

Final Draft June 2020

Odell Park MANAGEMENT PLAN



Fredericton

Prepared for the City of Fredericton by

The Planning Partnership

2020

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1 Background





1.1 Odell Park in Context

Odell Park is a precious gem. It is cherished in the hearts of Frederictonians for its beautiful environment and its diverse recreational opportunities. It has something for everyone. Odell Park is 160 hectares in size and represents over 12% of Fredericton's total parkland. It is the second largest park in the City, after Killarney Lake Park. One of its unique features is the old growth hemlock forest. Odell Park shares characteristics with other great urban parks in Canada.

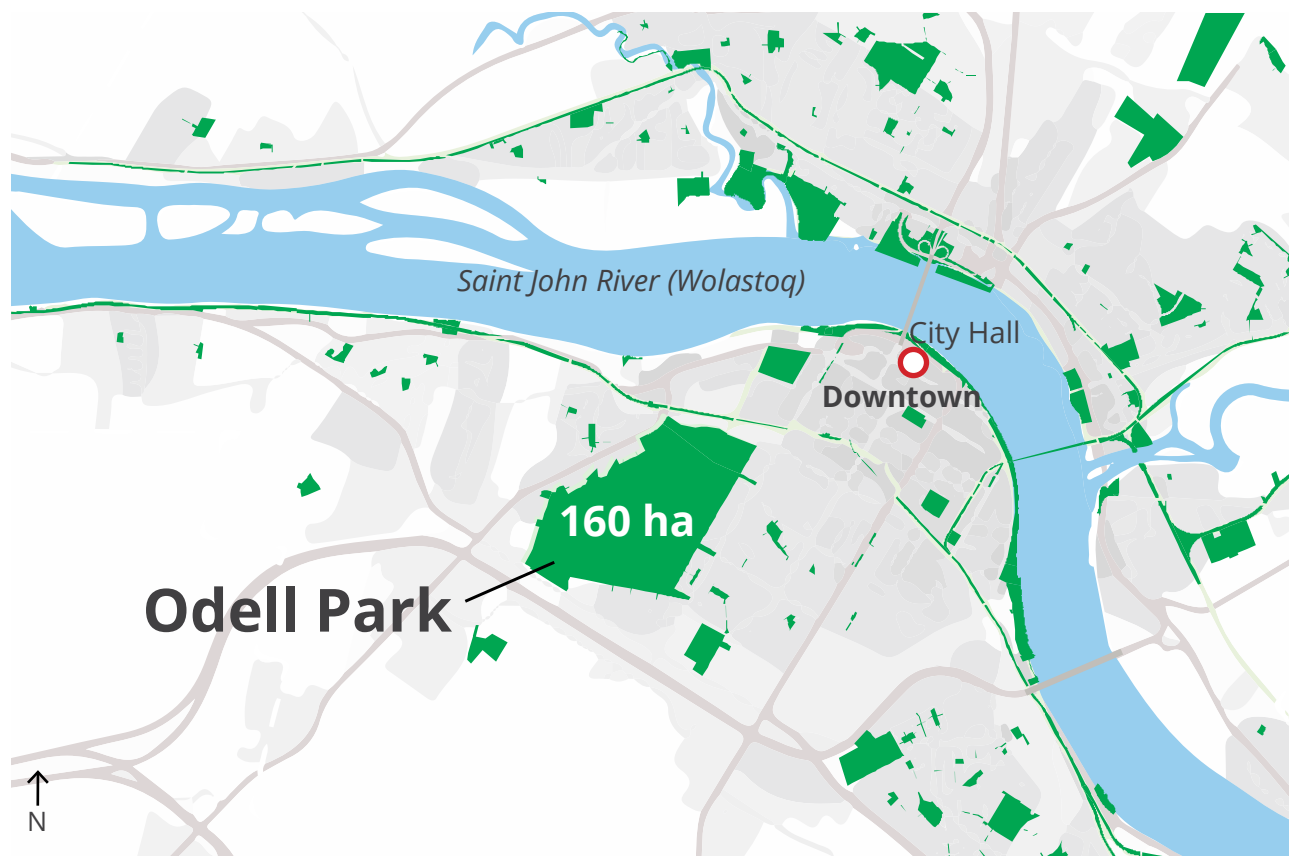
Odell Park is an urban park with expansive and highly sensitive natural environments. As a regional park, it has an important role to play within the context of the overall park system in Fredericton proper as well as the region, and within the context of the neighbourhoods that surround it. Large regional parks like Odell and Killarney Lake Park, which are the largest parks in Fredericton's park hierarchy, are under immense pressure to accommodate the greatest level of recreation and programming, which have the potential to negatively impact the park *ecology*. There are environmental stressors such as invasive species and disease that are threatening the ecological health of parks of all sizes in Fredericton and in other cities in eastern Canada.

Odell Park has a large percentage of land characterized by sensitive ecologies, such as an old hemlock forest, steep slopes and creeks. Based on this knowledge, selected recreational and cultural activities that take place in the park today will remain but be modified. Popular activities include; disc golf, biking, walking, running, picnicking, Shakespeare in the Park and the Artists in Residence Program.

Ecology

Ecology is the study of how all living things relate to one another and to their environment. It includes how organisms live, grow and reproduce, the flow of energy and minerals in the food web, and how organisms are distributed across the world.







1.2 Purpose

The plan is meant to be a guiding document that sets the framework for the evolution of a regional park. The plan will guide future decisions, key projects and investments under a common vision developed by the community and the municipality. The purpose is to:

- Identify significant natural features within the park and establish a system for classifying how land is used: Management Zones. The natural features will inform what recreational opportunities are appropriate and to what intensity they should occur.
- Manage change in the park as the City's population grows and pressure on the park increases.
- Provide the basis to develop an Eco-tourism and Sport Tourism Strategy.
- Operate the park as a balanced ecological and recreational destination.
- Design all elements to be inclusive and accessible.
- Provide recommendations for park wide initiatives that improve the user experience and help resolve conflict.
- Provide recommendations for capital projects.
- Provide guidance for near, medium- and long-term projects to be further defined through construction drawings.





This plan is rooted in the goal of achieving the right balance between ecology and recreation. What we build, the way people move and what we learn about the park all grow from there.

Roots of the Plan

1.3 History

Odell Park has a rare example of old growth forest. The park's hemlock stands have specimens that are 400 years old. This is a unique and precious resource.

The land that Odell Park occupies is part of the original grant to the Academy of Liberal Arts and Sciences that later became the University of New Brunswick. The land was granted to Loyalist Jonathan Odell who landed in Fredericton in 1783 from Philadelphia. Odell was a minister by training and was appointed the Dean of Christ Church prior to being appointed first secretary of the Province of New Brunswick at its establishment in 1784. Eventually, the estate became known as Rookwood.

The property has passed through generations of the Odell family, with little change occurring over the years. In 1940, the City of Fredericton acquired the lands that now make up Odell Park from Mary Kearny Odell. At the time, the park still contained the original Rookwood farmstead along with its accompanying barns and outbuildings.

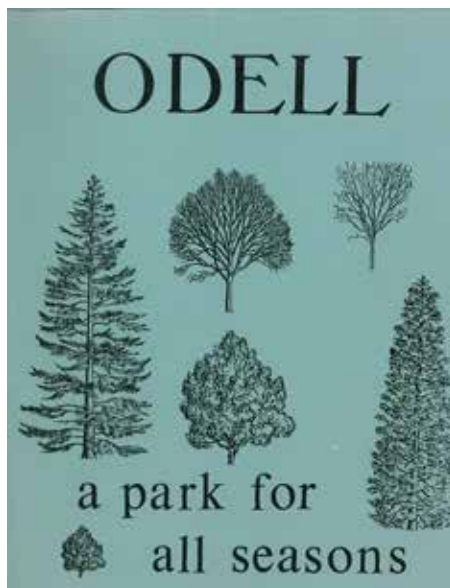
Unfortunately, just three years later, the estate home was razed by fire and by 1958, all fences and barns had been dismantled due to their deteriorating condition. Early on, the City undertook selective logging operations within the park lands but concluded in 1954 that full preservation of the natural character of the park was the priority and halted all operations related to harvesting wood. To secure this future, an Act of Legislature was enacted - Chapter 126 of the Statutes of New Brunswick 3 Elizabeth II (1954). By-Laws No. 165 and 181 were later added to allow the administration of the forest by the City.

