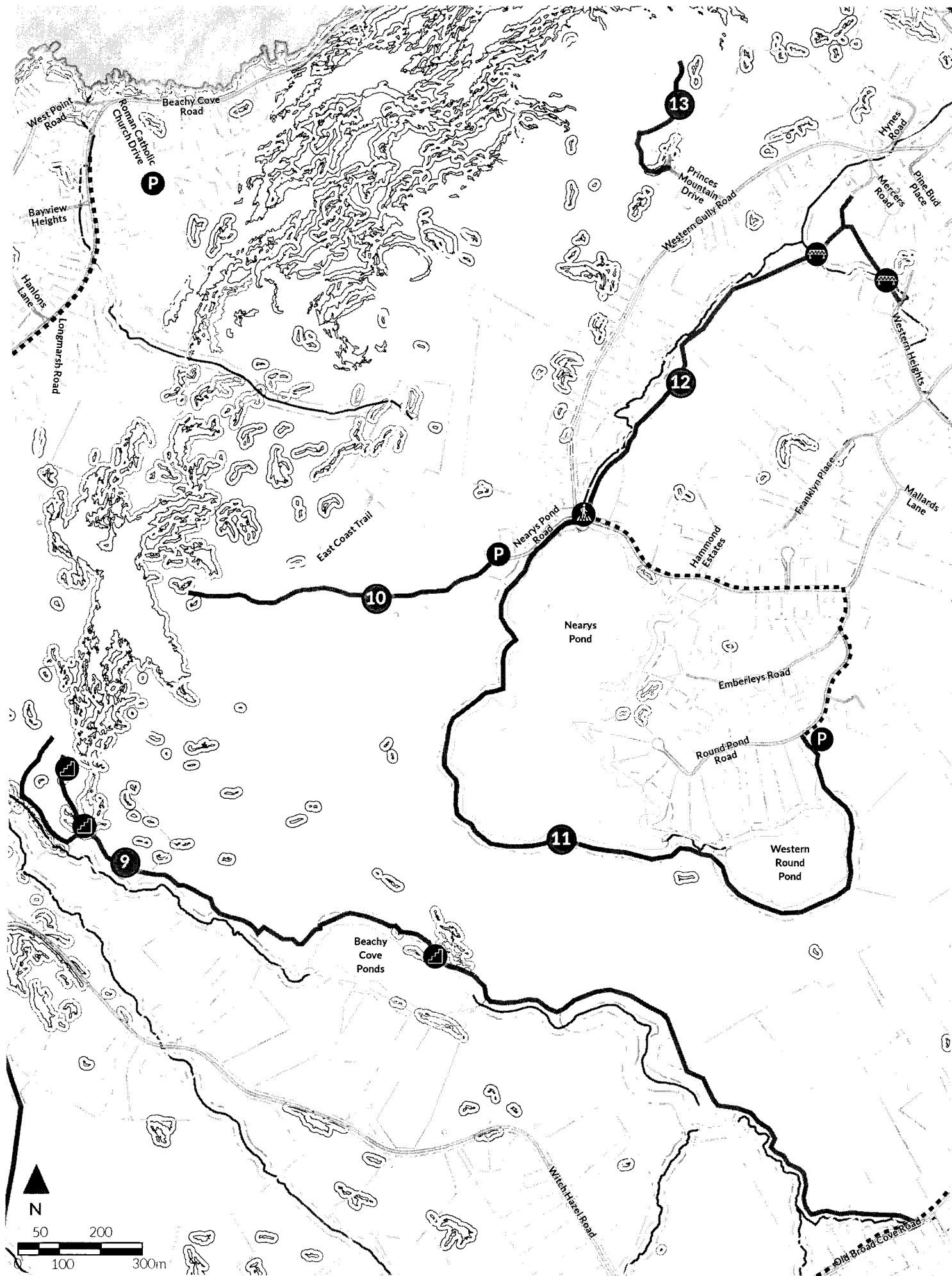


Existing Trail



Existing Trail





Trail 11: Nearys Pond and Western Round Pond Loop	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	2.3km
Targeted User Groups	Walkers, Bikers, Snowshoers, Cross-country Skiers
Priority Level	High
Opportunities	Residents expressed the desire for more recreational trails within the community. Nearys Pond and Western Round Pond provide the opportunity for a waterside recreational trail in a natural setting. There is space near the Round Pond Road trailhead to develop additional parking.
Challenges	The pond is surrounded by private property, much of which is currently undeveloped. The trail must be constructed within the pond protection buffer so care would have to be taken to create a trail route that considers potential flood conditions.



Existing trail



Existing trail at Round Pond Road



View of Nearys Pond

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

Trail 12: Nearys Pond Road to Mercers Road	
Trail Classification	Type 2
Trail Rating	Easy
Approximate Distance	1.3km
Targeted User Groups	Walkers, Bikers, Snowshoers, Cross-country Skiers
Priority Level	Medium
Opportunities	This trail would provide another north-south connection in the community, which is currently lacking. It would also help connect the future trail around Nearys Pond and Western Round Pond to Portugal Cove Road.
Challenges	Some bridges or boardwalks may be required near the marsh-like area at Mercers Road. The trail would have to be partially constructed within the river protection buffer so care would have to be taken to create a trail route that considers potential flood conditions.



Existing Recreation Area at Start of Trail

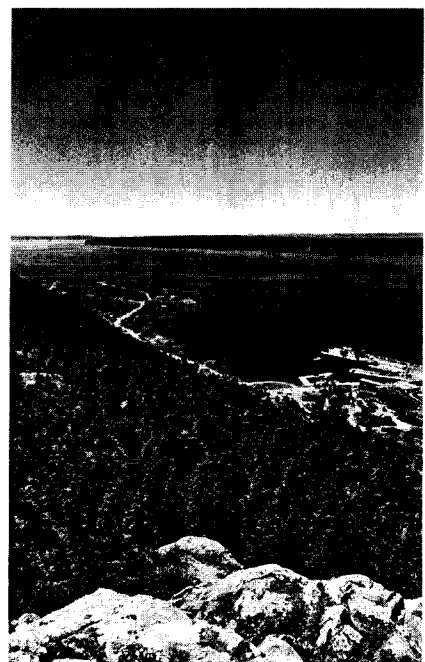
Trail 13: Princes Mountain Lookout	
Trail Classification	Type 1
Trail Rating	Easy or Moderate
Approximate Distance	0.6km
Targeted User Groups	Walkers, Snowshoers
Priority Level	High
Opportunities	This trail is existing and provides access to Princes Lookout, which provides great views of the community and Conception Bay. Upgrading the trail to make it more accessible would allow more residents and visitors to appreciate the views without having to hike the East Coast Trail to access them. Since this trail is not a part of the East Coast Trail, upgrading it will not negatively impact the Trail.
Challenges	There is a very small parking area on Princes Mountain Drive. Additional parking may be required in the surrounding area if the trail is upgraded and marketed as an accessible trail.



