NCC CCN

Canada

Gatineau Park Sustainable Transportation Plan

August 2015

Gatineau Park Sustainable Transportation Plan

August 2015

This Plan was approved
by the Executive Management Committee
on August 5th, 2015

Streering and Working Teams

The Gatineau Park Sustainable Transportation Plan is the product of work undertaken by staff of the NCC and of the firm AECOM (Gatineau)

National Capital Commission

Executive Management Committee

Director of Planning
Stephen Willis
François Lapointe (2013)

Project Leader
Hugues Charron

Working group
Arto Keklikian
Renée Bellehumeur
Michel Viens
François Leduc
Christie Spence
Jocelyne Jacob

Sterring Committee
Marie Boulet, Directrice, Parc de la Gatineau
Sandra Pecek, Directrice, Affaires Publiques
Lucie Bureau, Chef, Planification et transports
Pierre Dubé, Chef, Planification et transports (2012)

Communication team
Jocelyne Moncion
Émilie Girard-Ruel
Mario Tremblay
Cédric Pelletier
René Coignaud

We would like to thank all of those who participated in the planning process, public consultation, workshop and meeting.

Consultant Team

AECOM

Patrick Déoux, directeur de projet
Nadine Lafond, responsable de projet

Vanessa Skelton, ingénieure
Éric Deneut, biologiste
Chee F. Chan, urbaniste
Cécile Leblanc, urbaniste

Noxon Associates

Geoff Noxon, ingénieur en transport durable

Table of Contents

List of Tables

List of Figures

List of Appendices

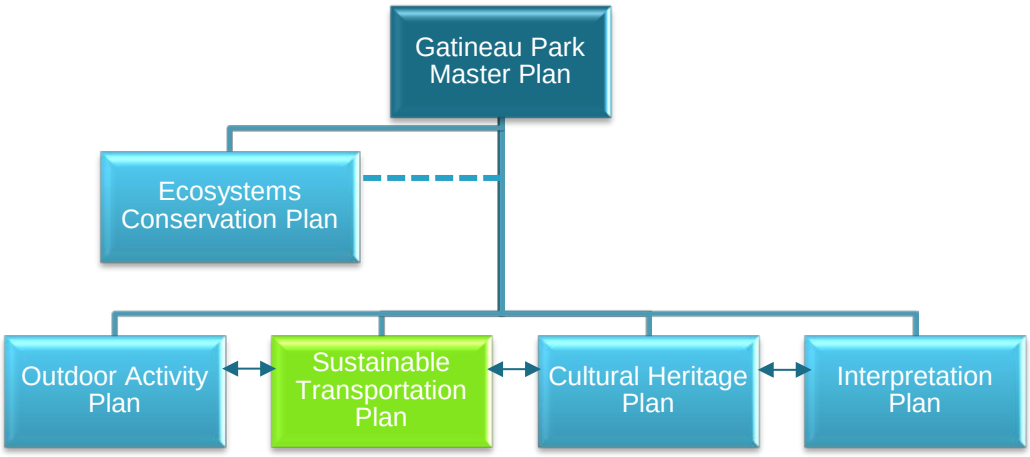
1 Introduction



1.1 Context

The National Capital Commission (NCC), a Crown corporation created in 1959, has a mandate and mission to build the Capital Region into a source of pride and unity for Canadians. It has legal responsibility for the development of federal lands of the National Capital Region, of which Gatineau Park is a part.

To this end, the NCC developed the *Gatineau Park Master Plan*, last updated in 2005. This planning tool contains a vision, as well as strategic, planning, usage, and long-term management objectives for the lands within the limits of the Park. The Master Plan recommends that further studies on various subjects be carried out. This Sustainable Transportation Plan is one of those studies. In parallel to this plan, four other plans were also developed, as shown in the following figure.



1.2 Objective of the Plan

The Sustainable Transportation Plan has a planning horizon that covers the next 20 years and focus on both within and to the Park travels. The principal issue of this Sustainable Transportation Plan is to assess and reduce the environmental impacts of trips made to and within the park while ensuring that park users can continue to partake in their activities.

A report presenting the assessment of the Park and its main sustainability issues (Phase 1 Report)[1] was developed through the course of 2009-2010, while the development of solutions report (Phase 2 Report)[2] was completed in the fall of 2012. A strategic environmental evaluation of proposed measures was submitted in spring 2013.

Finally, several consultation activities were held during the course of this study and a Report on Consultations is also available[3]. A questionnaire was put up on the website of the NCC from October 23, 2009 to January 15, 2010 in order to collect the technical knowledge and experience of the public and other interest groups to help in the assessment of the Park and the establishment of objectives. Consultations with the general public and interest groups were held in winter 2012. The objective of these consultations was to validate the relevance of proposed solutions, to identify other measures and to collect public comments.

1.3 Structure of the Plan

Chapter 2 of this document presents the vision and the strategic framework of this Sustainable Transportation Plan. The assessment of transportation issues to and within Gatineau Park evaluated in 2009 – 2010 is presented in Chapter 3. This assessment helped to identify the mobility issues within this study. Proposed measures to address the mobility issues are described in Chapter 4. This report ends with a strategic environmental assessment of proposed measures.

1 Gatineau Park Sustainable Transportation Plan, Phase 1 Report: Understanding and Assessing the Park, AECOM, December 2010.
2 Gatineau Park Sustainable Transportation Plan, Phase 2 Report: Development of Solutions, AECOM, October 2012.
3 Gatineau Park Sustainable Transportation Plan, Public Consultation Activities, June 2012.

2 Strategic Framework



2.1 Strategic Orientations of Gatineau Park

The Gatineau Park Sustainable Transportation Plan must be coherent with the visions and objectives of the NCC on matters of mobility and the environment. The **Plan for Canada's Capital**, for example, rests on the principles of environmental management, integrated transportation and accessibility. Note that the **Environmental Strategy** of the NCC published in 2009 encompasses five main areas of action: the reduction of waste, an increase in biodiversity, the prevention of pollution, the adoption of exemplary environmental practices and the fight against climate change. The promotion of alternative, environmentally friendly and sustainable modes of transportation figures among the objectives of the Environmental Strategy. This objective is coherent with the **Master Plan for Gatineau Park**, which seeks to encourage travel by active modes within the park to reduce the impacts of motorized travel, especially in conservation areas, and to concentrate parking lots in visitor reception areas.

Other more specific and interrelated plans fall from Gatineau Park Master Plan. The orientations of the Sustainable Transportation Plan were developed with consideration for the orientations of the Ecosystems Conservation Plan, which identifies zones to be protected within the Park, as well as the orientations of the Outdoor Recreation Plan, which characterizes the type, intensity and location of current and future recreational activities. The Sustainable Transportation Plan must satisfy the mobility demands of users of the Park all while respecting environmental constraints.

2.2 Strategic Framework

The strategic framework of the Sustainable Transportation Plan rests on three core values which help shape a vision for the park. This vision gives rise to a set of three guiding principles, each of which comprises several objectives.

The Gatineau Park Sustainable Transportation Plan is built on three core values: **ecosystem conservation**, **visitor movement management**, both unified under the principle of **sustainable mobility**. From these core values, the vision for Gatineau Park was established:

By 2035, access to Gatineau Park and travel within its boundaries will be less reliant on the automobile in favour of more efficient modes of transportation having less impact on natural ecosystems, while enhancing the overall Gatineau Park visitor experience.

This vision is articulated through three guiding principles, the **management of ecological impacts**, **a quality experience for all**, and the **management of peak traffic conditions**. Each of these principles and their associated objectives are described in the following table.