In 1960 a development plan for the park was created by Alwyn J. Cameron, J. Douglas Long, and Lawney E. Williams. Development in the park at that time consisted of a 16 km network of trails, stables for riding horses, and a visitor center. "It may be said that the City of Fredericton has preserved in Odell Park a gift of nature that cannot be found elsewhere in Eastern Canada." (Alwyn J. Cameron, J. Douglas Long, and Lawney E. Williams)

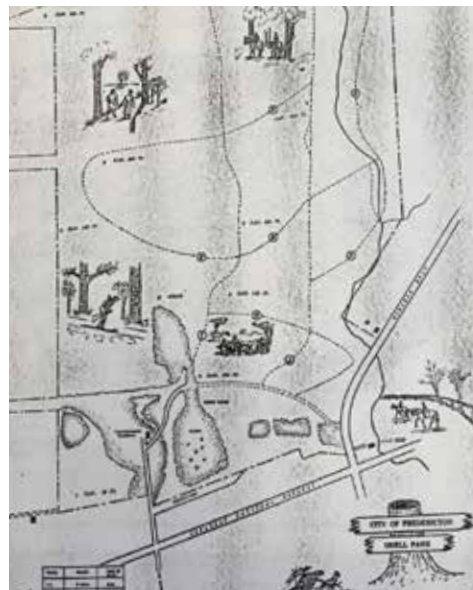




Odell House, Rookwood Estate, ca 1890's. Provincial Archives of NB ref: P5-293A



1981 Booklet (Alwyn J. Cameron, J. Douglas Long, and Lawney E. Williams)



Map of Odell Park

1.4 Engagement — Community and Stakeholders

There were a series of engagement events which were organized by the City as public forums to capture the ideas and aspirations of the residents of Fredericton, held from May 2017 to October 2019. Park users, special interest and user groups, school children, visitors, and interested individuals were engaged in the visioning process that led to these Management Plans. The process also included in-depth discussions with City, government officials, agencies and specialized consultants. Four key engagement strategies were undertaken:

Residents:

Conducted an on-line survey on existing park use and future themes for development.

Conversations:

Gathered thoughts and ideas from school children, special interest groups and staff regarding recreation in the park.

Workshops:

Delivery of design concepts at a community workshop at the Capital Winter Club that resulted in park development ideas and park management suggestions.

Open House:

Hosted a feedback session that allowed all participants to review and comment on the articulation of their ideas (Draft Plan Format).





2 Where We Are Now





2.1 Planning Context — What Guides the Plan

Provincial Policy

At the City's request, Provincial Legislature passed "An Act to Dedicate Certain Lands in the City of Fredericton as a Public Park." (Assented April 12, 1954). An excerpt from that Act states:

"1. All the lands and premises situate, lying and being in the City of Fredericton and mentioned and described in a deed thereof from the executors of the estate of Mary Kearny Odell to the said City of Fredericton, dated the 9th day of January, 1942, and registered in the Registry Office for the County of York in Book 242 at pages 264 to 268 under Official Number 93166, excepting such portions thereof heretofore conveyed or agreed to be conveyed by the said City of Fredericton, area hereby dedicated in perpetuity as a public park to be known as Odell Park and to be kept by the said City of Fredericton for the following purposes or any of them: namely, for the preservation of natural tree and plant growth, as a natural park, a tree nursery or recreational grounds for the citizens of the said City."

Fredericton Municipal Plan (January 2020)

The City of Fredericton's Municipal Plan emphasizes that parks and natural areas are integral public infrastructure contributing to a liveable, dynamic and economically vibrant City. Key objectives related to Odell Park include:

- Develop a City-wide network of trails, parks and natural areas.
- Provide sufficient space for programs and facilities for year-round recreation and leisure.
- Provide programs, services and facilities that are responsive, accessible and affordable.

Fredericton Growth Strategy (Adopted by Council June 2017)

The growth strategy identifies the community's vision for parks. Key objectives related to Odell Park include:

- Design for active and passive use by people of all ages and abilities in all seasons.
- Protect for valued and significant natural features.
- Develop a parks system with a diversity of parks that celebrate nature and encourage a range of outdoor and indoor sport and recreational activities in all seasons.

The Recreation Master Plan (November 2008)

This plan provides detailed guidance on the development and enhancement of recreation systems in the City.

By-Law No L8, A By-law Respecting Parklands

Code and conduct in all municipal parks are mandated through this by-law and overseen by the Director responsible for Parks.

2016 Active Transportation Connection Plan

The plan envisions a well-connected network of cycling routes throughout the downtown core and extending to the suburban fringes of the City.



First Nation Partnership

In the spirit of truth and reconciliation, the City of Fredericton respectfully acknowledges that it is situated within the heart of the traditional lands of the Wolastoqiyik people. As such, the management and development of the park should be informed by consideration of the interest of members from the St. Mary's First Nation and other Wolastoqiyik communities.

One of the St. Mary's First Nation community organizations, Under One Sky, located in Fredericton New Brunswick, was founded in 2004 as an Aboriginal Head Start program that focuses on culture and language, education, health, nutrition, social support and parent involvement. As a result of its exemplary "Take it Outside" program, Under One Sky Head Start is now seen as a National leader by the professional early childhood development community. For the past two decades, Under One Sky, in cooperation with the City of Fredericton and the Fredericton Botanic Garden Association have been successfully delivering the "Take it Outside" program in Odell Park. Odell has provided the perfect setting for this discovery-based learning in the outdoors for pre-school aged children attending Under One Sky that is culturally appropriate and enriching. This management plan should support the continued use of Odell Park as a site for this and other similar programs now and in the future.

Another Wolastoqiyik community group, Wabanaki Tree Spirit Tours, offer medicine walks, workshops and culinary experiences with the hope of creating dialogue that leads to a more harmonious world. During the medicine walks they share their knowledge of Medicinal and Edible Mushrooms, Medicinal Plants, Wild Foods, Wabanaki History and Culture, Storytelling and Wabanaki values. There are plans to expand these tours into winter walks and workshops.

Odell Park was the location for The Artists in Residence Program, a City of Fredericton initiative piloted in the summer of 2019. The program featured the work of two First Nations Artists. This was an opportunity for the public to learn about native culture through art.

In 2020, the City of Fredericton, The Fredericton Botanic Garden and the St. Mary's First Nations community will collaborate to build a First Nations Healing Garden.

Further opportunities for collaboration should be explored with St. Mary's First Nations and other Wolastoqiyik communities.





2.2 Fredericton's Park System

Fredericton has an extensive network of parks and public open spaces. A diverse, well designed park system plays a key role in improving the quality of life for residents and visitors alike. There are 1350 hectares of designated parkland in Fredericton. Some parks serve their immediate neighbourhoods with children's playgrounds and informal grass fields and trails. Other parks are community wide parks with pools, tennis courts and sports fields. There is also an extensive waterfront trail along the Saint John River (Wolastoq). Each of these parks and open spaces has a specific relationship to its local neighbourhoods and to the broader City that is reflected in its facilities and capacity.

Regional parks are a new concept in Fredericton's park hierarchy that reflects the special nature of Odell and Killarney Lake Parks. The park hierarchy has four general categories:

Regional Parks (Odell & Killarney Lake)

Municipal Parks (Carleton & Wilmot)

Neighbourhood Parks

Pocket Parks

The City meets resident recreational needs with a system of parks and open space well distributed through the City. Regional parks serve as the anchors to the park network and simultaneously provide residents and visitors diverse recreational opportunities. Odell Park is 160 hectares, representing 12% of municipal park space. Killarney is 645 hectares, representing 48% of municipal park space.



3 Where We Want To Go





3.1 Opportunities and Challenges

Opportunities

Odell Park is blessed with one of the largest remaining known fragments of *primeval forest* in Atlantic Canada. This old hemlock forest has never been destroyed by fire or people and fosters an irreplaceable record of woodland that has stood for thousands of years. These trees create a unique urban oasis, a cathedral of light, and a refuge from heat in the summer. This amazing ecological heritage must be conserved for all to enjoy, including Fredericton residents and eco-tourists alike.

Tremendous Potential

- There is tremendous potential for local groups who respect nature and are interested in educating people about the special nature of Odell Park and in helping to maintain its health. Everyone is a steward of the land, including staff, user groups, students and researchers.
- Developing formal partnerships with interested user groups and harnessing collaboration and contribution from residents and user groups as volunteers, fundraisers and grant recipients can help make many of the initiatives in this plan become a reality; for example, collaboration with the Fredericton Botanic Garden as the City's only Local Improvement Association.
- Activities in the park can be expanded to include eco-tourism, ecological education (for school groups).