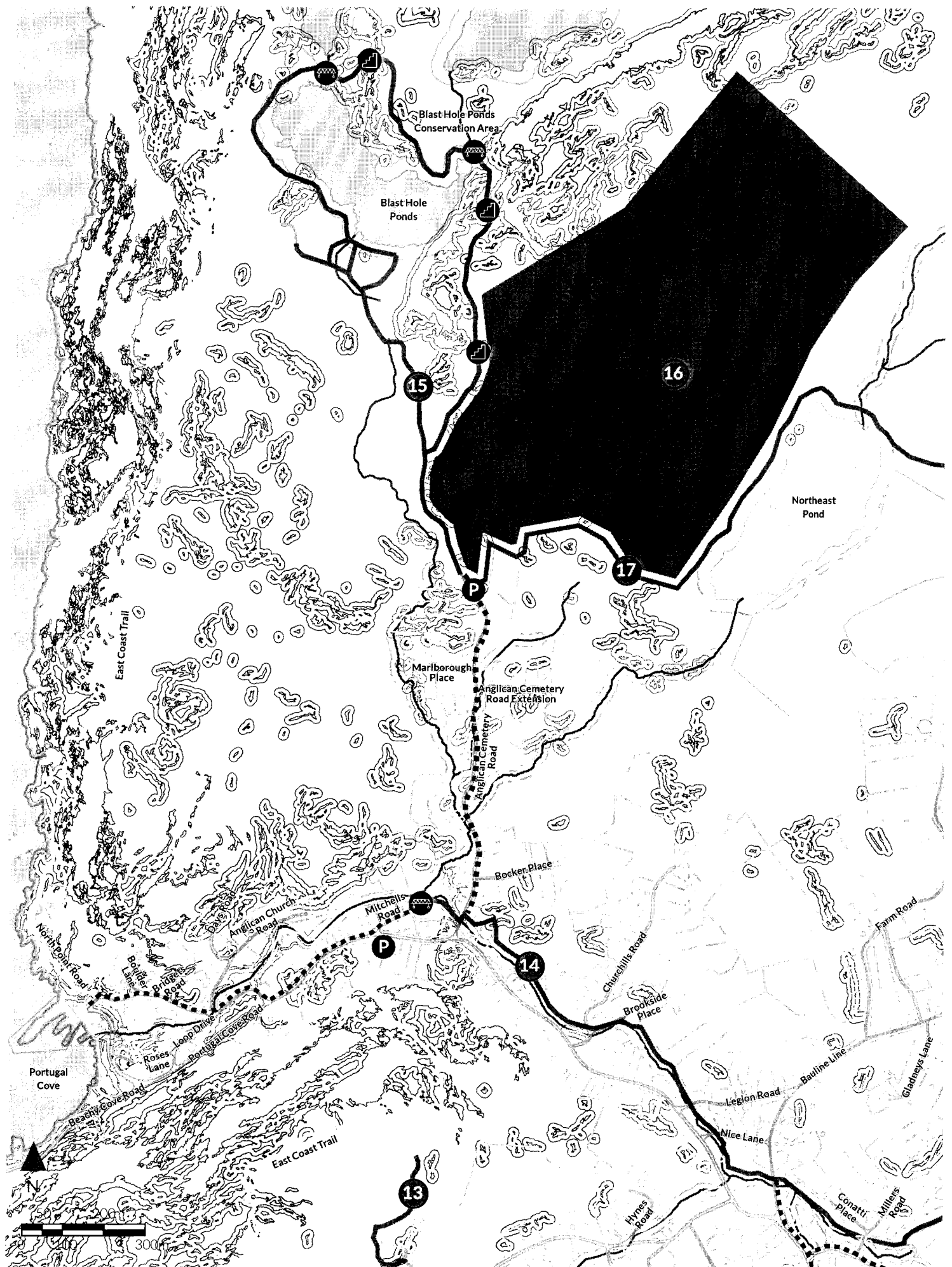
Parking Area on Princes Mountain Drive



Existing Trail



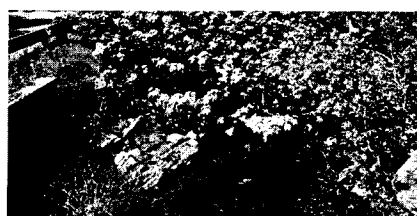
View from Lookout on East Coast Trail



Trail 14: Main River	
Trail Classification	Type 1
Trail Rating	Easy or Moderate
Approximate Distance	3km
Targeted User Groups	Walkers, Snowshoers
Priority Level	High
Opportunities	This trail was highly desired by residents as it creates a route that runs parallel to Portugal Cove Road and connects to Voisey's Brook Park. It would offer pedestrians a safe and pleasant route along the river. Main River is a protected Management Unit under the Municipal Habitat Stewardship Agreement. Trail development is allowed in these areas as long as they promote the protection of these areas and are respectful of the land during development.
Challenges	A high level of effort is required to construct this trail due to dense vegetation and encroachment on the river by private properties. This trail would have to be constructed within the river protection buffer and care would have to be taken to create a trail route that considers potential flood conditions. There is not much available space along the route for parking. Residents along the river might feel an infringement on their privacy with this trail route.



Main River at Legion Road



Main River at Loop Drive



Main River at Indian Meal Line

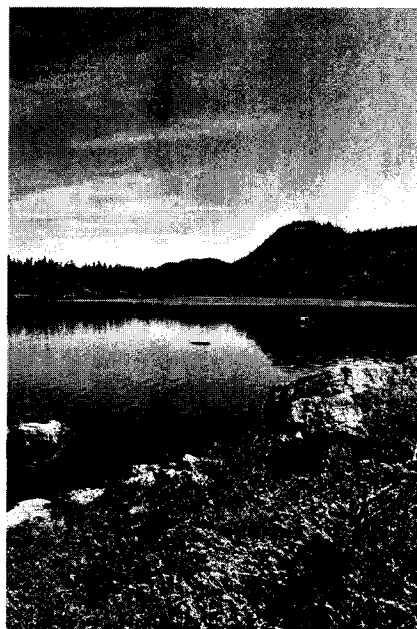
Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

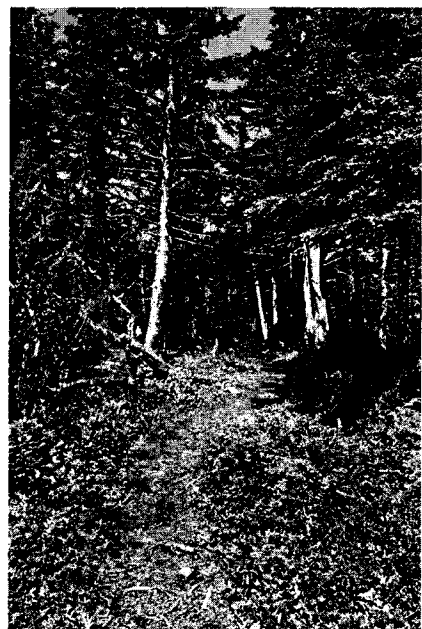
Trail 15: Blast Hole Ponds Conservation Area	
Trail Classification	Type 2
Trail Rating	Moderate
Approximate Distance	3km
Targeted User Groups	Hikers, Snowshoers, Cross-country Skiers
Priority Level	Medium
Opportunities	Blast Hole Ponds is a protected Management Unit under the Municipal Habitat Stewardship Agreement. Trail development is allowed and encouraged in these areas as long as they promote the protection of these areas and are respectful of the land during development. This area is currently used for passive recreation activities such as hiking, and upgrading the trail system in this area would provide another recreation opportunity within the community. This trail system also provides another connection point to the East Coast Trail. There is an existing parking area that can be re-developed to accommodate trail users.
Challenges	There are some wet and steep areas that will require infrastructure such as boardwalks, stairs, and bridges. There are private properties near Blast Hole Pond River that should be avoided. It is clear that ATVs are active in this area. Building purpose-built ATV trails in this area may not be feasible, and therefore it is recommended that ATV use be discouraged in this area to help protect the natural environment of the conservation area.