CORE VALUES		
1. Ecosystem Conservation	2. Visitor Experience	3. Sustainable Mobility

GUIDING PRINCIPLES		
1. Managing Ecological Impacts	**2. A Quality Experience for All**	**3. Managing Peak Traffic Conditions**
Access to the Park, travel within Park boundaries and arrival facilities will be designed and managed to minimize their impacts on the Park's natural ecosystems	Access to the Park and travel within Park boundaries will facilitate access to activity sites by all user groups and will not negatively affect the quality of the Park experience	Access to the Park and travel within Park boundaries will be maintained and facilitated by the adaptive use of various modes of transportation based on time of year and traffic conditions
OBJECTIVES		
▪ Whenever possible, limit and reduce ecosystem and habitat fragmentation ▪ Reduce impacts related to roadway maintenance ▪ Reduce the risk of collision with endangered species ▪ Contribute to region-wide GHG reductions	▪ Propose modes of travel that are efficient and well adapted to the activities and equipment required ▪ Improve public safety on parkways ▪ Enhance the natural environment experience by optimizing non-motorized travel and public transportation upon entering the Park	▪ Maintain access to activity areas without increasing parking facilities within the Park outside of visitor arrival areas ▪ Respect the capacity of individuals and organizations to finance initiatives

2.3 Policies and Objectives of the Master Plan

The policies and objectives of the Gatineau Park Master Plan, specifically with respect to the road network, also apply to the Sustainable Transportation Plan. These policies are described in section 6.2.6 (p. 55) of the Master Plan and are also listed below:

1. **Avoid further fragmentation** of the Park caused by the creation of local and regional roads for through traffic;
2. **Rationalize the current road network** in the Park by the closure of old roads in the La Pêche Lake sector, as well as the closure of Gamelin Street, between Gatineau Parkway and Lac-des-Fées Street, in collaboration with the City of Gatineau;
3. **Maintain regional routes** which cross the park and provide access to communities: Saint-Raymond and Allumettières Boulevards, as well as Eardley-Masham, Notch, Kingsmere, Meech Lake, Cross Loop, Pine, Sincennes, La Pêche Lake and Camp-Gatineau Roads

Moreover, one of the strategic objectives of the Master Plan is to **limit parking lots within the Park**. Instead, their creation on the Park's periphery is preferred (see section 5.3.2, objective 6, p. 23).

The policies and objectives together constitute the basic premise for the development of the Sustainable Transportation Plan.

Measures which are already in place, and whose transportation impacts are beneficial for the environment, should be maintained. The **closure of parkways in winter** is one such example. It avoids the use of de-icing salts and reduces noise and air pollution generated by motor vehicles.

3 Assessment of the Current Situation

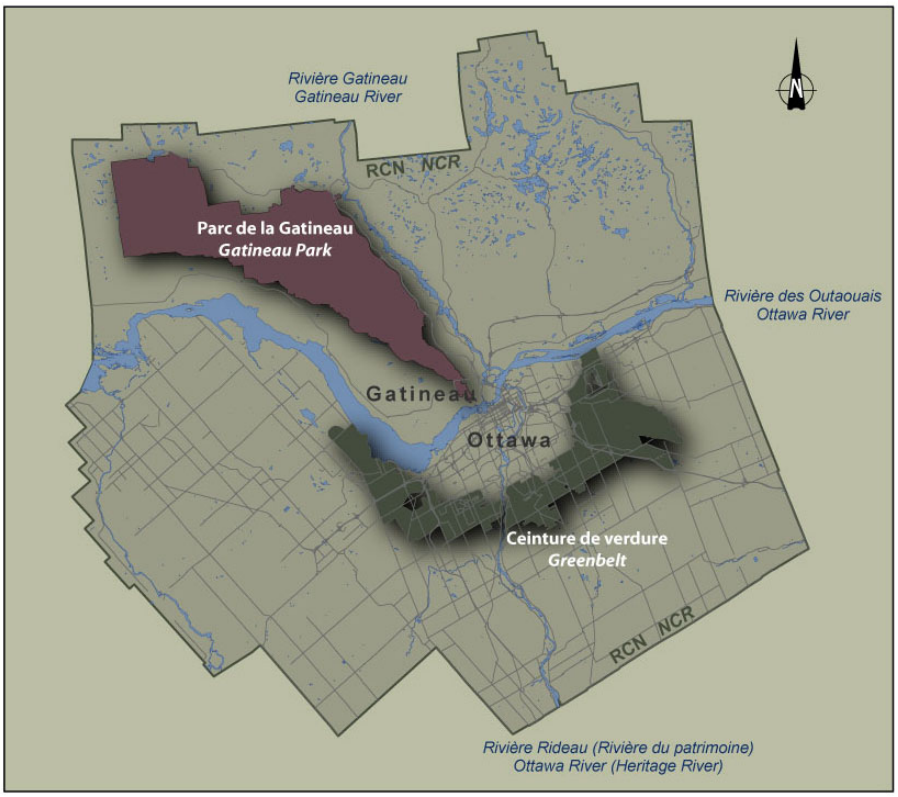


This chapter summarizes the principal characteristics of Gatineau Park, travel to and within the park, and the environmental impacts of these trips. More details are provided in the Phase 1 Report. This chapter concludes with the identification of 15 mobility issues.

3.1 Characteristics of Gatineau Park

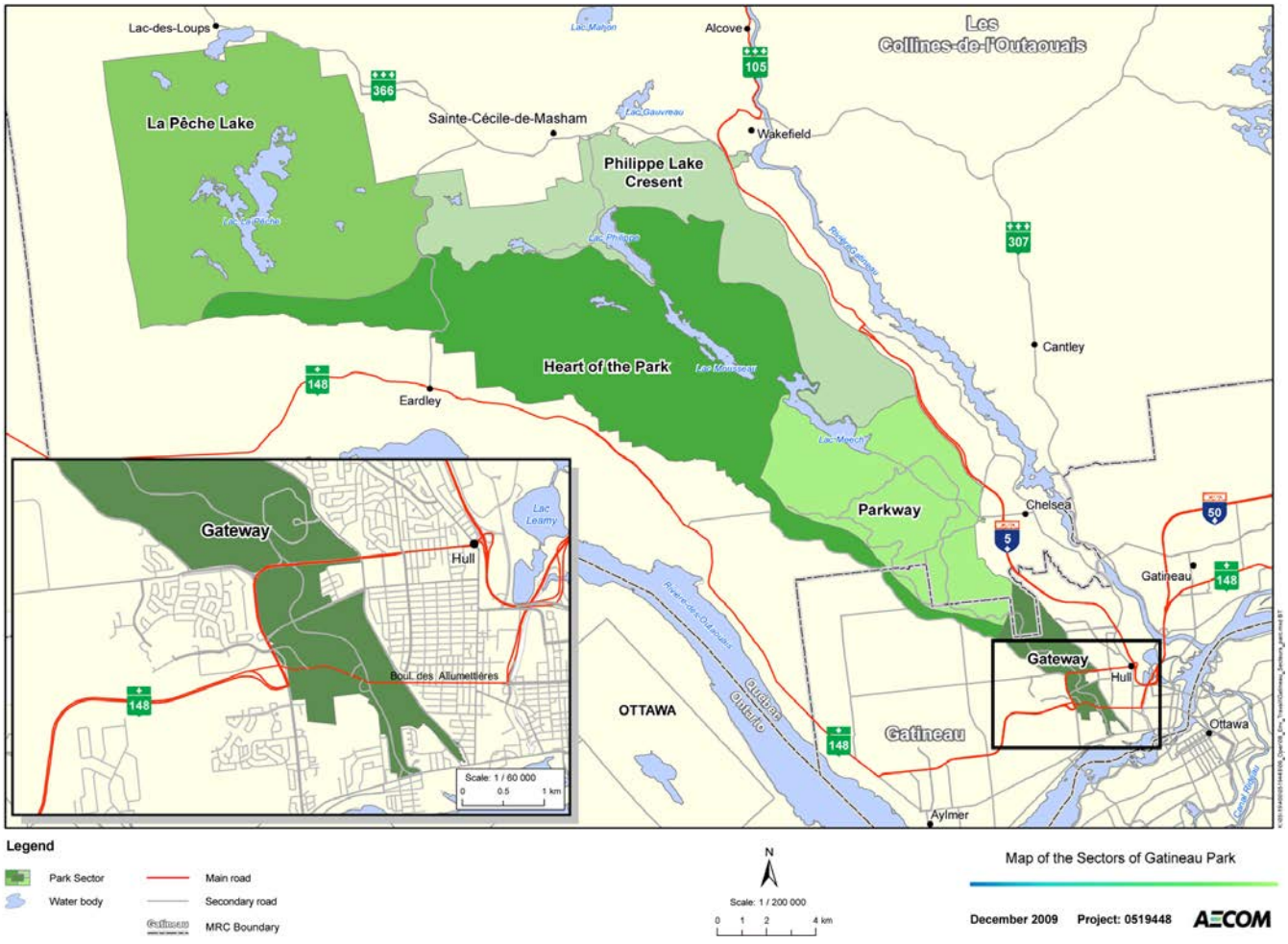
Gatineau Park is an important emblem in the National Capital Region. The Park is dedicated first for conservation, then for recreational purposes. Gatineau Park covers an area of 361,1 km^2, a size more characteristic of a provincial or national park. However, it is unique in its proximity to an urban area, which is especially true for its southern portion. Its easy access also distinguishes it from other Canadian Parks and its clientele comes largely from the local area. For example, in 2000, 85% of the 1.7 million visitors to the park originated in the National Capital Region. However, despite its proximity to the urban area, 85% of visitors travel to Gatineau Park by car.