Primeval Forest

Also called old growth forest, primeval forest has typically not experienced disturbance (from natural disasters or logging, for example), reaching its climax state. It is very high in biodiversity and provides irreplaceable ecosystem benefits.

Location

- Odell Park lies in the heart of the City and is minutes from the downtown and can be experienced by many.

Challenges

By its very nature, Odell Park's unique ecology is sensitive to human use and disturbance. Great care must be taken to conserve the resource to be enjoyed by all. The first challenge is to resolve conflicts between passive and active recreation activities. This



challenge, in addition to valuable habitat protection, is the primary purpose for City Council's request to prepare this management plan.

Sustainable Parks

- Odell Park is a gathering ground for those wishing to access both natural and formalized landscapes. The City of Fredericton has grown up and around this park. At the same time, generations of residents continue to enjoy the site's unique passive offerings. Most importantly, this management plan is tasked with finding a balance between use and conservation of the special habitats that define the park. Conserving these habitats ensures park sustainability for future generations.
- The current locations of some trails were created without the support of an ecological analysis or regard to the sensitive nature of the underlying geology, hydrology, faunal or floral systems. Having access to such information now allows us to determine the locations of sensitive forest habitats and systems and plan a trail network that provides the greatest opportunity for the forest's survival and enrichment for future generations.

Use Management

- The location of the maintenance area at the park entrance provides a disservice to the overall quality and user experience of the park itself.



Forest Edges

- The primary vegetative challenge in Odell Park is forest edges. The edge zone is a 5 to 20 metre wide area along the edges of mature interior forests. It is important to ensure this edge zone is maintained with native species to help protect the interior forest. Invasive plants in this edge zone can change the ecological function leading to degradation of the interior.

Invasive Pests

- The Woolly Hemlock Adelgid is a foreign insect that has invaded the hemlock forests of the northeastern United States with devastating consequences. In Odell Park, portions of the forest are 100% hemlock overstorey. An infestation of this insect can kill a mature hemlock in as few as three years. Early detection is critical.
- Asian Longhorn Beetle is another invasive pest that affects all species of maple trees and other host plants.
- Ash trees in the park are vulnerable to the invasive Emerald Ash Borer, a beetle that is killing ash trees across North America. The City of Fredericton has an Emerald Ash Borer plan to restore lost trees. An inventory of all Ash in Odell is in process.

Signage and Wayfinding

- Signage in the form of wayfinding, rules and education is either lacking or in need of replacement in many areas of the park. There is an opportunity to educate the public about the park and in so doing mitigate conflicts. This plan offers guidelines toward improvement in this area.



3.2 Management Strategy — Ecology/Land Use + Recreation/ People Use

A fundamental objective in planning large urban parks is to create an environment that people will enjoy. In Odell Park there is a unique opportunity for people to experience nature in the city.

This plan supports the concept of balancing ecology or natural features of the land with recreation or how people use the land. The more sensitive the ecology, the more limited the recreational use in terms of scale and intensity.

In Odell Park, a large percentage of the land base contains sensitive features such as an old hemlock forest, steep slopes, water features and sensitive breeding areas for various plants and animals.

Odell is loved for both for its natural amenities and its recreational opportunities. This management plan allows the current permitted activities to continue, but it suggests some restriction or mitigation regarding:

- Protecting and improving the *riparian* ecology underneath trails where they cross streams;

Riparian

The riparian zone is the area of interaction between a river or stream and the land along its banks and in its valley. The riparian ecology includes all the organisms that live in or visit this area and how they interact with the river and the land.

- Limit access to certain areas of the park during sensitive spring breeding calendars, toward habitat rehabilitation.
- Facilitate human interaction with the old growth forest, by either raising the trail off the ground at points to allow rehabilitation of the forest floor, or provide barriers to side movement as to direct our movements within these areas so that some habitat can be left relatively untouched.





4 How We Get There

Oregon Park Management Plan 4 How We Get There





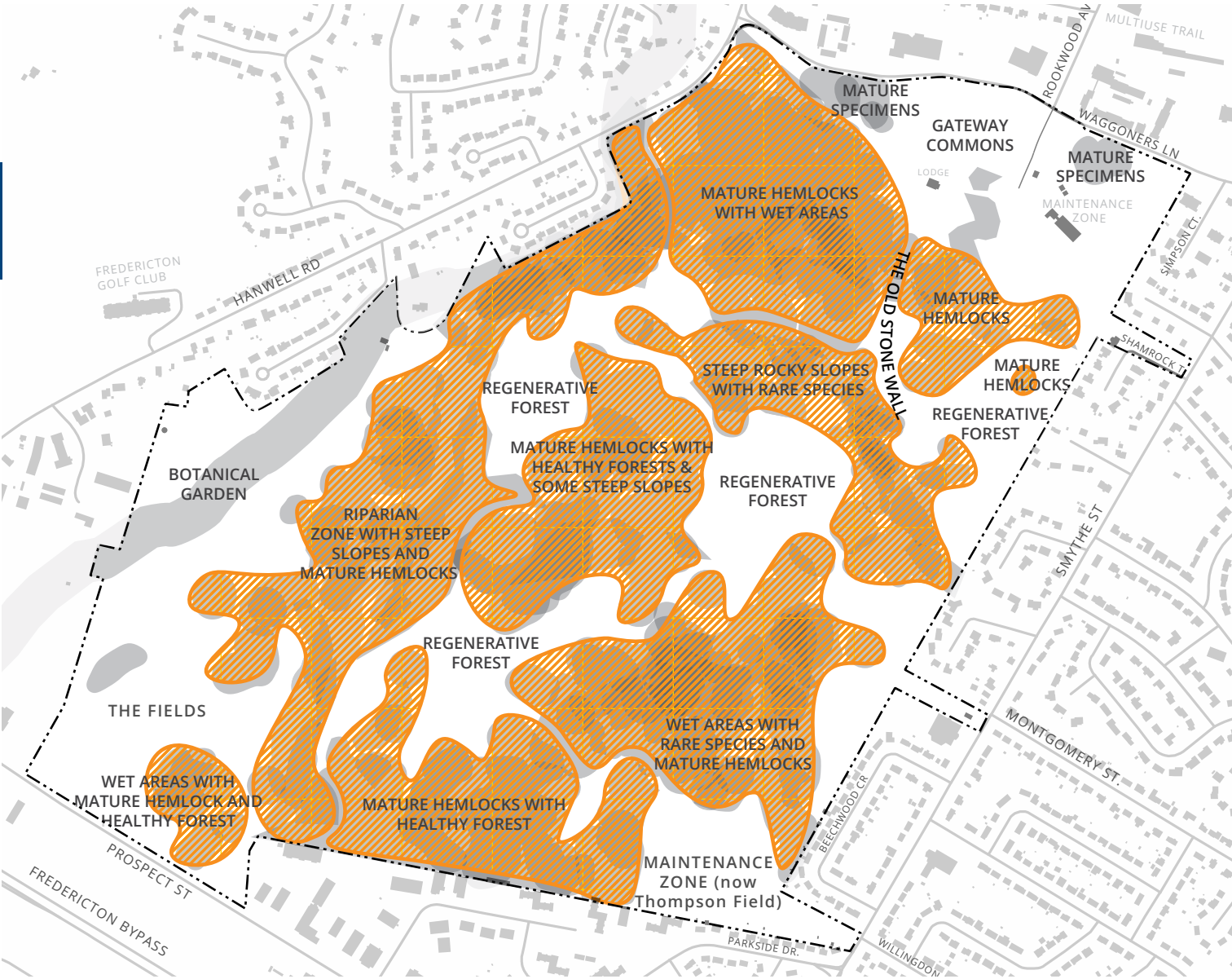
4.1 Management Zones

Odell Park has been organized into three zones based on their natural features or ecologies. The most sensitive ecologies are found in Zone 1 (Conservation Zone), moderately sensitive ecologies are found in Zone 2 (Natural Environment Zone), and the least sensitive ecologies are found in Zone 3 (Recreation Zone). Development and recreation use in Zone 1 is the most limited. The most potential for large scale and intense development and recreation use is in Zones 2 and 3.