Parking area at end of Anglican Cemetery Road



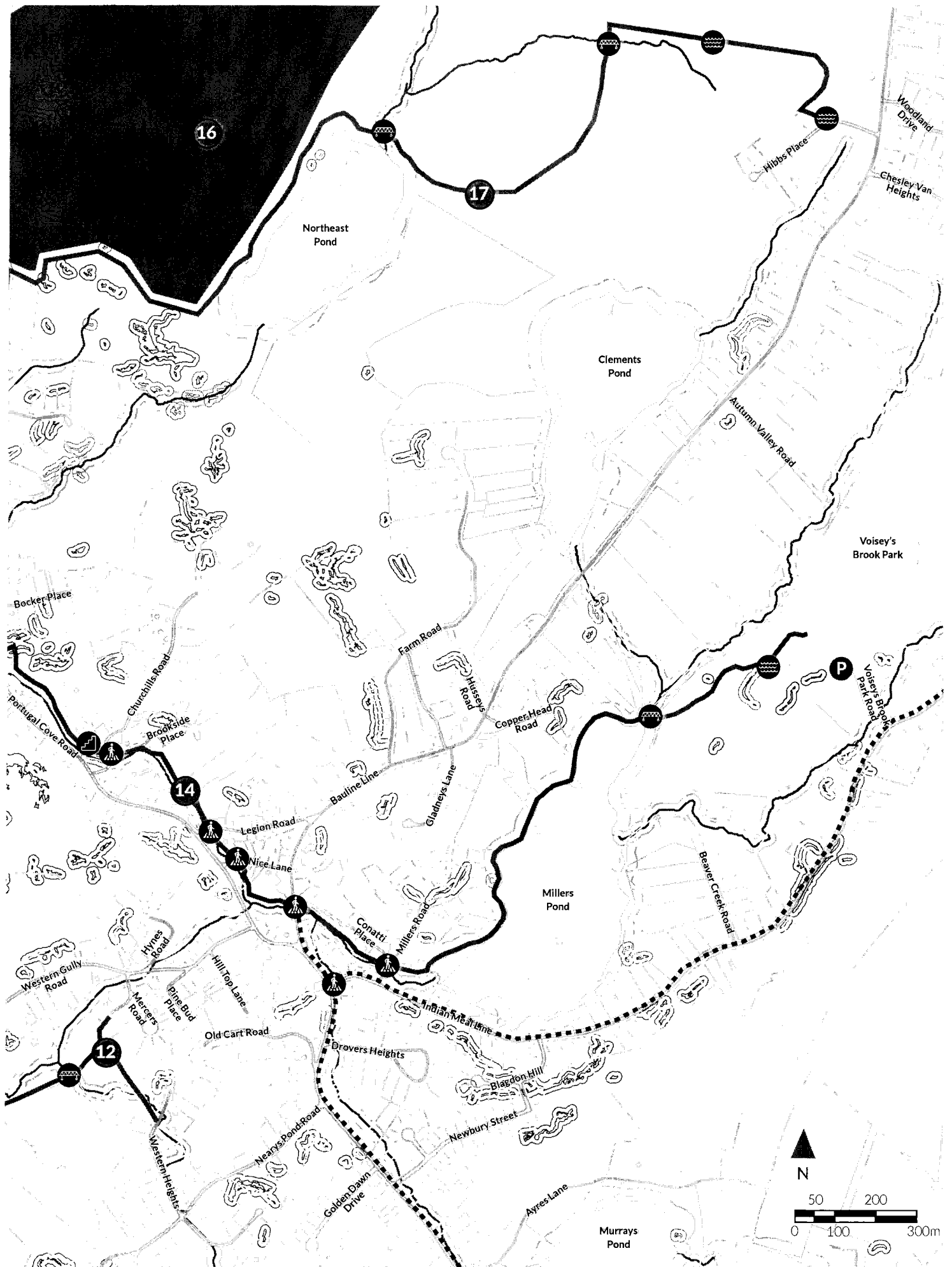
View of Blast Holes Pond



Existing trail

Trail 16: Blast Hole Ponds Mountain Biking Area	
Trail Classification	Mountain Biking
Trail Rating	N/A
Approximate Distance	To Be Determined
Targeted User Groups	Bikers
Priority Level	High
Opportunities	During community engagement, many people expressed the desire for purpose-built mountain biking trails. There are many mountain bikers in the surrounding area that would like to see a trail system in this area and mountain biking is becoming a tourism draw in Atlantic Canada as well. The Town should approach the Avalon Mountain Biking Association to discuss trail options for this area. The shaded area on the map visually represents an area similar in size to the East White Hills mountain biking trail system in St. John's. This mountain biking trail system, paired with Trail 15 offers a valuable recreation opportunity within the town.
Challenges	There has been feedback that mountain biking trails in this area would negatively effect the conservation area. As a part of this project, a high-level review of the environmental impacts of mountain biking was conducted. The findings suggest that as long as the trails are developed in a purposeful, informed, and thoughtful way, the negative impact on the environment should be minimal. The proposed location is also outside of the conservation area, to ensure protection of that area.

Trail 17: Blast Hole Ponds to Bauline Line	
Trail Classification	Type 2
Trail Rating	Moderate
Approximate Distance	2.7km
Targeted User Groups	Hikers, Bikers, Snowshoers, Cross-country Skiers
Priority Level	Low
Opportunities	This trail would provide a connection from the Bauline Line neighbourhoods to Blast Hole Ponds and would provide an additional nature trail in the northern part of the community.
Challenges	Bridge and boardwalk infrastructure will likely be required to develop this trail.