Figure 3-1 Gatineau Park in the National Capital Region (NCR)



The park is divided into five sectors. The Gateway Sector and the Parkway Sector in the southern portion of the park are located in an urbanized area. They are also the most visited areas of the park. The parkways are visited frequently by all types of users both in summer and winter for scenic drives or sport training activities. The northwest portion of the Park (La Pêche Lake and Heart of the Park Sectors) is farther away from urban centres. Major portions of these sectors are dedicated to conservation and are less visited. Between the two areas is the Philippe Lake Crescent Sector, whose popularity is growing due to the high volumes of visitors in the Parkway sector and the increased accessibility afforded by the extension of Highway 5.

Figure 3-2 Sectors of Gatineau Park



3.2 Analysis of Trips

The analysis of traffic volumes in Gatineau Park showed that, apart from the Fall Rhapsody period (first three weekends in October), there are no major traffic problems in the Park. It is the capacity of parking lots rather than the capacity of the Park's roads which limits the number of vehicles in the Park.

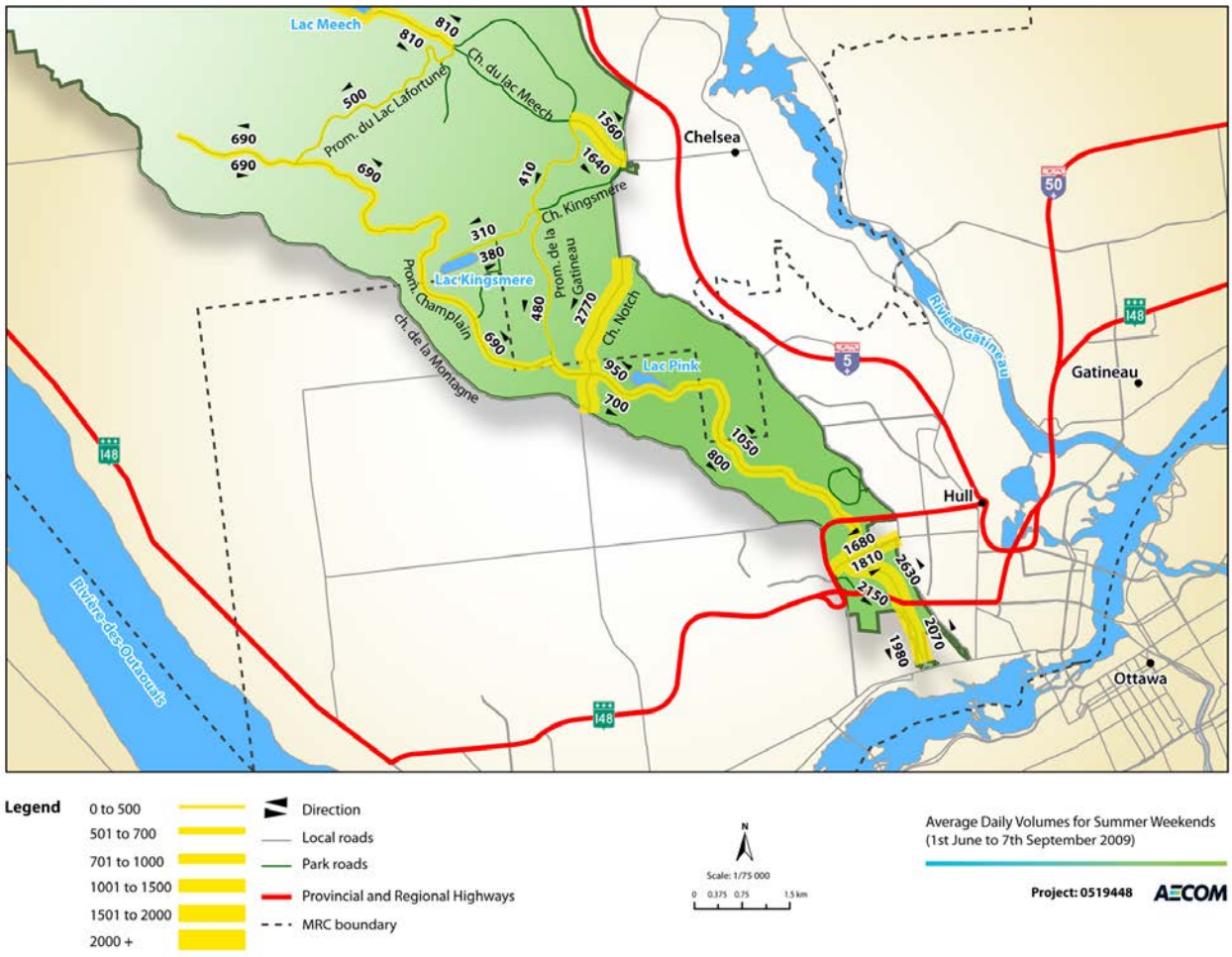
A detailed analysis of available data reveals the following observations:

- Volumes in Gatineau Park are growing at a rate of approximately 2% to 4% per year.

- On summer weekends, the two most popular routes in the Park appear to be from the Gamelin Entrance to the Champlain Lookout (around 690 vehicles per day); and from the Chelsea Entrance to Meech Lake (around 810 vehicles per day). These volumes are illustrated in Figure 3-3;
- For the Gamelin-Champlain route, volumes are greatest during the Fall Rhapsody. During these three October weekends, volumes at the Gamelin entrance are three times greater than on summer weekends.
- At the Chelsea Entrance, volumes on weekends of the Fall Rhapsody are 1.6 times greater than summer weekends, but similar to volumes observed on winter weekends.
- The Chelsea entrance is the busiest entrance of the park, except during the Fall Rhapsody when the Gamelin entrance is busier.
- Volumes of through traffic on Gamelin Street and on Gatineau Parkway south of Gamelin Street are estimated at 400 vehicles per hour during rush hour and around 5,000 vehicles per weekday in both directions;
- On Notch Road, all traffic is through traffic since the road crosses the Park without providing any access. Traffic volume is estimated at around 6,000 vehicles per day. However, few other alternatives are available to these drivers;
- The average daily volume on the Eardley-Masham Road, located in an integral conservation zone, is relatively low at 320 vehicles per day.
- Travel by bicycle is important on parkways: from 11 am to 2 pm on Saturdays, between a quarter and half of visitors are cyclists. On Meech Lake Road, less than 10% of visitors travel by bicycle.
- The vehicle occupancy rate appears to have decreased over the last several years.
- Parking lots P10 (Fortune), P3 (Gamelin) and P8 (Gatineau Parkway and Meech Lake Road) are the three most used lots in winter.
- Available data show that on summer weekends, parking lots P6 (Mackenzie King), P11 (O'Brien), P13 (Blanchet) and P19 (Philippe Lake) are very busy.
- Visitors to the park are largely residents of the NCR (85%), a greater proportion of who are from Ontario than Quebec.
- The parkways attract the greatest number of visitors.