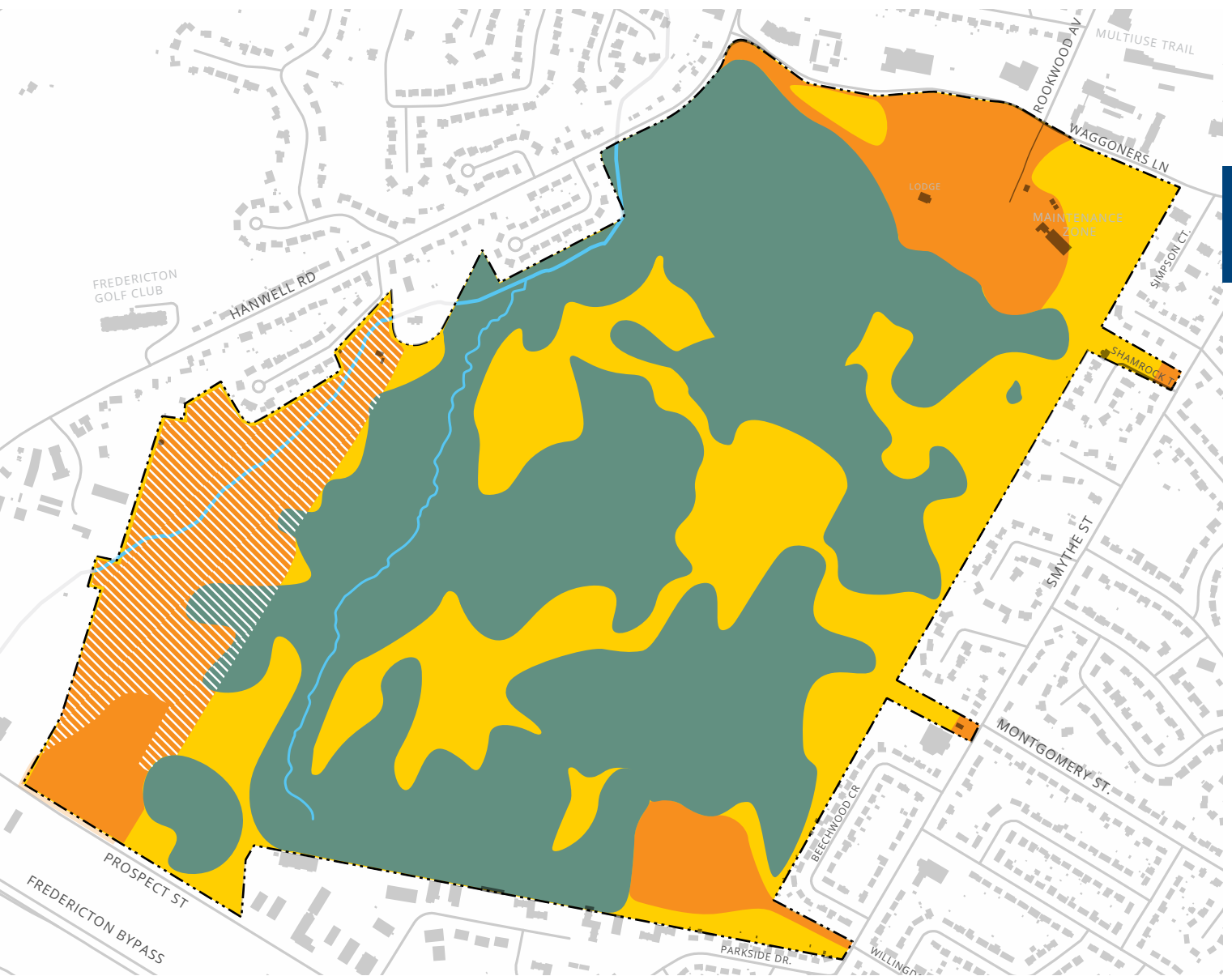
The Management Zones are based on an analysis of the ecological sensitivities of the existing conditions of the park. This analysis considered UNB biological surveys, City GIS data, historical data from past management plans, and present-day site observations.

Map 1: Ecologies/Natural Features








 Established Ecologies

Map 2: Management Zones



Management Zones

- | | |
|--|--|
|  Zone 1: Conservation (84 ha - 53%) |  Watercourse |
|  Zone 2: Natural Environment (41 ha - 26%) |  Botanic Garden (17 ha) |
|  Zone 3: Recreation (35 ha - 21%) | |

Each Management Zone has a different approach to the type of activities that the area can support, and the kind of management that will be used to steward the natural and cultural resources. This is based on an analysis of the ecological sensitivities of the existing conditions of the park. This analysis was conducted by a certified professional who is a Landscape Architect, arborist and urban ecologist.



Use by Management Zone

The chart below identifies the uses that are permitted in each Management Zone. Uses within the Conservation and Natural Environment Zones are restricted to low-impact activities that do not compromise ecological processes, whereas uses within the Recreation Zone are higher impact and more varied, as Recreation Zones are located where ecological function is not as critical. While Conservation and Natural Environment Zones permit similar uses, in Conservation Zones priority is given to the ecology, for example, by requiring trails to be elevated boardwalks wherever they pass through sensitive ecologies. This will be evaluated and based on need, and not all trails in Conservation Zones will be elevated.

Use	 CONSERVATION	 NATURAL ENVIRONMENT	 RECREATION
Walking trails	✓	✓	✓
Ecological & cultural heritage interpretation	✓	✓	✓
Eco-tourism	✓	✓	✓
Wildlife viewing	✓	✓	✓
Biking / Fat biking	*	✓	✓
Skiing (informal, ungroomed)	✓	✓	✓
Snowshoeing	✓	✓	✓
Hiking	✓	✓	✓
Trail running	✓	✓	✓
Outdoor Theatre		*	✓
Trail heads			✓
Disc golf			✓
Parking			✓
Children's play area			✓
Sports fields			✓
Picnic shelter			✓
Lodge			✓
BBQ stations			✓
Washroom			✓
Maintenance yard			✓

* Only when approved design/construction methods can prevent ecological impact

Natural Features of Odell Park



Rock outcrops/ledges



Lawns and paths at northern entrance



Typical rocky stream beds in Odell Park



Dense hardwood forest with Hemlocks establishing



Jack-in-the-Pulpit



Hobblebush



Painted Trilliums



Trout Lilies



Management Zone 1



84ha (53% of total Odell parkland)

CONSERVATION

The Conservation Zone contains key natural features that have come to define the park's character over time. These are the areas where we frame and direct a user's experience. It is important that interactions between people and nature continue and are actively managed with consideration of the sensitive ecologies we inherited.

The sorts of activities allowed in this Management Zone are as follows:

Walking Trails – To access these areas.

Elevated Boardwalk – To minimize ground disturbance.

Guided Trails – To frame and direct the user experience to promote stewardship and provide opportunities to interpret the natural features.

The key natural features that comprise Zone 1 will be managed with the following considerations.

Key Features — Zone 1

Mature Hemlocks & Healthy Forests

Characteristics

Concentration of mature Hemlock specimens
Relatively low disturbance historically
Provincially and nationally rare Old Growth forest patches
Healthy and <i>stratified forest</i> with a developed <i>understorey layer</i>

Objective

Preserve Old Growth forest, mature trees and <i>stratified forest</i> for future generations
Minimize human disturbance, particularly for hemlocks which have difficulty establishing in compacted soils

Key Management Items

During trail design and construction in partnership with appropriate personnel, some trail sections may be designated for reforestation
Convert sections of existing trails to raised, guided trails where sensitive ecologies exist, to limit compaction and other disturbance
Operations staff are responsible for implementing trail types appropriate to conditions including: raised & guided, guided with crushed stone granular surface, and single track, when approved trail design/construction methods, can prevent ecological impact. Refer to Trail Types on page 48
Monitor forest edges for invasive species and remove them as soon as possible. Responsive management of forest edges will allow interior forests to flourish with relatively little management. Partner with the Botanic Garden and naturalist groups to assist with identification and removal

Stratified forest

A healthy forest is well-stratified, which means that it has thriving growth at three layers:

- 1) The canopy layer, where the tall trees are.
- 2) The understorey layer, where the shrubs and young trees are.
- 3) The undergrowth layer near the forest floor, where groundcovers and herbaceous plants are.

Each layer has plants and animals specifically adapted to it.





Wet Areas

Characteristics

Locally flat but with small topographic changes causing water to pond in the spring

Some wet areas expand and join to one large wet area in spring

Important habitat for many species, including sensitive amphibian species

Objective

Preserve wet areas as important amphibian habitat, which is in rapid global decline

Minimize human disturbance

Do not alter drainage patterns

Wet areas

Slight depressions in the ground that fill with water during the spring as snow melts are important habitats, especially for amphibians, and a source of clean water. Because they typically dry out in the summer, there are no fish, which are predators of amphibian offspring.