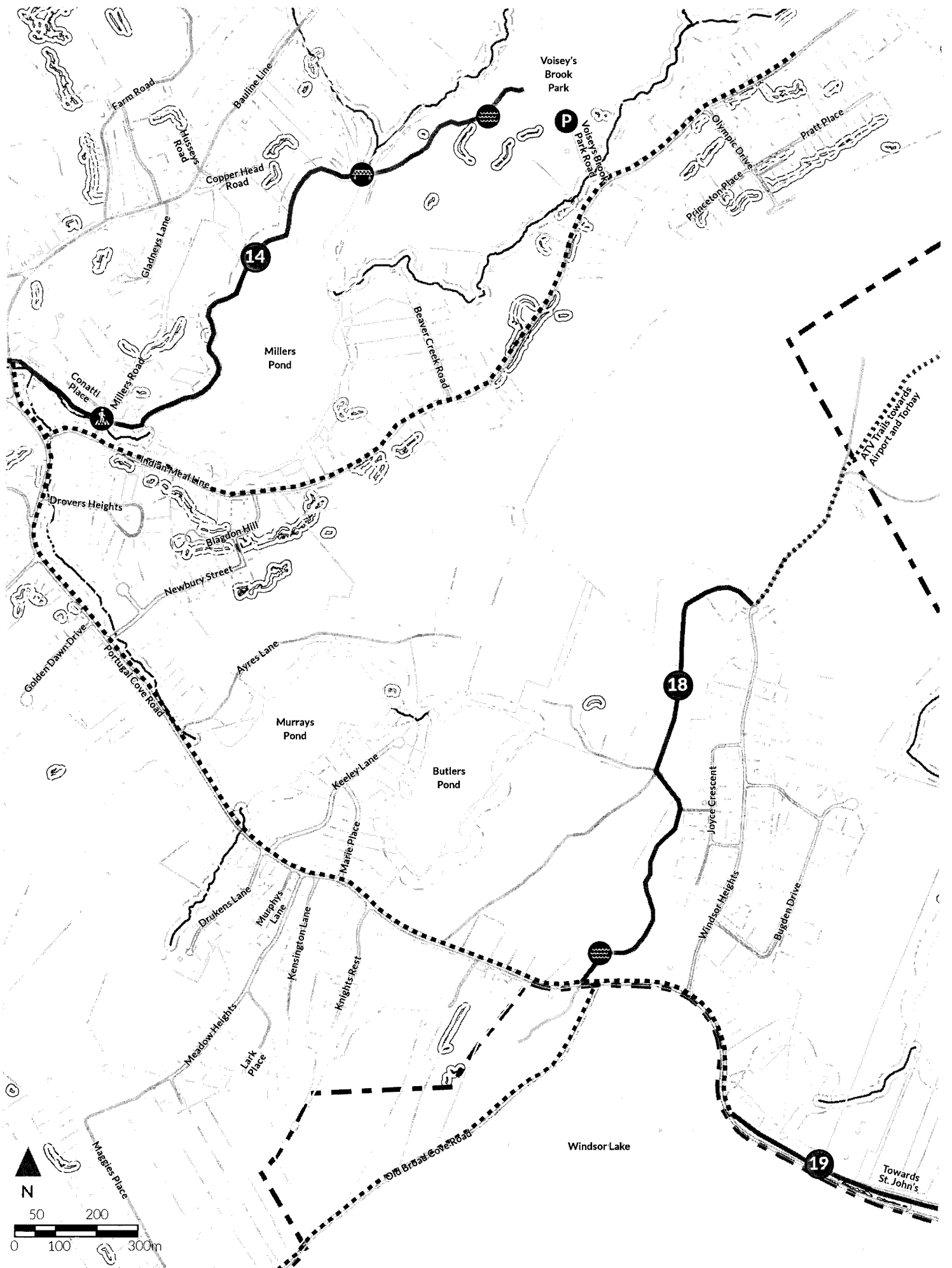




Voisey's Brook Park

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required



Trail 18: Portugal Cove Road to Windsor Heights	
Trail Classification	ATV
Trail Rating	N/A
Approximate Distance	1.2km
Targeted User Groups	ATVs
Priority Level	Medium
Opportunities	This trail is mostly existing and can be upgraded to facilitate ATV access to the existing trails that run from Windsor Heights towards the airport and Torbay.
Challenges	Some wet areas will require re-grading or boardwalks to develop this trail.



Existing trail



Existing trail

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required

Trail 19: Portugal Cove Road Pole Line	
Trail Classification	Type 1
Trail Rating	Easy
Approximate Distance	1.2km
Targeted User Groups	Walkers, Bikers, Snowshoers, Cross-country Skiers
Priority Level	Low
Opportunities	Residents expressed the desire to have a shared use trail that connects to St. John's via the existing pole line. A new pole line was recently installed and residents believe the opportunity exists to install a trail within the easement.
Challenges	This would have to be a joint venture with the City of St. John's, as a majority of the pole line crosses into their city limits. The Town should not develop their portion of the trail until there is confirmation that it can be completed to connect to the Grand Concourse Trail system in Airport Heights. Discussions would also have to take place with NL Power to determine if a shared use trail is an acceptable use in this type of easement. The trail would take a high level of effort to develop. Although the area has been cleared of vegetation, there are large grade changes and rock outcrops that would have to be addressed.