In terms of public transit, one tourism operator offers occasional tours in Gatineau Park. However, its buses represent less than 1% of motor vehicles in the Park on summer weekends. Self-propelled modes (mainly cycling, but also walking, rollerblading and skiing) are popular means of getting to and travelling within Gatineau Park. However, these modes are only employed by a relatively fit group of users. The changes in elevation within the Park make travel by bicycle difficult for all types of users. The principal attractions (Pink Lake, the Mackenzie King Estate, the Champlain Lookout, Meech Lake) are difficult to access by self-propelled modes for the majority of users. Moreover, activities requiring large or oversized equipment, and visits with young children are less easily accomplished by self-propelled modes of travel.

Figure 3-3 Average Daily Traffic on Summer Weekends of 2009



3.3 Environmental Impacts of Transportation

The evaluation of the environmental impacts of transportation in Gatineau Park has revealed that road infrastructure is a source of impacts that is comparable to, or even more significant than, the traffic that travels on it. Roads cause habitat fragmentation and facilitate access to fragile areas of the Park. Moreover, de-icing salts are spread on park roads in the winter. They accumulate until the snow melts in spring, leading to the phenomenon known as “spring chemical shock”. Fortunately, this impact is limited by the winter closure of numerous roads in the Park, and by the use of sand and gravel on roads belonging to the Municipality of Chelsea (Meech Lake Road, Kingsmere Road, and Notch Road). Impacts tied to infrastructure should not grow significantly in the years to come.

The impacts of vehicle traffic on the Park’s natural resources are principally through collisions with wildlife, especially in the northern portions of the Park. Less important impacts of vehicle traffic include noise pollution, emissions of greenhouse gases, and oil and gas leaks. The impacts of traffic on the Park’s natural resources are lessened by the fact that traffic volumes are generally low in zones of integral conservation. Traffic is heavier in the Gateway and Parkway Sectors, causing more of a nuisance for visitors than the environment. The closure of parkways in winter also limits the impact of traffic on the Park’s natural resources.

Vehicle traffic is an annoyance for Park visitors carrying out their activities, whether it be through noise disturbances or the cohabitation of cars and bicycles. Population growth in the region and increased travel by single-occupant vehicles in the Park will only intensify vehicle traffic and its associated impacts within the Park.

3.4 Projected Impacts

Population growth in the Ottawa-Gatineau region, estimated at approximately 1% per year between 2006 and 2031, will increase travel demand to and within Gatineau Park in the years to come. If few alternative modes of travel are offered, users will continue to arrive by car. Congestions problems, which are currently limited, could become more recurrent. Moreover, the heavy usage of the Parkway Sector will likely increase user volumes significantly in other Park sectors, portions of which are currently dedicated to conservation purposes.

3.5 Mobility Issues

The mobility issues for Gatineau Park were developed through an analysis of usage data for roads and parking lots; an evaluation of transportation impacts on the environment; results from consultations with the public, NCC technical experts, and municipal and public partner organizations; the strategic orientations of Gatineau Park; and projected travel demand. These issues were grouped by theme under the three main principles of the Sustainable Transportation Plan and are presented below.

Table 3-1 Mobility Issues of Gatineau Park

Theme	No.	Issue
Ecological Impacts	1	The presence of roads cause the fragmentation of habitats
	2	Damaging impacts of de-icing salts
	3	Collisions with endangered species – Lack of parking near Trail 56 on the Eardley-Masham Road: vehicles parking on road shoulders contributes to the death of Blanding's turtles and endangers the safety of park users
	4	Contribution to regional greenhouse gas emissions
A Quality Experience for All	5	Lack of public transit to the Park
	6	Parkways shared by cars and bicycles
	7	Some cycling links to the Park do not exist or are less appealing
	8	Excessive speed on parkways and Meech Lake Road
	9	Vandalism and noise caused by night-time traffic
	10	Lack of Park access for residents on the west side of the Park
	11	Traffic conflict zone at the intersection of Alexandre-Taché Boulevard, Gatineau Parkway and Bégin Street
Managing Peak Traffic Conditions	12	Congestion near the South Entrance (Gatineau Parkway and Gamelin) and full parking lots along the Gamelin-Champlain Lookout route during Fall Rhapsody
	13	Congestion near the Chelsea Visitor's Centre and full parking lots (P3, P8, P9 P10 and Camp Fortune) during winter weekends
	14	Full parking lots at Meech Lake (P11, P12 and P13) during summer weekends
	15	Anticipated pressure on visitor facilities in areas to the north following the extension of Highway 5

3.5.1 Ecological Impacts

Environmental impacts are related mostly to road infrastructure more than the traffic that travels on it.

The main ecological issue of Park roads is that they cause the fragmentation of habitat **(issue no. 1)**. The presence of roads also creates issues related to de-icing salts which can cause the deterioration of water quality, especially near Des Fées Lake **(issue no. 2)**. Fortunately, this impact is limited by the winter closure of the park's parkways.

Automobile traffic does however pose a risk of collision for endangered fauna. This issue was observed on the Eardley-Masham Road, where the use of the gravel shoulder for parking increases the risk of mortality of the Blanding's turtle **(issue no. 3)**.

Finally, while traffic volumes in Gatineau Park are very low in comparison with the traffic on the road network of the National Capital Region, motorized travel in the park does contribute to greenhouse gas emissions **(issue no. 4)**.

3.5.2 Quality Experience for All

In terms of Park accessibility, few alternatives to the car are offered to users travelling to Gatineau Park. This explains why 85% of visits are made by car. Public transit service is extremely limited and the location of stops and the frequencies of STO buses do not meet the needs of Park visitors **(issue no. 5)**.

During the summer, one of the main traffic issues on parkways is the conflict between drivers and cyclists **(issue no. 6)**. While many visitors do get to Gatineau Park by car, cyclists constitute a non-negligible proportion of visitors. On parkways, cyclists make up between 25% and 50% of road users between 11 am and 2 pm on summer Saturdays. The sharing of parkways by both drivers and cyclists is a major concern for many cyclists and several drivers. The absence of shoulders on parkways limits the amount of space available to these two types of users, thereby creating a feeling of insecurity. The speed differential between the two modes is also a source of irritation for both parties. Furthermore, excessive speeding by some drivers in the Park increases the risk and gravity of accidents. Speed also amplifies noise impacts to the detriment of visitors seeking tranquility **(issue no. 8)**.

The poor condition of the roadway on Meech Lake Road and the absence of a paved shoulder discourages the use of bicycles on this route. As such, the proportion of cyclists on this road is much lower than that observed on the parkways. Municipal bicycle networks are not always well connected to the Park's entrances or recreational trails, a fact which discourages the use of the bicycle as a means of active transport to get to Gatineau Park **(issue no.7)**. For example, cycling conditions are poor on Mine Road and along the route between the Champlain Bridge and the Park entrance on Alexandre-Taché Boulevard.

It has been pointed out that vandalism in parking lots and late night activities in Gatineau Park are concerns for some visitors and residents **(issue no. 9)**. Note however that night time traffic of around 10 vehicles per hour has been registered along parkways.

The Eardley Escarpment, a valued ecosystem, represents a physical barrier along the southwestern limit of the Park. Consequently, residents from the Plateau and the municipality of Pontiac have few direct access points to the Park **(issue no. 10)**. This leads to the creation of informal trails and the use of the car to access the Park via its entrances. Significant projected population growth in these sectors will likely increase traffic both to and through the Park.

Finally, the intersection of Alexandre-Taché Boulevard and the entrance to the park facing Bégin Street is a traffic conflict zone between drivers, pedestrians and cyclists **(issue no. 11)**.