Key Management Items

In wet areas of the park, where species have been lost or are weak, consider reforestation with native species in consultation with the City Forester

Convert sections of existing trails to raised, guided trails where sensitive ecologies exist, to limit compaction and other disturbance

Operations staff are responsible for implementing trail types appropriate to conditions including: raised & guided, guided with crushed stone granular surface. Refer to Trail Types on page 48

Seek partnerships with others to undertake an inventory of plant and animal species present in understory layer. Prevent human access to the trails during breeding season, through temporary trail closure

Monitor forest edges for invasive species and remove them as soon as possible. Responsive management of forest edges will allow interior forests to flourish with relatively little management. Partner with the Botanic Garden and naturalist groups to assist with identification and removal

Steep, Rocky Areas & Associated Rare Species

Characteristics

Exposed rock outcrops, steep slopes and remnant glacial features

Shallow soils

Water sources

Presence of rare ferns, herbaceous plants and other under-represented species arising from rock outcrops and shallow soils

Objective

Preserve rare ecologies that are connected to each other

Minimize human disturbance to amphibian populations, and steep slopes which are vulnerable to erosion

Key Management Items

Promote good stewardship through educational signage in areas where recreation is limited. Such areas will be established collaboratively with appropriate personnel.

Operations staff are responsible for implementing trail types appropriate to conditions including: raised & guided and guided with crushed stone granular surface. Refer to Trail Types on page 48

Identify top of slope (riparian crest) and bottom of slope (riparian toe) to define the creek corridor

Ensure infrastructure including bridges and trails are located outside the riparian corridor (including footings) wherever possible. Bridges should be clear span or be minimally harmful

Comprehensively sow native seeds within the corridor with the goal of achieving 100% native species. Seed species composition should be based on a healthy vegetation mix found in locally similar stream/river corridors

Monitor forest edges for invasive species and remove them as soon as possible. Responsive management of forest edges will allow interior forests to flourish with relatively little management. Partner with the Botanic Garden and naturalist groups to assist with identification and removal



Management Zone 2



NATURAL ENVIRONMENT

41ha (26% of total Odell parkland)

Zone 2 is defined as areas that while still rich in natural features, the natural features themselves are less sensitive to development and recreation. These areas allow for some increased level of activity. Staying on the trails will still be encouraged, but the associated level of disturbance is deemed to be less significant to the adjacent natural features.

The sorts of activities allowed in this Management Zone are as follows:

Walking Trails – To access these areas

Activity Trails – To access these areas with more intensity

- Biking
- Skiing
- Hiking
- Trail Running

The key natural features that comprise Zone 2 are as follows.



Regenerative Forest

Characteristics

Roughly contiguous with areas of past human disturbance from original farmstead and/or logged areas

Less mature forest, less established understorey, fewer ecological connections

Fewer hemlock trees

Objective

Promote natural **succession** and regeneration. It is preferable to allow the woodland to succeed through natural processes, and provide assistance when necessary

Sensitively locate new trails for human enjoyment

Develop a working relationship with leadership of organized user groups to plan future use areas and routes

Key Management Items

In areas that do not support a diverse mix of native plants and animals, sow new trees and shrubs to create a successional ecology

Monitor and manage the plant species that are in disturbed areas to ensure that healthy forest regeneration occurs with native plants

Operations staff are responsible for implementing trail types appropriate to conditions including: guided with crushed stone granular surface, guided with asphalt surface (only where already existing), typical with crushed stone granular surface, and single track. Refer to Trail Types on page 48

Succession

The process of biological communities evolving over time is succession. In a forest, there are certain plants that specialize in colonizing bare ground, followed by those that are specialized for intermediate stages because they out-compete the colonizers. Lastly are climax species, which, if left undisturbed, will dominate the forest in perpetuity.



Mature Specimens

Characteristics

Mature eastern white pine, maple, ash, beech, ironwood and hemlock specimens

Objective

Preserve trees for future generations

Key Management Items

Trails along the ground are acceptable (not raised or guided) provided they do not harm the trees or soil

Operations staff are responsible for implementing trail types appropriate to conditions, generally typical with crushed stone granular surface and single track. Refer to Trail Types on page 48



The Old Stone Wall

Characteristics

- Rare surviving cultural landscape feature from Odell family homestead
- Dry laid, linear, serpentine pile of stones
- Important reptilian habitat and food source for other fauna. Good breeding potential

Objective

- Do not disturb the wall remnants
- Provide cultural heritage interpretation opportunities

Key Management Items

- Route new trails where wall disturbance to the wall can be minimized
- Consider interpretive signs that tell the story of the wall's relevance and history
- Operations staff are responsible for implementing trail types appropriate to conditions, generally guided with crushed stone granular surface. Refer to Trail Types on page 48



Management Zone 3



35ha (21% of total Odell parkland)

RECREATION

Zone 3 is characterized by open green space that was cleared to build the original homestead and has remained open over time. This allows for the largest concentration of recreational use.

The park is greatly loved for its recreational opportunities, and it is important to place these more intense activities in areas that have less potential to disturb sensitive habitat. Whether it is a sport enjoyed alone, or one that requires a group, there will be increased pressures on these areas, so it is important to thoughtfully locate them.

There will be a continued partnership with the Botanic Garden.

The sorts of activities/infrastructure allowed in this Management Zone are as follows:

- | | |
|------------------------|-----------------------------------|
| Ball Fields | Lodge |
| Disc Golf | Walking/Running |
| Play Area | Gardening (Botanic Garden) |
| Outdoor Theatre | Biking |
| Picnic Shelter | Parking |



Objectives

- Provide for human use and enjoyment, for people of all ages and abilities
- Create new recreational opportunities
- Create a Gateway Commons at the main park entrance that provides parking, visitor services, and a range of recreational, educational and interpretive opportunities
- Establish secondary gateways for trail heads
- Create linkages between activity areas
- Create Accessible routes to major destinations

Key Management Items

- Keep Thompson Field in it's current state for the short term. Consider relocating the maintenance area at the main entrance of the park, to co-exist with Thompson Field.
- Consider relocating/modifying the existing disc golf course to a new course within the Recreation Zone. Work with the disc golf community to develop a course that meets their needs, respects the ecology and meets the needs of other users.
- Provide routes for cross country running, including the potential of holding cross country running events if a suitable running course can meet the objectives of this plan and the requirements of users
- Operations staff are responsible for implementing trail types appropriate to conditions, including: guided with crushed stone granular surface, guided with asphalt surface (limited to existing asphalt trails), typical with crushed stone granular surface, and single track. Refer to Trail Types on page 48



The Botanic Garden

Characteristics

Specimen trees and plant collections in turf grass and manicured garden beds

Objective

Responsibly collect tree and plant species for display and public education

Provide a space for passive recreation

Continue the partnership with the Botanic Garden

Key Management Items

Refurbish walking paths. Operations staff are responsible for implementing trail types appropriate to conditions, generally gravel road. Refer to Trail Types on page 48

Remove identification signs for trees that have died

Add new identification signs for trees within the park that are attractive specimens adjacent to major circulation routes



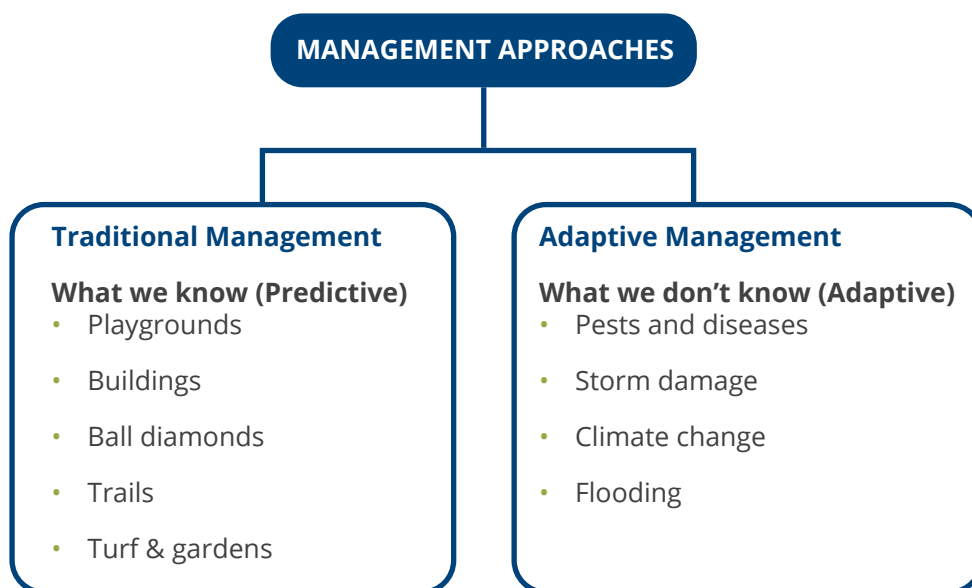
4.2 Management Approaches

The plan proposes a two-tiered approach to managing the development of Odell Park; Traditional and Adaptive.