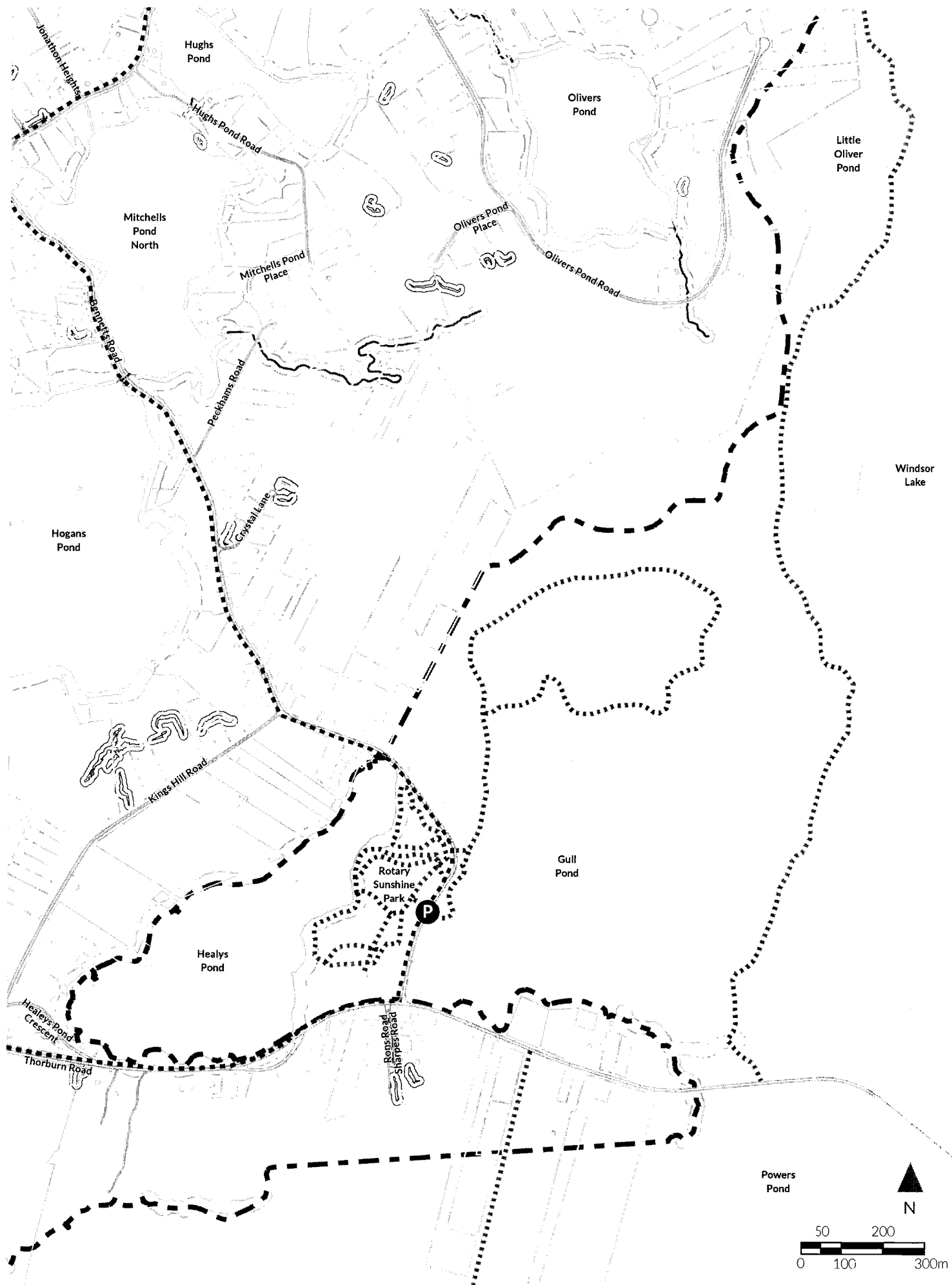
Existing pole line



Existing pole line

Legend

	Proposed Trail		Wetland
	Existing Developed Trail		Pond and 30m Protection Buffer
	Existing Trail (Outside Town Boundaries)		Property Lines
	Proposed Improved Pedestrian Experience (see page 34 for more info)		Trail Number
	Existing Sidewalk		Proposed Parking Area
	Existing Road		Existing Parking Area
	Town Boundary Line		Boardwalk Likely Required
	Watercourse and 15m Protection Buffer		Stairs Likely Required
	Steep Slopes		Bridge Likely Required
			Crosswalk Required



Implementation

The recommendations presented in this report identify strategies and projects that will help the Town achieve its trail development goals over time. While many ideas emerged from the community engagement and trail inventory and analysis, the focus has been on choosing recommendations which support the Guiding Principles.

It should be noted that this Trails Master Plan represents a long-term vision for trail development in Portugal Cove - St. Philip's. This Plan is only a first step, and the changes outlined herein will not happen overnight. Implementation will require an organized effort, dedicated champions, strategic partnerships, and further investment before the recommendations presented become a reality. This section of the report is dedicated to identifying the next steps required to begin that process.

Roles and Responsibilities

Town of Portugal Cove - St. Philip's

As the Town moves forward with realizing recommendations from this plan, they will be responsible for the following tasks:

- Review the Trails Master Plan and set priorities for project implementation;
- Work with Council to allocate budget each year to advance the initiatives of this plan;
- Become the champion for implementing the recommendations of this plan; consider making this part of the Recreation Committee's mandate;
- Liaise with other levels of government as needed;
- Work with the landowners and government to secure land agreements for priority projects that require property not currently owned by the Town;
- Apply for funding or undertake fundraising initiatives, consider striking a sub-committee to lead this;
- Promote the importance of the initiatives of this plan to the residents of Portugal Cove - St. Philip's;
- Engage residents on a regular basis to provide updates, prioritize projects, and to create project support. Throughout the planning process, it was evident that a strong sense of pride and passion for the community exists among residents of Portugal Cove - St. Philip's. The success of this plan will only be possible with the participation and involvement of these community members.

Design and Planning Team

Good trail planning requires experience and expertise in many different areas. The Town should ensure that any design and planning teams that they hire for detailed trail design or construction have practical experience in:

- Community, Indigenous, and stakeholder engagement and communications;
- Inventory and assessment of environmental, cultural, and historic resources;
- Federal, provincial and local legislation, regulations and permitting processes (e.g. planner);
- Engineering (e.g. civil, transportation);
- Geographic Information Systems (GIS) based spatial analysis and mapping;
- Tourism market research;
- Trail planning (e.g. trail planner, recreation planner, landscape architect);
- Technical trail routing and design (e.g. trail design specialist, landscape architect);
- Trail construction (e.g. trail construction inspector/supervisor, landscape architect)

Detailed Design Process

The typical trail planning phases are outlined in this section and provide an overview of the steps that are required to ensure a successful and well-constructed trail network.

Phase 1: Defining the Trail Experience and Vision

1. Identify the Area of Interest
2. Determine Trail User Objectives
3. Determine Trail Classification
4. Determine the Desired Maintenance and Risk Management Frequency
5. Determine the Design Features, Amenities and Challenge Features
6. Determine the Trail Significance and Theming
7. Meet with the Public Land Manager
 - Arrange a meeting with the Crown Lands Division of the Department of Fisheries, Forestry, and Agriculture to discuss the plans for the trail. The Crown Lands Officer will help explain the application process. This can be a lengthy process depending on the jurisdictions that may be involved, so this meeting should occur early in the planning process to help avoid delays.

Items number 1-6 in this phase have been completed for nineteen proposed trails as a part of this Plan. Please see the Recommendations section for more detail.

Phase 2: Analysis, Constraints and Opportunities

1. Review and Summarize Relevant Provincial and Local Land Management Policies
 - The meeting with the Crown Lands Officer from the previous phase will provide insight about relevant policies and plans that will need to be considered as part of the trail planning.
2. Review Existing Land Uses and Land Ownership
 - This has been done at a conceptual level for this plan, however, resources such as exact locations of adjacent property boundaries were not available in all cases. During the detailed design phase, the Town will need to confirm any conflicts within property boundaries, and may need to adjust the trail route to address the conflict.
3. Conduct a Site Inventory and Analysis
 - General trail routes were highlighted in the Recommendations section of this plan, and preliminary inventory and analysis was conducted for each trail. However, certain parts of trails could not be visited due to low accessibility and lack of available project time. Therefore, each proposed trail route will need to be inventoried and analyzed in detail.
 - Local knowledge should be leveraged during this phase. It was clear during the engagement phase that there are many residents who are very interested in trail development. These residents should be included in the routing process if possible.
 - Data collected in the field should be compared to the general analysis presented in this report and any necessary changes to the proposed trail routes can be made to address these opportunities or constraints.