3.5.3 Management of Peak Traffic Conditions

In general, road capacity is not a problem in Gatineau Park. However, traffic volumes at the south entrance (Gamelin) are three times greater on the weekends for viewing fall colours (the first three weekends of October) than summer weekends. During this busy period, road congestion is present near to both the Gamelin and Chelsea Entrances. These high volumes of traffic also create strong demand for parking within the park. Parking lots along the Gamelin-Champlain route during this period were found to be at capacity. Difficulties in finding parking aggravate the traffic problem and are annoyances for visitors whether they drive, bicycle or walk **(issue no. 12)**.

Thus, it is the capacity of parking lots rather than that of roads that limits the number of motor vehicles in Gatineau Park. In addition to the time for the fall colours, some parking lots were found to be overfilled on winter and summer weekends.

On winter weekends, parking lots at the Gamelin Visitor Reception Area (P3) and near Meech Lake Road (P8 and P10) are used beyond capacity **(issue no. 13)**. Meech Lake Road is also more heavily used in winter than in summer because it provides access to nearly half of all available parking spaces in Gatineau Park, including those at Camp Fortune. On summer weekends, parking lots along the edge of Meech Lake also fill to capacity (**issue no. 14)**. This leads users to park on the roadside, creating issues of road safety.

Roads in the **Philippe Lake Crescent, Heart of the Park and La Pêche Lake** Sectors are farther from urban centres and are consequently less busy. Several roads are unpaved and infrequently used by cyclists. No issues involving the cohabitation of different modes were noted. However, the extension of Autoroute 5 will facilitate access to the Philippe Lake Crescent and La Pêche Lake Sectors. This accessibility, coupled with an increase in outdoor activities being offered in the Philippe Lake Crescent Sector will certainly increase travel demand in this area **(issue no. 15)**.

3.6 Prioritization of Issues

In order to prioritize the implementation of measures, it is important to first understand which issues have the greatest potential scope or beneficial impacts on the environment or on users. These issues should be addressed first. Thus, the following table presents the mobility issues according to four levels of priority.

- Highest priority (**HH**);
- High priority (**H**);
- Medium priority (**M**);
- Low priority (**L**).

The fragmentation of habitat, the lack of transit services, the cohabitation of cars and bicycles and peak traffic conditions in autumn and winter are issues which the NCC attributes the **highest priorities**. Thus, solutions which address these issues will be especially important.

Next, the issues of collisions with endangered species, the deficiencies in cycling links to access the park, excessive speeding and the saturation of parking lots at Meech Lake in summer are also considered important. They are attributed a **high priority**.

Medium priority issues are the harmful effects of de-icing salts, greenhouse gas emissions, night-time traffic and restricted access to the park from the southwest side.

Finally, only two issues are considered **low priority**. They are the conflict zone at the intersection of Alexandre-Taché Boulevard and the anticipated pressures on visitor facilities in the north end of the park following the extension of Highway 5. In the former case, the problem is localized. In the latter case, the problem was not observed, but is anticipated. These reasons explain their low prioritization among all other issues.

The following table presents the 15 mobility issues according to their level of priority. A keyword is attributed to each issue as a reference aid in the Action Plan presented further in this document.

Table 3-2 Prioritizing the Transportation Issues of Gatineau Park

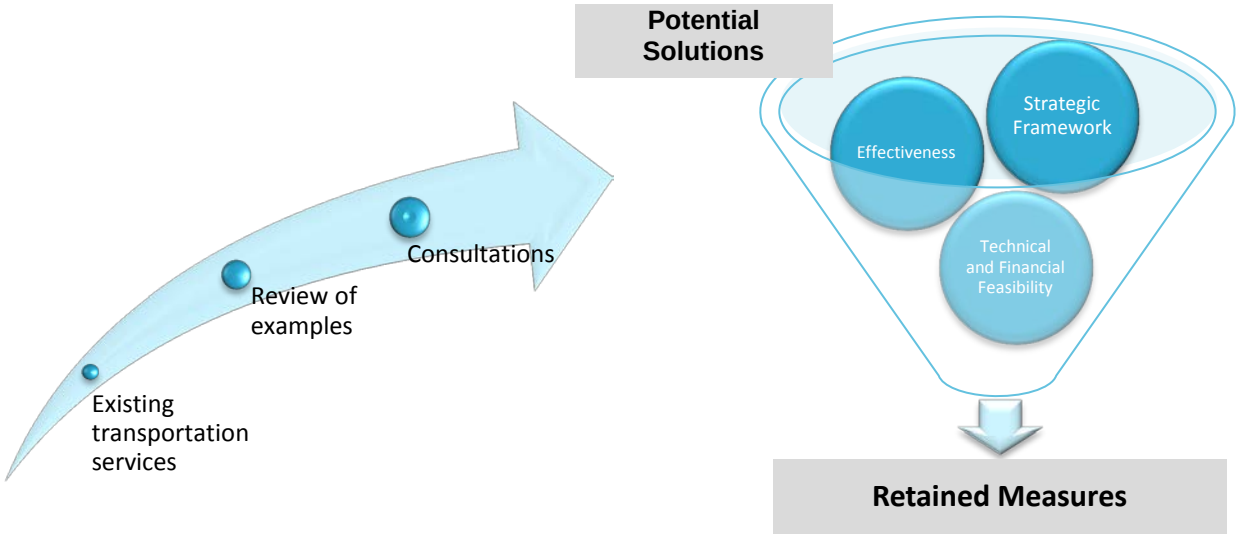
Priority	Issue	Keyword
Highest	The presence of roads cause the fragmentation of habitats	Fragmentation
Highest	Lack of public transit to the Park	Transit
Highest	Parkways shared by cars and bicycles	Cohabitation
Highest	Congestion near the South Entrance (Gatineau Parkway and Gamelin) and full parking lots along the Gamelin-Champlain Lookout route during Fall Rhapsody	Autumn
Highest	Congestion near the Chelsea Visitor's Centre and full parking lots (P3, P8, P9, P10 and Camp Fortune) during winter weekends	Winter
High	Collisions with endangered species	Fauna
High	Some cycling links to the Park do not exist or are less appealing	Cycling
High	Excessive speed on parkways and Meech Lake Road	Speed
High	Full parking lots at Meech Lake (P11, P12 and P13) during summer weekends	Summer
Medium	Damaging impacts of de-icing salts	Deicing
Medium	Contribution to regional greenhouse gas emissions	GHG
Medium	Vandalism and noise caused by night-time traffic	Night-time
Medium	Lack of Park access for residents on the west side of the Park	West Access
Low	Traffic conflict zone at the intersection of Alexandre-Taché Boulevard, Gatineau Parkway and Bégin Street	Taché
Low	Anticipated pressure on visitor facilities in areas to the north following the extension of Highway 5	H-5

4 Solutions

A set of possible solutions was developed based upon the review of practices in other parks, suggestions and comments received through consultations with the public and project partners, and an analysis of existing transportation services. A preliminary analysis of options led to the identification of measures which were relevant, feasible, and able to address identified transportation issues.

Next, a technical analysis of "relevant" measures was carried out. They were evaluated for their conformity to the guiding principles of the strategic framework, their effectiveness in addressing the identified problems, and their technical and financial feasibility. Thus, some solutions which seemed relevant were not carried forward for reasons that are identified in Section 6.2.

Finally, measures that were retained will be part of the Gatineau Park Sustainable Transportation Plan. They are presented in the following section.



4.1 Retained Measures

A total of 47 measures were retained to address identified mobility issues. They are listed in Table 4-1, and are described thereafter under each of the mobility issues in which they seek to address. The mobility issues themselves are grouped under the three guiding principles: ecological impact, the quality of the experience for all

and the management of peak traffic conditions. Note that some solutions address several mobility issues and are thus listed in several places.