The first tier (traditional management) is applied largely to managing infrastructure projects and meets the corporate objectives around delivery of our services. This approach ensures the allocation of resources to existing and future projects.

Adaptive management is applied to the unknown/unpredictive occurrences that affect the natural resources in our parks. Its advantage comes in the form of research, metrics and a constant cycle of learning as solutions are implemented. It requires collaboration from UNB, GNB and other municipalities with similar issues. An example of where we are applying this approach is in dealing with the Emerald Ash Borer, as it will affect a large portion of the forest in Odell Park. A City-wide plan for this pest is in progress and UNB has been a partner with the City in developing an inventory of ash within the park.

Two-Tiered Park Management Strategy





Responsibility for Following the Plan

Successful implementation of this park plan requires clear ownership and accountability within the City organizational structure. It is recommended that the City designate a staff position as well as a City department that will assume responsibility for implementing the park plans.

Management Strategies for Odell Park

Odell Park will be one of the largest plans to implement and one of the most challenging to manage. The following section clearly describes the many strategies, projects and initiatives relative to this management plan. They will help to ensure the long-term health of Odell Park, and the continued enjoyment of the park by all Fredericton's residents and user groups, during the transition period and beyond.

Strategies

Develop partnerships with user groups, stakeholders and professionals to develop these parks.

- Develop and support communications strategies and tactics to engage the public in park development.
- Collaborate with and include First Nations in the planning and operations of the park.
- Formalize partnerships with user groups (Example Wostawea Cross Country Ski Club) as infrastructure is planned and built.

Develop an Eco-tourism strategy for Odell Park that is integrated with the City's broader tourism strategy and initiatives.

- Explore partnership opportunities that are compatible with the use and enjoyment of Park, for example the Wabanaki Tree Tour.



Develop an Integrated Pest Management (IPM) Plan for identified and unknown pests

- Develop a specific monitoring program for Hemlock woolly adelgid which is a pending threat. Work with area partners such as Natural Resources Canada to monitor the pest and predict trends. Develop a graduated response plan based on the specific location, timing, and severity.
- Follow a monitoring program for invasive pests (e.g. Asian Long Horned Beetle and the Emerald Ash Borer (EAB))
- Follow best practises for managing Dutch Elm Disease.
- Mitigate against pests, disease and invasive species by promoting diverse, native vegetation (including native species, associations and spacing). Avoid broadcast chemical controls.

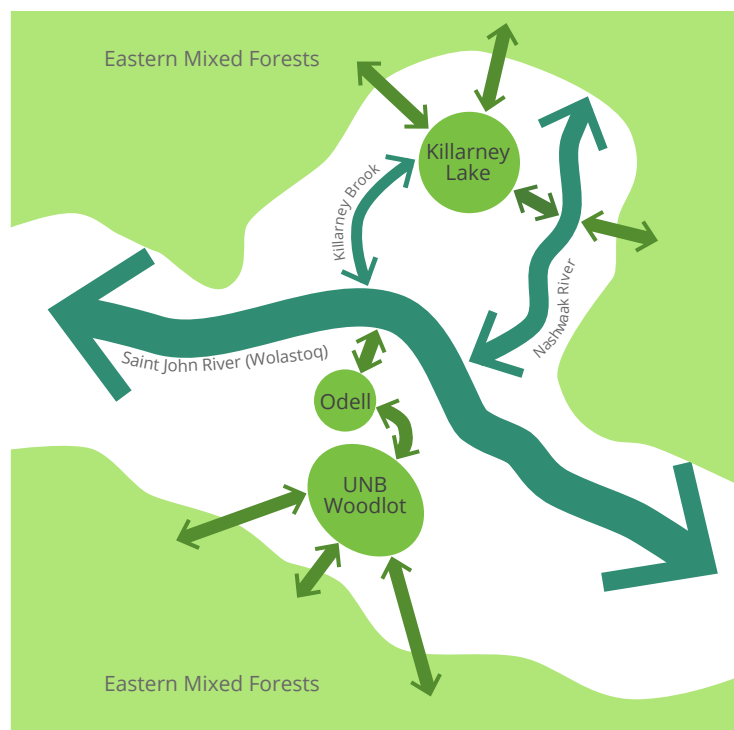
Develop a Naturalization and Planting Strategy

- Develop an Environmental Emergency Response Plan for storms, wind, ice, flooding, drought and disease events.
- Develop importation guidelines for soil and vegetation that specifies source, quality structure, texture and Follow a monitoring program for invasive pest such as; (e.g. Asian Long Horned Beetle and the Emerald Ash Borer (EAB))
- Follow best practises for managing Dutch Elm Disease.
- Develop importation guidelines for soil and vegetation that specifies source, quality structure, texture and chemistry, and that are free from unwanted seeds.
- Develop a GIS Map of canopy coverage and tree species .
- Develop ties to plant suppliers to secure plant materials that are adapted to Fredericton's environmental conditions.
- Create an asset management database to measure existing conditions such as natural features, flora and fauna, patterns of use, and infrastructure. Identify evaluation criteria to identify gaps and forecast future needs.
- Use calliper trees within Recreation Zones, and seeding, live staking, and small calliper plantings within Conservation and Natural Environment Zones.



- Generally, do not remove dead trees, as they provide important habitat and food sources. Fell dead trees where there is a risk to human use. Leave the biomass to decompose. Some felled trees and pruned wood can be used for firewood, as staff provided firewood for BBQ pits (conform to By-Law L-8 -303 (2) Fire index
- Concentrate invasive species removal in Conservation Zones, and around all edges and trails.
- Encourage strategies that conserve and promote rare/ keystone species.

Regional Ecological Linkages



Additional Strategies

- Develop an operations and maintenance plan with a seasonally based schedule, maintenance standards, protocols and responsibilities. Seek partnerships with local groups and volunteers.
- Work with the University of New Brunswick and agencies to create an ecological habitat inventory to understand species representation, breeding and migration.
- Create a wildlife management strategy with a focus on limiting human access to sensitive areas during key periods.





Projects & Initiatives for Odell Park



Trails (see map on page 47)

Develop a comprehensive trail/track network for multiple modes of active transportation connecting park gateways and interiors, with a choice of routes and levels of challenge.

There will be sections of trail through the Conservation Zone that may need to be guided and fenced along the sides. Trails in sensitive hemlock and pond areas may also need to be raised off the ground to prevent soil compaction.

Develop secondary gateways at neighbourhood access points.

Develop and post an Accessible route through Odell Park.

Remove obstructions such as fallen trees.

Engage in situ with the expertise of staff, trail designers, user groups and ecologists to address unsanctioned trails that do not respect the sensitive ecologies identified in this plan.

Block informal and unsanctioned trails with brush barriers or temporary fencing. Provide signs to educate all park users on why the trail is closed.

Reforest unsanctioned trails that do not respect the sensitive ecologies identified in this plan.

Consider the rate at which trails are reforested/decommissioned and new trails established in order to maintain recreational opportunities for all users during the transition period.

New trails should consider the park's hydrologic conditions to ensure proper and positive drainage in all affected areas.



Furniture

Develop a family of furniture that have a consistent visual language, quality workmanship, ruggedness and longevity for seating, fencing, lighting and waste disposal.

Provide permanent lighting only within the Recreation Zones, not for interior trails. Provide night-sky compliant lighting to mitigate avian conflicts.

Locate waste and recycling receptacles at park gateways and follow City maintenance access requirements.



Signage

Develop a comprehensive information and wayfinding sign system to inform visitors about Odell Park and its features, to help make their experience more enjoyable.

Develop standards for sign placement, size, height, materials and graphic language.

Follow Provincial, City and/or regional park standards for graphics on signs. Follow City branding guidelines for signs.