Phase 3: Trail Concept Planning and Order of Magnitude Costing

1. Draft Trail Concept Plan

- This plan provides conceptual routes for each trail, but as trails are slated for development, more detailed mapping needs to be produced for each trail. The draft trail plan should include information such as:
 - Any route options including pros and cons, and the preferred option;
 - Trail classification (can vary for different sections of trail if necessary);
 - Notes on whether any existing footpaths are to be upgraded, or whether it is new construction;
 - Type and general location of any technical trail features and infrastructure (bridge, stairs, drainage systems, boardwalks, etc.);
 - Type and general location of amenities (washrooms, seating, etc.);
 - Type and general location of lookouts or destinations;
 - Signage plan;
 - Notes on any measures that need to be taken to manage risk or impacts to environmental resources;
 - General statistics (distance, trail rating, targeted users, etc.).

2. Public Engagement

- Before moving into detailed design, release the draft trail concept plan for public review and comment. Revise the draft trail concept plan as necessary.

3. Order of Magnitude Costing

- If required, prepare a Class D order of magnitude capital and operational cost estimate for the trail. The accepted accuracy of a Class D cost estimate is +/- 30%.

4. Public Lands Application and Referrals

- Phase 2 included a meeting with Crown Lands Division to review the necessary submissions for a Crown Lands application, and this phase includes the submission of those necessary applications.

Phase 4: Detailed Trail Design

1. Detailed Trail Layout and Flagging
 - The draft trail concept plan identified the general corridor and route for the trail and this phase includes the detailed locating of these elements.
 - Determine and flag the trail corridor with flagging tape ties at eye level.
 - Locate trail features, amenities and other infrastructure using flagging tape or marking paint.
 - Undertake a detailed GPS-based inventory of the trail tread, amenities, and infrastructure locations that will inform detailed cost estimates and tender package preparation.
 - If topography varies significantly, consider engaging a qualified surveyor to provide a topographic survey for use as a base plan for detailed design.
2. Prepare Construction Drawings
 - Prepare construction drawings that provide detailed information about the following:
 - Trail tread/surface material
 - Trail amenities (washrooms, seating, etc.)
 - Technical trail features and infrastructure (bridges, retaining walls, drainage structures, stairs, boardwalks, lookouts, etc.)
 - Signage
3. Final Detailed Cost Estimate
 - A detailed cost estimate can be completed using the detailed construction drawings and quantities.

Phase 5: Tendering and Construction

1. Tendering and Procurement (if construction is by a contractor)
 - Prepare bid package and quantities document.
 - Establish a Bid Review and Selection Team.
 - Advertise the opportunity.
 - Set up and host a pre-bid site meeting.
 - Receive bids and evaluate.
 - Award the project to the successful proponent and provide them with a project management plan for the construction phase.
2. Construct Trail
 - Proceed with trail construction following the construction drawings and project management plan.
3. Construction Administration and Inspection
 - Regularly review construction progress.
4. Final Acceptance and Opening
 - Complete a final inspection. If work is acceptable, open the trail to the public.

Setting Priorities

Summary Chart

In order to assist the Town in setting priorities for trail development, a summary chart has been created that identifies the following information about the proposed trails. This chart is meant to be a tool that the Town can use to prioritize trail development as needed.

- **Level of Effort** - Represented as High, Medium, or Low; trails have been assigned a level based on the estimated amount of effort that is required to develop the trail to the Trail Classification Type highlighted in the Recommendations section.
- **Impact Level** - Represented as High, Medium, or Low; trails have been assigned a level based on the amount of public feedback about that trail. Trails assigned High means that the desire level was high for that trail during public engagement. Trails assigned Low did not have as much public comment about them, but the design team believes they help achieve the Guiding Principles.
- **Potential Partners** - Potential partner organizations have been highlighted that may be able to assist the Town with the development of that specific trail.
- **Consulting and Design Fees** - Professional cost estimates of design and consulting fees have been prepared for each trail. Refer to Costing Notes.
- **Construction Costs** - Conceptual construction cost estimates have been prepared for each trail. A cost/km rate was developed based on past trail development in the province. The rates were informed by the level of development required for each type of trail, considering the amount of clearing required, the ground surface material, and whether infrastructure like bridges or stairs were required. Many of these trail routes were not fully accessible during the inventory phase, which meant that a desktop review of the topography conditions was used to determine the type of necessary infrastructure.

Trail	Reference Page	Trail Classification Type	Level of Effort	Impact Level	Potential Partners	Consulting and Design Fees	Construction Costs
Trail 1: Broad Cove River	59	Type 1	High	High	SAM	\$32,000 - \$35,000	\$315,000 - \$325,000
Trail 2: Skinners Road	60	Type 3 & Mountain Biking	Medium	Low	AMBA	\$8,000 - \$11,000	\$20,000 - \$25,000
Trail 3: Dogberry Hill Road Pole Line	61	Type 2	Medium	Low	Town of Paradise	\$8,000 - \$10,000	\$15,000 - \$20,000
Trail 4: Rainbow Gully Park Extension	63	Type 1	Medium	High	City of St. John's	\$12,000 - \$16,000	\$120,000 - \$130,000
Trail 5: Rainbow Gully Park to Healys Pond	64	Type 1	High	Medium		\$14,000 - \$17,000	\$84,000 - \$91,000
Trail 6: Little Powers Pond Road to Little Power's Pond	65	Type 2	Low	High	Town of Paradise, City of St. John's	Can be taken on by Town	\$3,000 - \$5,000
Trail 7: Old Broad Cove Road to Tucker's Hill Road	67	Type 1	Medium	High	Local Residents	\$14,000 - \$16,000	\$96,000 - \$104,000
Trail 8: Knapps Road to Witch Hazel Drive	68	Type 2	Low	Low		\$7,000 - \$10,000	\$27,000 - \$30,000
Trail 9: Beachy Cove Brook and Conservation Area	69	Type 3	High	Low	SAM, ECT	\$17,000 - \$19,000	\$45,000 - \$50,000
Trail 10: Beachy Cove Hill to Nearys Pond Road	70	Type 1	Low	High	ECT	\$9,000 - \$11,000	\$80,000 - \$85,000

Trail	Reference Page	Trail Classification Type	Level of Effort	Impact Level	Potential Partners	Consulting and Design Fees	Construction Costs
Trail 11: Nearys Pond and Western Round Pond Loop	73	Type 1	High	High		\$27,000 - \$30,000	\$276,000 - \$295,000
Trail 12: Nearys Pond Road to Mercer's Road	74	Type 2	High	Low		\$16,000 - \$19,000	\$39,000 - \$45,000
Trail 13: Princes Mountain Lookout	75	Type 1	Low	High	ECT	\$9,000 - \$11,000	\$72,000 - \$78,000
Trail 14: Main River	77	Type 1	High	High	SAM	\$35,000 - \$40,000	\$360,000 - \$390,000
Trail 15: Blast Hole Ponds Conservation Area	78	Type 2	Medium and High	Medium	SAM	\$26,000 - \$30,000	\$90,000 - \$105,000
Trail 16: Blast Hole Ponds Mountain Biking Area	79	Mountain Biking	Medium	High	AMBA	TBD after Town consultation with AMBA	TBD after Town consultation with AMBA
Trail 17: Blast Hole Ponds to Bauline Line	79	Type 2	Medium	Low		\$27,000 - \$30,000	\$81,000 - \$90,000
Trail 18: Portugal Cove Road to Windsor Heights	83	ATV	Medium	Low		Can be taken on by Town	\$14,000 - \$16,000
Trail 19: Portugal Cove Road Pole Line	84	Type 1	High	High	City of St. John's	\$26,000 - \$30,000	\$145,000 - \$155,000