Table 4-1 Proposed Measures

No.	Specific Measures
1	Continually evaluate the possibility of closing roads which are no longer necessary
2	Close and renaturalize roads which are no longer useful
3	Encourage the use of ecologically sensitive abrasives in the Park
4	Prohibit parking on the shoulder of Eardley-Masham Road
5	Build a parking lot beside Eardley-Masham Road at the trailhead of trail no. 56
6	Collaborate on the installation of protective measures for endangered species and signage around road infrastructure
7	Offer bicycle rentals on the Park's periphery
8	Offer bicycles at the Philippe Lake Campground for travel around the site
9	Install bicycle racks in parking lots serving the Park
10	Promote Relais plein air as the main entrance for public transit users
11	Encourage the STO and OC Transpo to identify Park entrances on their transit network maps
12	Encourage the STO and OC Transpo to identify Park entrances on Plani-Bus and Travel Planner
13	Show bus stops on Park maps
14	Inform tourists of the possibility of getting to the Park by transit
15	Add information about the Park at bus stops serving the Park
16	Encourage the STO to install bus shelters at stops serving the Park
17	Encourage the STO to improve service to the Relais plein air on weekends
18	Encourage the STO to maintain or improve Park access via Saint-Raymond Boulevard
19	Encourage the STO to add bicycle racks on buses serving the Park
20	Facilitate taxi-bus service to Gatineau Park
21	Monitor the development of the Steam Train to Chelsea and Wakefield and study the possibility of creating links to the Park
22	Develop a charter on sharing the road
23	Raise awareness to reduce speeding
24	Increase policing to incite drivers to respect speed limits
25	Raise awareness on the use of carpooling and alternative modes
26	Evaluate the possibility of strategically paving shoulders on parkways
27	Examine the possibility of closing more of the "north loop" to drivers
28	Include Gatineau Park as a destination in the Trail Signage Project of NCC and municipal networks
29	Create a cycling and pedestrian link between the South Entrance and the Lac-des-Fees Parkway
30	Encourage the City of Gatineau to improve the connection between the Voyagers Trail and the trails of Gatineau Park
31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway
32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads
33	Encourage the Municipality of Chelsea to create a cycling lane along Mine Road and on Notch road between Mine and Kingsmere roads
34	Encourage municipalities to create cycling lanes along Notch Road, from Mountain road including connections to the parkways and trail no. 15
35	Evaluate the possibilities to create cycling connections in some ecological corridors
36	Encourage municipalities to create a cycling link between urban areas and Philippe Lake to encourage cycle touring
37	Close the parkways at night
38	Evaluate the impact of unofficial trails and study the possibility of formalizing a trail at La Brise Street
39	Collaborate with the City of Gatineau on the redesign of the intersection of A-Taché/Bégin/Gatineau Parkway
40	Promote sectors and times which are less busy
41	Provide information on parking space availability through the use of dynamic signage at Park entrances
42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)
43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)
44	New sources of financing to support shuttle services
45	Study the possibility of creating a winter trail following Gatineau Parkway between Gamelin Street and A.-Taché Boulevard
46	Create a winter trail between Chelsea village centre and the Park's network of trails
47	Monitor the evolution of visitor traffic in the Meech Creek Valley area

4.1.1 Specific Measures – Ecological Impact

Measures addressing the four issues related to ecological impacts are presented below.

	Issue – Ecological Impact	No.	Specific Measures
1	**The presence of roads causes the fragmentation of habitat**	1	Continually evaluate the possibility of closing roads which are no longer necessary
		2	Close and renaturalize roads which are no longer useful

In order to limit habitat fragmentation, it is important to continually evaluate the possibility of closing certain roads or road sections which are no longer required **(1)**. Furthermore, it should be renaturalized **(2)** following its closure in order to eliminate the harmful effects of fragmentation.

	Issue – Ecological Impact	No.	Specific Measures
2	**Harmful effects of de-icing salts**	3	Encourage the use of ecologically sensitive abrasives in the Park

In order to mitigate the harmful effects of de-icing salts, the use of ecologically sensitive abrasives is recommended on Park roads **(3)**. The Municipality of Chelsea already limits the use of de-icing salts in the Park; this practice should be maintained. The City of Gatineau does not have specific location dependent policies on the use of de-icing salts.

	Issue – Ecological Impact	No.	Specific Measures
3	**Collisions with endangered species – absence of parking near trail no. 56 on the Eardley-Masham Road**	4	Prohibit parking on the shoulder of Eardley-Masham Road
		5	Build a parking lot beside Eardley-Masham Road at the trailhead of trail no. 56
		6	Collaborate on the installation of protective measures for endangered species and signage around road infrastructure

The prohibition of parking on the shoulder of Eardley-Masham Road **(4)** should be maintained: in the absence of parking at this location, visitors would often park on the shoulder, a practice which kills Blanding's Turtles. It is thus suggested that the parking lot beside Eardley-Masham Road near to trail no. 56 be re-opened **(5)**. The infrastructure is already in place, although the lot had been closed due to vandalism. Different measures can be put in place to protect the Blanding's Turtle and reduce its mortality rate **(6)**. Measures, implemented in collaboration with the Quebec Ministry of Transportation, the owner of the right-of-way, could include making shoulders unsuitable for egg-laying; allowing turtles to cross the road under the roadway by installing appropriate measures when replacing some existing culverts; preventing turtles from getting on the roadway by installing permanent fencing in certain areas (though only if crossings are built); building egg-laying areas set back from the roadway; or using signage to make users aware of the turtle's annual egg-laying season.

	Issue – Ecological Impact	No.	Specific Measures
4	**Contributions to regional greenhouse gas emission reductions**	7	Offer bicycle rentals on the Park's periphery
		8	Offer bicycles at the Philippe Lake Campground for travel around the site
		9	Install bicycle racks in parking lots serving the Park
		10-15	Promote existing transit services
		16-21	Encourage the development of new transit services to the Park
		25	Raise awareness on the use of carpooling and alternative modes
		29-36	Encourage connections for active transportation
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		42-43	Provide shuttle services
		44	New sources of financing to support shuttle services

Most solutions included in this Plan will have a positive impact on GHG emissions because they tend to promote the use of alternatives to the automobile. Thus, most of the measures which can address the issue of GHG emissions are presented in other sections since they seek first and foremost to address other issues. However, three measures seeking to improve cycling within the Park are discussed in this section.

In order to promote the use of active modes of transportation in the Park, bicycle rentals **(7)** could be offered at strategic locations on the Park's periphery. The Chelsea Entrance in particular would be suitable if Meech Lake Road were equipped with a bicycle lane (specific measure 32). Rental locations should be situated near to bicycle paths. Access by public transit should also be considered when choosing appropriate sites. Long or steep hills are not suitable for all users and as a consequence, the option to rent electric bicycles should be considered. A partnership with the private sector should be studied.

The possibility of offering self-service bicycle rentals should also be considered in the Philippe Lake area **(8)**. These bicycles would allow users to travel easily between the campsite and the three beaches in the area in order to reduce the number of short trips made by car.

The installation of bicycle racks in parking lots serving the Park **(9)** could also encourage travel by bicycle.

4.1.2 Specific Measures – A Quality Experience for All

Seven issues are included under the theme of a quality experience for all. Some 30 measures are presented below to address these issues.

	Issue – Quality Experience for All	No.	Specific Measures
5	**Lack of transit service to the Park**	10	Promote Relais plein air as the main entrance for public transit users
		11	Encourage the STO and OC Transpo to identify Park entrances on their transit network maps
		12	Encourage the STO and OC Transpo to identify Park entrances on Plani-Bus and Travel Planner
		13	Show bus stops on Park maps
		14	Inform tourists of the possibility of getting to the Park by transit
		15	Add information about the Park at bus stops serving the Park
		16	Encourage the STO to install bus shelters at stops serving the Park
		17	Encourage the STO to improve service to the Relais plein air on weekends
		18	Encourage the STO to maintain or improve Park access via Saint-Raymond Boulevard
		19	Encourage the STO to add bicycle racks on buses serving the Park
		20	Facilitate taxi-bus service to Gatineau Park
		21	Monitor the development of the Steam Train to Chelsea and Wakefield and study the

	Issue – Quality Experience for All	No.	Specific Measures
			possibility of creating links to the Park
		42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)
		43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)

Proposed solutions to compensate for the ***lack of transit service*** vary from the addition of information on existing services to the improvement of existing services and the creation of new services. In most cases, these solutions require the collaboration of a range of partners, among whom the STO will play a major role.