Use universal pictorial signs wherever possible, with less emphasis on written communication.

Develop a management plan for updating signs, rotating signs seasonally, repair and replacement.

Wayfinding Signs

Develop a comprehensive trail marking system including directional arrows, maps, distance and difficulty markers.

Identify appropriate uses (walking, slow cycling, mountain biking, snowshoeing) on all major trails.

Provide orientation signs at all trail crossings.

Provide an overall park trails map at all park gateways.

Interpretive Signs

Provide information about the unique ecological and cultural features of Odell Park.

Inform the public about the role and value of dead and fallen trees as habitat.

Regulatory Signs and Etiquette

Locate parking, park rules and access control signs immediately adjacent to their associated use.

Consolidate regulatory signs to a single display wherever possible.

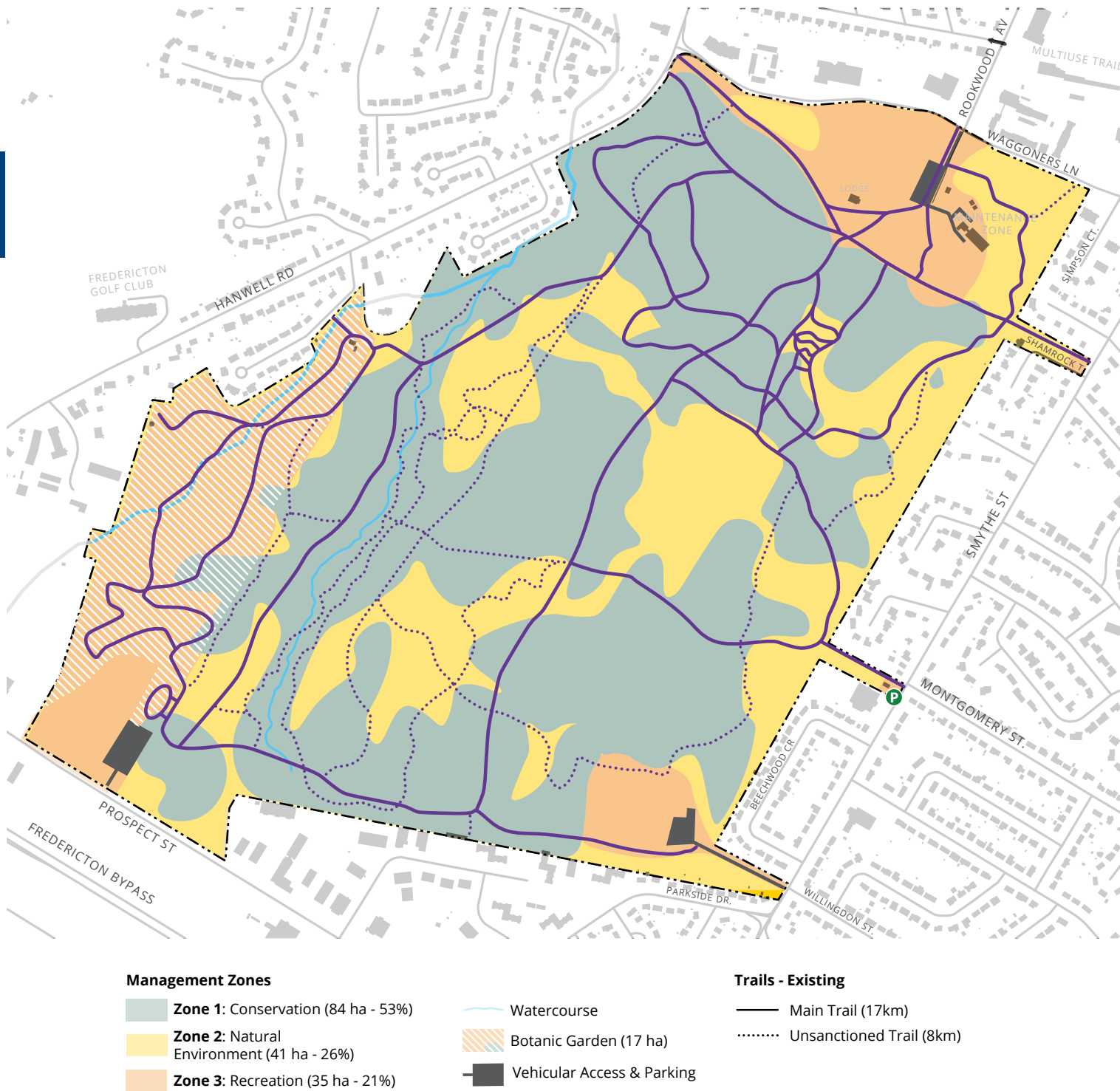
Use permissive signs and positive messaging where access is invited (e.g. "Please walk on the grass").

Information Signs

Provide operating hours, park boundaries, emergency information.



Map 3: Existing Trails in Odell Park



The park's existing trail network is a combination of sanctioned and unsanctioned trails. During trail design and construction in partnership with appropriate personnel, some trail sections may be designated for reforestation. The rate at which the proposed trail network is established will ensure recreational opportunities are maintained for all users during the transition period.

Map 4: Conceptual Future Trails in Odell Park



Management Zones

- Zone 1: Conservation** (84 ha - 53%)
- Zone 2: Natural Environment** (41 ha - 26%)
- Zone 3: Recreation** (35 ha - 21%)

- Watercourse
- Botanic Garden (17 ha)
- Vehicular Access & Parking

Trails - Future

- Multi-use Trail, 1.2-5.0m
- Multi-use (Single Track Trail), 0.5-1.0m
- Secondary Gateway

The proposed trail network favours routes that minimize ecological disturbance. Over time, trail types within sensitive ecological areas will be redesigned to have lower impacts on their immediate landscape, including, where appropriate, by becoming raised boardwalks. New trails will be designed in situ with the expertise of staff, trail designers, user groups and ecologists to ensure the integrity of natural systems are preserved while interesting and challenging trails are constructed. All new trails will be contained within the park's boundary.





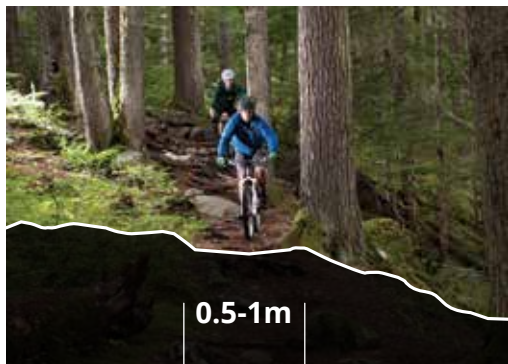
Trail Types



Multi Use Trail, Guided*
Crushed stone granular surface
(or existing asphalt surface)



Multi Use Trail, Typical
Crushed stone granular surface



Multi Use Single Track Trail
Natural Surface



Multi-Use Trail, Raised & Guided*
Boardwalk with Fence
Wire Mesh/Wood Surface

17 km of existing trails

8 km of existing trails to be reviewed by appropriate user groups and stakeholders

4 km of new trails to be reviewed by appropriate user groups and stakeholders

* Guided Trails frame and direct the user experience to promote stewardship and provide opportunities to interpret the natural features

Projects & Initiatives

ODELL PARK COMMONS

1 Great Meadow

Provide for human use and enjoyment, for people of all ages and abilities

Create new recreational opportunities

Create a Gateway Commons at the main park entrance that provides parking, visitor services, and a range of recreational, educational and interpretive opportunities

Establish secondary gateways for trail heads

Create linkages between activity areas

Create Accessible routes to major destinations

2 Pavilion & Village Courtyard

An Accessible, signature landmark building with washrooms, weather protection canopy, maps, park etiquette, wayfinding, seating, and trail hub

3 Natural Play Area

Unstructured play elements on slopes, stones, logs, straw and earth

Includes Accessible play opportunities

Existing and new trees provide sunny and shady spots

Seating around the edges

City staff receive training in natural playground construction

4a Parking Courtyard

Phase 1: Reconstruct the existing parking lot which is crumbling

Formally mark parking spaces to optimize use

Phase 2: Provide significant tree planting around the parking lot's edges where water and sewer infrastructure does not conflict

4b Maintenance Road & Overflow Parking

Create an access road to separate city maintenance vehicles from park users

Create overflow parking area for buses and staff parking; parking surface to be determined.

Water and sewer infrastructure renewal may occur and will consider the ecology as much as possible.