ECT = East Coast Trail Association
SAM = Stewardship Association of Municipalities
AMBA = Avalon Mountain Biking Association
See page 102 for descriptions of each organization

Costing Notes

- The provided fee estimates are considered preliminary meaning they are based on an initial functional program and broad concept approach only. The assumed scope of work for the Design and Consulting Fees is as follows:
 - Conduct a Site Inventory and Analysis
 - Prepare Topographic Survey
 - Draft a Trail Concept Plan
 - Public Engagement
 - Prepare Order of Magnitude Costing
 - Organize and Submit Public Lands Application and Referrals
 - Prepare Detailed Trail Layout and Pin-Flagging
 - Prepare Construction Drawings
 - Prepare Final Detailed Construction Cost Estimate
 - Organize Tendering and Procurement
 - Oversee Construction Administration and Inspections
- Costing is based on experience on similar projects and professional judgment only. Costing should be used for general guidance only and cannot be guaranteed as to accuracy.
- Costing does not include HST.
- Costs are provided for the year 2022 and should be escalated at a rate of 2-3% each year to account for inflation and market conditions.
- Savings may be realized if separate trail projects are combined or phased in groups of work together.
- No survey costs were included for Type 3 trails.

Next Steps

Based on the summary chart, it is recommended that the Town look at the following priorities in the short term.

Upgrade Trail 10: Beachy Cove Hill to Nearys Pond Road

- Undertake the necessary planning and construction activities required to upgrade this trail to a Type 1 trail that includes an accessible surface material, wayfinding signage, and rest areas.

Upgrade Trail 13: Princes Mountain Lookout

- Undertake the necessary planning and construction activities required to upgrade this to a Type 1 trail that includes a new parking area, an accessible surface material, and rest areas.

Upgrade Trail 6: Little Powers Pond Road to Little Powers Pond

- Undertake the necessary planning and construction activities required to upgrade this trail to a Type 2 trail that includes a more formalized access path to Little Powers Pond where residents can then access existing hiking and ATV trails that fan out beyond the town boundaries from this area.

Begin Planning and Seek Funding for Trail 1: Broad Cove River

- Begin the detailed design phase and start seeking funding for the Broad Cove River Trail. This trail was highly requested by residents, and will provide a safe walking route parallel to Thorburn Road.

Begin Planning and Seek Funding for Trail 14: Main River

- Begin the detailed design phase and start seeking funding for the Main River Trail. This trail was highly requested by residents, and will provide a safe walking route parallel to Portugal Cove Road and will also connect Portugal Cove to Voisey's Brook Park.

Begin Planning and Seek Funding for Trail 16: Blast Hole Ponds Mountain Biking Area

- Consult with AMBA and determine the required activities to install mountain biking trails in this area adjacent Blast Hole Ponds.

Partnerships and Funding Opportunities

As the Town moves toward implementing the recommendations outlined in this plan, it will become clear that partners are needed. The Town has finite resources to implement the recommendations of this Plan and project partners represent an opportunity to leverage additional resources. Further, several projects described in this plan would benefit not only the Town, but other government agencies and NGOs as well.

There is also a need to consider the realities of land ownership and long-term maintenance. In some cases, the trails proposed will require land that the Town does not currently own, or may require assistance with trail maintenance. Partnerships in these cases are imperative to the project's success.

Capital costs are another significant factor that affect implementation. While the Town has been the party responsible for initiating this study, they may not necessarily be responsible for covering all project costs. This is where funding agencies and grant programs at both the Provincial and Federal level can make a difference.

Clearly, it is in everyone's interest to develop the trails in Portugal Cove - St. Philip's, and that responsibility should be shared among stakeholders. The following section outlines proposed roles of important stakeholders and potential project partners.

Non- Governmental Organizations (NGOs)

(a) Grand Concourse Authority (GCA)

The Town of Portugal Cove - St. Philip's has worked with the GCA in the past on trail development projects. The GCA is committed to the enhancement and protection of the walkway network through regular maintenance and upgrading, environmental initiatives, open space and park development, promotion and public education. They seek to improve the quality of life of residents in our region by encouraging an active and healthy lifestyle within a natural setting.

(b) Avalon Mountain Biking Association (AMBA)

The Avalon Mountain Bike Association is a not-for-profit community organization engaged in promoting the sport of mountain biking on the Avalon Peninsula of Newfoundland and Labrador primarily through the development, maintenance and preservation of shared-use trails. They are also committed to promoting socially and environmentally responsible mountain biking and trail use, and to making mountain biking fun and accessible for riders of all levels and ages.

The AMBA was involved in the public engagement phase of this project and it was clear that they believe Portugal Cove - St. Philip's has potential to become a mountain biking destination on the Avalon. Although the scope of this Plan was to focus on hiking and walking trails, Section 3 does include suggestions for areas that could be mountain biking destinations. Now that the Plan is complete, the Town should meet with the AMBA to determine the next step to begin the development of mountain biking trails within the community.

(c) Inclusion NL

InclusionNL provides support to government, businesses and organizations to make spaces, events, and resources inclusive. InclusionNL can be engaged during the detail design phase to confirm that amenities on the trail network (signage, seating, etc.), and resources like trail signs and digital maps are inclusive for all users.

(d) Stewardship Association of Municipalities (SAM)

The Stewardship Association of Municipalities is an incorporated non-profit organization that works to secure, enhance, and restore important wildlife habitats within municipal boundaries. SAM is comprised of a network of municipalities that have formally committed to the practice of environmental stewardship in Newfoundland and Labrador. Municipal members (including Portugal Cove - St. Philip's) sign Habitat Stewardship Agreements with the provincial government, publicly committing to the conservation of important wildlife habitat found within their municipal boundaries. SAM supports members in environmental education, habitat restoration, and enhancement projects. SAM should be consulted for any trail development within the protected Management Units in the town. Trail development is allowed and encouraged in these areas as long as they promote the protection of these areas and are respectful of the land during development.

(e) East Coast Trail Association (ECT)

The East Coast Trail Association is a registered charity established to provide a wilderness hiking experience by developing and maintaining the East Coast Trail, promoting public access, minimizing its impact on the natural environment and protecting it for future generations. Portions of the East Coast Trail run through Portugal Cove - St. Philip's and the Association should be consulted on any trail projects near those routes as well as parking upgrades and road connections that impact the trail.

Government of Newfoundland and Labrador

(a) Department of Tourism, Culture, Arts, and Recreation (TCAR)

TCAR is the lead for the economic, culture, and innovation agenda of the Provincial Government. Their goal is to create a vibrant, diverse and sustainable economy, with productive, prosperous and culturally-rich communities and regions, making Newfoundland and Labrador a business and tourism “destination of choice”. Some of the initiatives outlined in this plan may overlap with the TCAR's vision for the province.