The Relais plein air is already served by the STO. It is located close to numerous walking, biking, skiing and snowshoeing trails. For these reasons, it would be a suitable location to serve as the main park entrance for public transit users **(10)**. Efforts exploring an increase in recreational services in the area between Alexandre-Taché Boulevard and Gamelin identified the former as a suitable second entrance to the Park for public transit users.

However, since the Relais plein air depends on volunteers, the centre is not always open. If it is to be served by transit, means must be found to ensure that the facility and its services are offered regularly in all seasons.

To facilitate access to Gatineau Park via existing transit services, park entry points should be identified on STO and OC Transpo network maps **(11)**. Park entry points could also be integrated within the travel planners of the STO and OC Transpo, the Plani-Bus and Travel Planner respectively **(12)**. Similarly, the NCC could show bus stops and corresponding bus lines in proximity to the Park on Park maps **(13)**. In addition to STO service, Greyhound services between Hull and Wakefield could also be shown.

Information for tourists on getting to the Park by transit should be provided through various forms of communication **(14)**. Park information, including trail maps, could be added to bus stops serving the Park **(15)**. Finally, adding bus shelters near to Park access points **(16)** would enhance visitor comfort. Some bus shelters could even be protected from the elements or heated. The STO is currently assessing the cost-effectiveness and potential for vandalism of such shelters through ongoing trials.

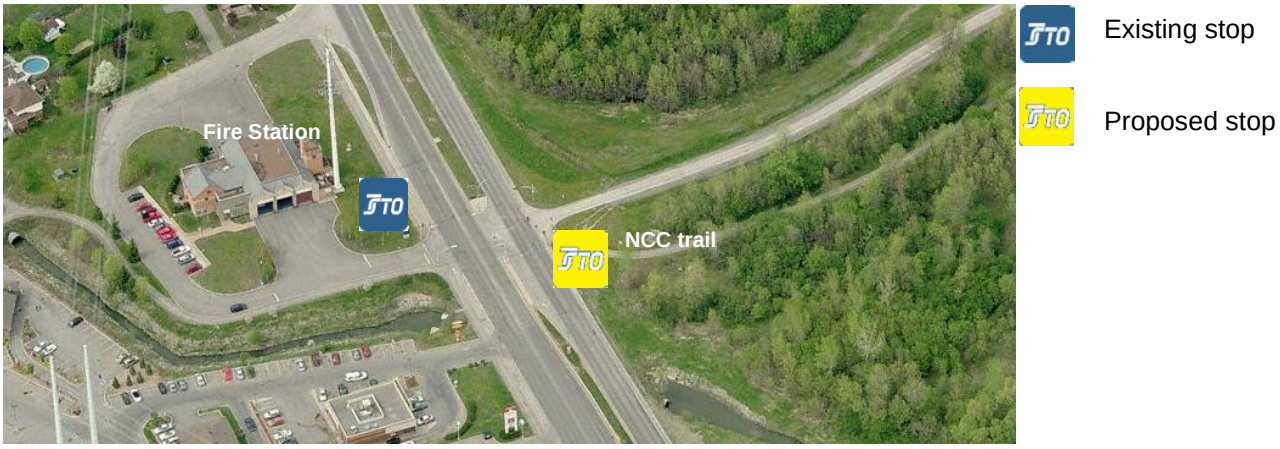
Existing transit services were described in chapter 4. Improvements can be made to facilitate Park access by transit.

Increasing the frequency of weekend bus service to Relais plein air **(17)** would improve Park accessibility. Such improvements would however depend on attracting a minimum number of riders and should be evaluated in greater detail by the STO. For the moment, demand is insufficient. Integration of bus services to the CEGEP should be considered since service to the latter is more frequent than to the Relais plein air. For example, the bus schedules of buses to the CEGEP could be displayed at the Relais plein air. The display could either be static or

dynamic. The creation of safe trails between the two institutions could also enhance the integration of services to the area.

STO line 49 runs along Saint-Raymond Boulevard next to the Park. However, there is no stop for northbound vehicles at the junction of the recreational trail, and only one stop for southbound vehicles near the fire station. Access to the Park from a stop on Saint-Raymond Boulevard opposite the fire station would be interesting for cyclists if STO buses were equipped with bicycle racks (measure no. 9). Thus, one measure **(18)** is to encourage the STO to maintain and improve Park access via Saint-Raymond Boulevard.

The Park can be accessed from the intersection of Saint-Raymond and Cité-des-Jeunes Boulevards. Perhaps a bus stop could be added at this location for lines 39 and 49.



Equipping buses serving the Park with bicycle racks **(19)** would encourage some cyclists to travel to the Park by bus rather than by car. The STO has already expressed a desire to equip its buses with bicycle racks. The inauguration of the Rapibus service as well as the construction of a second bus garage would in all likelihood allow the STO to add bicycle racks. The assignment of bicycle rack equipped buses to a specific line (which serves the Park) would however incur additional operating costs.

The addition of a regular bus service to the Chelsea Visitors Centre or the South Entrance (Gamelin) is not being considered by the STO due to an unfavourable revenue/cost ratio. A shuttle service from the two downtowns during busy Park visiting periods could however be more appropriate.

The option to operate a shuttle service is described in section 0 (measures 42 and 43).

A taxi-bus service for residents of the MRC des Collines is offered by the Corporation de Transport Collectif des Collines. The service is currently being restructured. For its part, the NCC could construct drop-off or waiting zones for these taxi-buses in order to encourage this car-sharing practice **(20)**.

A study was recently completed on the restoration of the Chelsea Train Station and service by steam train[4]. If the project were to proceed, public transit accessibility to Gatineau Park would be improved. The Chelsea train station is however located more than 2 km from the entrance to the Park. A connection to the Park would be necessary; the NCC could participate in the creation of a connecting service to the Park **(21)**.

Solutions to reduce **conflicts between cyclists and drivers** are presented below.

[4] Chelsea Steam Train Feasibility Study, Kehoe Ridley Consultants, Final Report July 2010

	Issue – Quality Experience for All	No.	Specific Measures
6	**Parkways shared by cars and bicycles**	22	Develop a charter on sharing the road
		23	Raise awareness to reduce speeding
		24	Increase policing to incite drivers to respect speed limits
		25	Raise awareness on the use of carpooling and alternative modes
		26	Evaluate the possibility of strategically paving shoulders on parkways
		27	Examine the possibility of closing more of the “north loop” to drivers

As a starting point, measures to inform Park users and raise awareness are proposed. These solutions are relatively easy to implement and generally cost little. Measures to enhance awareness on sharing the road are already in place. Efforts should also be made in managing bicycle pelotons, a practice which is prohibited (according to the Highway Safety Code of Quebec, a maximum of fifteen bicycles are allowed to ride together, but only in single file). A special permit can be given to groups which are escorted by safety vehicles.

In order to encourage road users to share the road better, a charter for drivers and cyclists **(22)** comprising the following elements is proposed:

- Pass bicycles at a slower speed (40 km/h);
- Do not pass cyclists going downhill and maintain a safe distance;
- Respect the limit on the maximum number of cyclists in a group without an escort;
- Respect speed limits;
- Do not honk the horn;
- Prohibit parking on shoulders.