5 Demonstration Gardens

Provide community garden plots for public use. Explore partnerships with others, such as the Fredericton Botanic Garden Local Improvement Association

Create themed gardens showcasing New Brunswick's natural plant communities including Lowlands, Uplands, Riparian and Arboretum Gardens

Ensure the demonstration gardens are accessible, including some wide pathways and raised planters

Explore partnerships with community groups for maintenance, programming, education and promotion activities

6 Educational Opportunities

Explore community outreach and engagement tools to promote education about Odell Park's natural and cultural heritage including eco-tourism, the Wabanaki Tree tour, summer camps, garden talks, Earth Day events, food growing, native plant sales, Art in the Park, outdoor theatre and other cultural celebrations, including the Botanic Garden as a partner

7 Photography Garden

Develop a photography garden at the Lodge for wedding, engagement and family photos

Include formal and informal design elements, and ensure there is all-season horticultural interest

8 Vehicular Access to the Lodge

Keep the multi-purpose trail route to the Lodge to accommodate Accessible vehicular drop-off/pick-up and occasional small truck loading

9 Disc Golf Area

Work with the disc golf community to develop a course that meets their needs, respects the ecology and meets the needs of other users.

10 Duck Pond

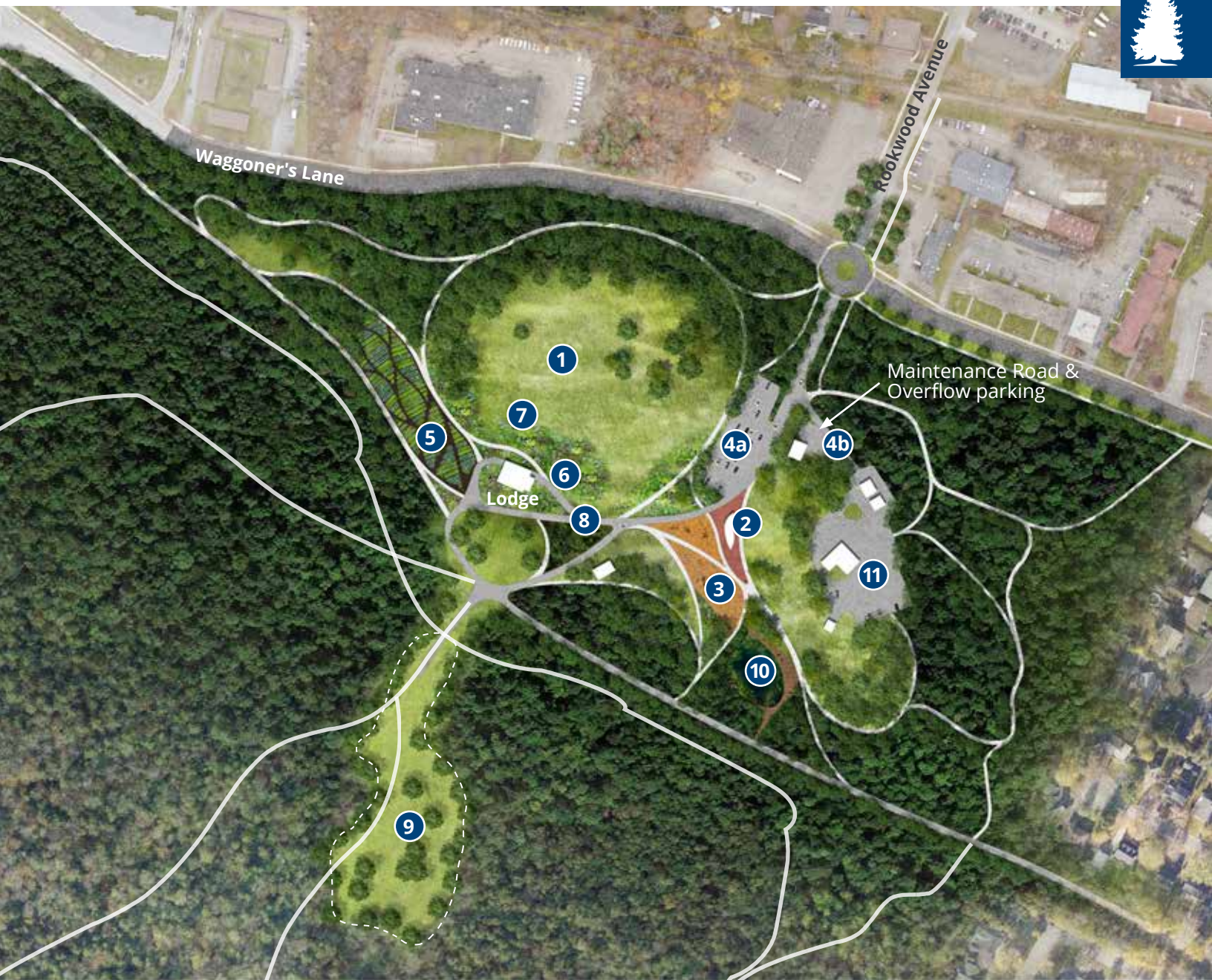
Explore the future of this pond as a renovation of the existing pond area

11 Maintenance Yard

Monitor the state of repair of the existing maintenance structures

Explore the potential to relocate the maintenance yard to the Thompson Field or Botanic Garden location

Conceptual Plan for Odell Park Commons





4.3 Implementation Plan

Recommendations range from short term to long term and are to be achieved, through incremental investment over the next 25 years and beyond. Successful implementation of this park plan requires clear ownership and accountability within the City organizational structure. It is recommended that the City designate a staff position as well as a City department that will assume responsibility for implementing the park plans.

Everyone has a role to play in implementing this plan. The City of Fredericton will take the lead role, providing operations, staff, and capital budget. Staff considerations include condition of assets, outside funding and private donations. It will be crucial to support and collaborate with community groups and residents who want to contribute to the planning, and maintenance of the parks, whether helping with fundraising, park advocacy or planning projects. Leveraging the passion of the community will have a huge impact on the quality of outcomes that can be achieved by this plan.



Short Term

Develop new main entrance sign
Develop new entranceway
Develop new parking courtyard (Phase 1)
Improve vehicular access to the lodge (temporary parking)
The Great Meadow (Phase 1)
Woodland Edge - deciduous, native species
Relocate 6 Hole Disc Golf
Expand educational opportunities through signage and programs (e.g. Artists in Residence Program)
Create a web-based portal that is part of a larger parks information page
Formalize mountain biking within the park and establish new single-track trails in appropriate zones and close routes through sensitive areas
Signage/Wayfinding, Rules of Conduct, Education, Information
Protect and preserve the wet areas and spring streams
Reforest trail sections in sensitive areas with native species

Medium – Long Term

The Great Meadow (Phase 2)
Woodland Edge - deciduous, native species
Design boardwalks through the most sensitive areas (Hemlock Groves and Wet Areas) of Zone 1. Note this does not mean designing boardwalks for all trails in Zone 1
Community Garden
Bike trails
Enhance all trail crossings of permanent water features with new bridges
Develop Secondary Gateways
Preserve and enhance Phyllis Creek and a hydrological habitat connection to the Saint John River (Wolastoq)
Preserve and enhance the old stone wall
Establish summer camps (initiated by community groups)
Lighting Plan
Photography Garden
Pavilion
Ecological Demonstration Gardens (explore partnerships)
Evaluate maintenance area at end of life cycle, relocate if feasible
Develop new play area



This Management Plan for Odell Park is a long term vision. The ecosystems in the park are by their nature the result of the long term evolution of natural systems and human use. The change envisioned by this plan will occur incrementally, over time, as opposed to a single large up-front investment. The City of Fredericton will work with partners at the University of New Brunswick and different levels of government, as well as seek more active participation of citizens and park users, runners, bikers and bird watchers to identify opportunities to improve the park through funding, volunteer work, or joint projects. Making a series of small scale improvements over time is the best approach to ecosystem management, and is a fiscally responsible way to achieve the goals of the plan.

Project implementation may occur with injections of capital from the City's operating budget or government grants, or as more modest undertakings relying on volunteer contributions and donations. There are many ways to achieve the principles and recommendations of this Management Plan, from formal construction projects involving detailed working drawings and hiring of contractors, to community tree planting, building and clean-up projects involving volunteers, and these have different levels of capital funding requirements. Costing for individual projects will be better defined during the preparation of secondary plans and construction drawings which will need to also include detailed geotechnical, servicing, and contractor costs, as well as City operations and staffing needs.