The Community Healthy Living Fund is a program that supports “The Way Forward: A Vision for Sustainability and Growth in Newfoundland and Labrador” and provides a funding opportunity to communities and organizations for projects, programs and initiatives that demonstrate direct measurable results towards the targets outlined in “The Way Forward”, specifically to increase physical activity.

(b) Department of Municipal Affairs and Environment (MAE)

MAE assists municipalities in meeting their infrastructure needs and provides the financial and administrative tools to support development of community capacity, regional cooperation, and sound governance. The Town must work closely with MAE for any work that will occur in or around a body of water as permits are required.

The Multi Year Capital Works funding is the Government of Newfoundland and Labrador's commitment to provincial investment to larger scale municipal infrastructure. The Multi-Year Capital Works Program allows larger municipalities to avail of three-year blocks of funding which supports improved planning in larger communities which have the capacity to make multi-year commitments.

(c) The Department of Fisheries, Forestry, and Agriculture: Crown Lands Division

This division is responsible for all Crown Lands Applications. The Town can apply for trail development on Crown Land. As outlined in the process for detailed trail design, it is important that the Town meet with the Crown Lands Division to understand the necessary applications and processes for acquiring Crown Land.

Government of Canada

(a) Atlantic Canada Opportunities Agency (ACOA)

ACOA works to create opportunities for economic growth in Atlantic Canada by working with diverse communities to develop and diversify local economies and by championing the strengths of Atlantic Canada. Traditionally, ACOA has supported many initiatives in the province that promote tourism and economic growth and development.

The Innovative Communities Fund invests in strategic projects that build the economies of Atlantic Canada's communities. ICF focuses on investments that lead to long-term employment and economic capacity building in rural communities. Urban initiatives that stimulate the competitiveness and vitality of rural communities may be considered on a selective basis.

(b) Infrastructure Canada

Infrastructure Canada provides long-term support to help Canadians benefit from world-class, modern public infrastructure and makes investments, builds partnerships, develops policies, delivers programs, and fosters knowledge about public infrastructure in Canada. They provide funding for projects that increase the potential for innovation and economic development, improve the environment and support stronger, safer communities.

The federal Gas Tax Fund is a permanent source of funding provided up front, twice-a-year, to provinces and territories, who in turn flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank and borrow against this funding, providing significant financial flexibility.

The Small Communities Fund provides contribution funding for infrastructure projects in small communities with populations of 100,000 or less that contribute to economic growth, a clean environment and stronger communities. Projects will allow people and goods to move more freely, increase the potential for innovation and economic development, and help to improve the environment and support stronger, safer communities.

Post-Trail Construction

As the Town develops the trails outlined in this plan, some additional projects can take place post-trail construction to help improve the overall trail network.

Marketing

The online survey found that 30% of the respondents were non-residents of Portugal Cove - St. Philip's that travel to the town to avail of different hiking trails. It is encouraging to see that the town is already a destination, and future trail development will hopefully boost these numbers even more. Signage will be important to help visitors navigate to the different trails. See the Recommendations section for more details. Beyond signage, the Town can focus on improving their website to include an updated trail map and trail details. The trail map should present the overall trail network along with important info such as trail ratings. The trail map can live online and therefore can be easily updated as more trails are added to the network. It is important that the online map is as accessible as possible, ensuring that visitors with a disability can easily access and understand the map.

Signage and online maps will help visitors find the trails once they reach the town, but attention can also be given to marketing the trails. The Town should consider adding all of their trails to popular hiking apps like AllTrails and Wikiloc as they are developed. Trails can also be advertised on the province's tourism website, and through other partners, such as the Avalon Mountain Biking Association, as those types of trails become available.

Technology

Technology can be leveraged in many ways when it comes to the trail network. Trail users are starting to rely on technology more and more to discover trail options and help improve their experience while on the trail. This section outlines a number of different ways that technology can be used to improve user experience.

(a) QR Codes

QR Codes allow a smartphone to read an image and provide information such as a link to online content, a website or video. QR Codes can also be used in more creative ways, such as the QR Fitness Trails of Hamilton, Ontario (<https://www.hamilton.ca/recreation/qr-fitness-trail>). Instead of typical trail exercises such as walking or jogging, this trail system offers an array of digital exercise stations. By scanning the QR code on signs around the trail, users get instructional videos on exercises they can do while on the trail. Each trail features multiple QR signs that take the participant through a full workout, from warm up to cool down, with beginner, intermediate and advanced options. QR Fitness Trails provide free alternative fitness opportunities, guided routines by certified trainers, a family-friendly exercise experience, three skill level options, and enjoyable outdoor recreation.

(b) Augmented Reality

Augmented reality is a technology that uses smartphones to create a computer-generated image of people or objects over a user's real-world view. This technology has been incorporated in a wide range of applications and presents an opportunity to increase trail user engagement. In fact, augmented reality trails have been developed around the world. These trails allow a user to take a picture of a sign or image, then receive an explanation of something about the trail (its history, nature, etc.) explained by a digital figure who appears to be on the trail in front of them. This is an excellent, interactive way to provide interpretive content without the need for a user to stop and read a traditional storyboard. Check out an exciting example of augmented reality here: <https://float4.com/en/projects/ar-experiences-at-toronto-waterfront-festival/>.

(c) Audio Tours

An audio tour or audio guide provides a recorded spoken commentary, through a mobile device, to a visitor attraction. Like an augmented reality trail, but without the real-world visualization, users download an app or file that provides information, context, or interpretive information on a trail. Some of the more elaborate tours may include original music and interviews. Audio tours are typically self-guided and undertaken at the user's own pace and comfort level. The Bannerman Quartet and Inside Outside Battery tours in St. John's are excellent examples of locally developed audio tours.

(d) Geocaching

Sometimes referred to as a "real world treasure hunt," geocaching is the activity of looking for hidden objects using GPS technology and map coordinates. Physical objects hidden anywhere, including along trails, are tagged with coordinates that lead users to secret locations containing these hidden items. Once found, the geocacher completes a logbook and puts the object back in place for the next hunter to find. Geocaching has become a worldwide phenomenon in recent years and represents an opportunity to engage users along the trail network, provide recreational activities, and promote active lifestyle.

Other Resources

There are many documents available publicly that can assist the Town in developing their trail network. Some resources that the Town can reference beyond this report include:

- Exceptional Trails: A guide to the planning, classification, design, construction and management of trail experiences on Public Lands (Government of Alberta, 2018)
- Guidelines for a Quality Trail Experience (International Mountain Biking Association, 2017)
- Minnesota Department of Natural Resources: Trail Planning, Design, and Development Guidelines (2017)
- Trail Development Guidelines for Alberta's Public Land (Government of Alberta, 2019)
- Parks Canada National Best Management Practices, Trail Maintenance and Modification (Parks Canada, 2016)