For example, a cycling club in the Quebec City region promotes good cycling behaviour through the campaign "Ride with class"[5]. Signage is already in place promoting the sharing of the roadway and it should be maintained, if not reinforced. Moreover, it would be opportune to monitor the progress of the review of the Highway Safety Code by the Quebec Ministry of Transportation. Their review involves, among others things, the application of specific measures to reinforce the requirement to ride single file. Finally, it would be interesting to verify the existence and possible application of rules limiting noise generated by vehicles. In addition to disturbing the peace and tranquility of the Park, the use of the car horn or excessive noise by some vehicles are sources of stress for cyclists. The City of Gatineau has a noise by-law but nothing to prohibit the use of car horns[6]. A general by-law applied in National Parks attributes fines of $100 to $200 for creating excessive noise[7].

The measure to raise awareness to reduce speeding **(23)** should be reinforced by police surveillance at certain times **(24)**. Note that the RCMP is responsible for policing traffic on parkways, while municipal police (City of Gatineau and the MRC des Collines) intervene in cases of criminal activity. Policing traffic on municipal roads (Notch, Meech Lake, Kingsmere) is also done by municipal police forces. Consequently, the NCC does not have any control over the monitoring of speeding in the Park. NCC conservation agents only have the power to hand out fines for illegal parking.

An agreement is being considered between the RCMP and municipal police forces to allow the latter to police traffic on parkways. However, these forces generally have few resources to begin with, let alone to allocate to the Park. To mitigate this issue, cameras/photo radar in problem areas could be installed to allow for the automated attribution of fines. In winter 2012, the City of Gatineau was identified as a contributor to a MTQ pilot project. It

[5] http://www.roulonsavecclasse.cbsf.ca/Roulons_avec_Classe.html
[6] http://laws-lois.justice.gc.ca/fra/reglements/DORS-96-313/page-3.html
[7] http://laws-lois.justice.gc.ca/fra/reglements/DORS-96-313/page-3.html

would be interesting to evaluate the applicability of the results from the pilot to Gatineau Park. The use of instant speed indicators generally also has a positive impact on driver speeds.

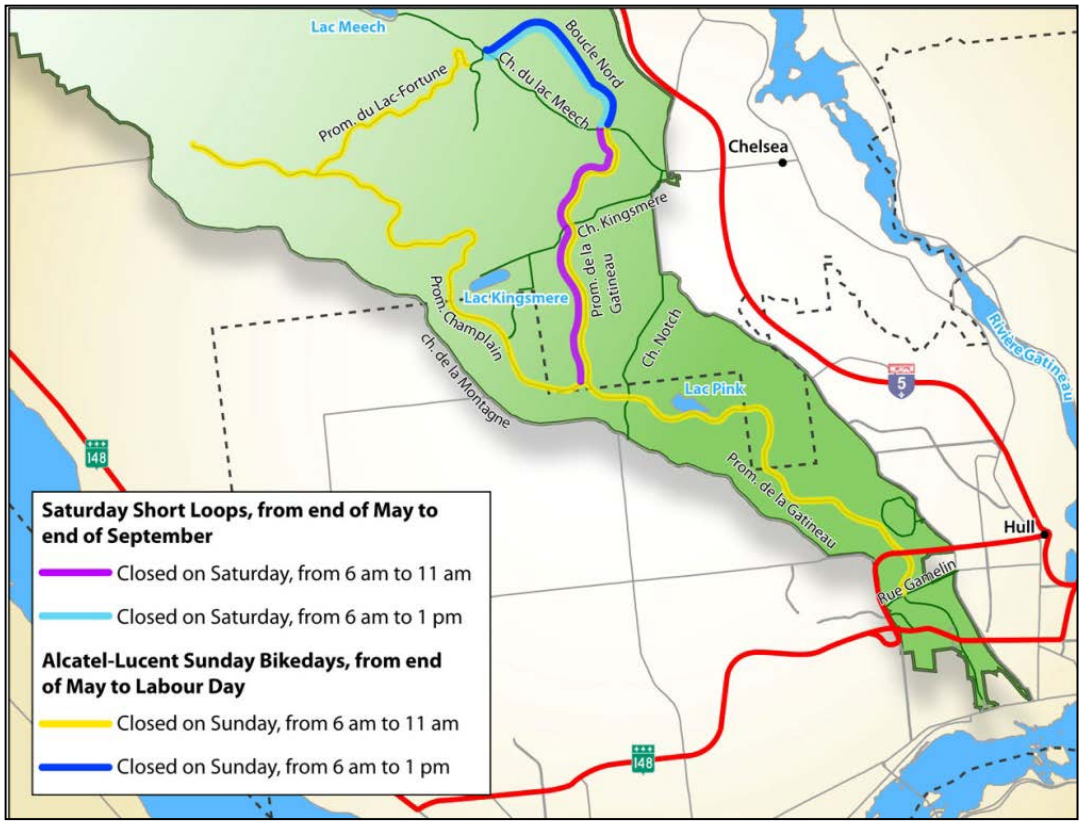
An awareness campaign could also be launched to promote carpooling and alternative modes of transportation **(25)** towards and within Gatineau Park. Such a campaign could also be used to promote travel by transit to the Park. It could also include information about GHG emission reductions generated by such practices. To encourage carpooling, dedicated parking spaces could be set aside. The proper use of these stalls however is generally based on an honour system. Car sharing could also be part of this awareness campaign.

In order to limit conflicts between cyclists and drivers, shoulders could be paved at strategic locations along parkways **(26)**. A detailed study is required to determine where doing so is desirable and technically feasible. A line along the edge would delimit the cycling lane from the driving lane. By demarking the driving lane at a width of 3.0 to 3.2 m, a visual effect is created that helps incite drivers to slow down. However, the Cultural Heritage Plan designates parkways as cultural landscapes. Their modification should be done in accordance with this plan. The widening of parkways would also have an impact on the natural aspects of the Park by increasing the amount of paved surface.

Parts of the parkway network are closed to drivers on Saturdays and Sunday mornings in summer as shown in the figure below. A small portion of Gatineau Parkway is also closed by volunteers on Tuesday and Thursday evenings, from 6 pm to 10 pm, mid-May to the end of October. Closure of parkways to drivers allows cyclists and other users to partake in their activities in peace. In return, it is thus important to maintain a balance between the different types of users. According to the NCC, the closure of the parkways has basically attained the maximum acceptable ratio. Each closure that benefits non-motorized modes means that some recreational trails and several popular sites (Pink Lake, Mont King, the Mackenzie-King Estate and the Champlain Lookout) are no longer accessible to users who are not physically capable of getting there by bike or foot. According to the NCC, the Park should be accessible to as many users as possible.

Following discussions with managers of Gatineau Park, the closure of the North Loop **(27)** could be considered. The North Loop is formed by the portion of Gatineau Parkway north of Meech Lake Road. This road section has a gentler incline than any other section of the parkways and makes it appealing to more users. There is a 20 stall parking lot located on the North Loop. However, no trails start from there. Additional road closure periods are not identified here and could be examined in greater detail by park managers. While the closure of the North Loop will have little impact on accessibility, it could nonetheless create additional traffic on Meech Lake Road.

Figure 4-1 Current Closures of the Parkway Network



Ten specific measures are proposed below to ***improve cycling connections*** to Gatineau Park

	Issue – Quality Experience for All	No.	Specific Measures
7	**Some cycling connections to the Park are missing or are less attractive**	28	Include Gatineau Park as a destination in the Trail Signage Project of NCC and municipal networks
		29	Create a cycling and pedestrian link between the South Entrance and the Lac-des-Fées Parkway
		30	Encourage the City of Gatineau to improve the connection between the Voyagers Trail and the trails of Gatineau Park
		31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway
		32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads
		33	Encourage the Municipality of Chelsea to create a cycling lane along Mine Road and on Notch road between Mine and Kingsmere roads
		34	Encourage municipalities to create cycling lanes along Notch Road, from Mountain road including connections to the parkways and trail no. 15
		35	Evaluate the possibilities to create cycling connections in some ecological corridors
		36	Encourage municipalities to create a cycling link between urban areas and Philippe Lake to encourage cycle touring

An interagency committee on multiuse trails, comprised of the City of Gatineau, the City of Ottawa and the NCC, is working on, among other things, standardizing signage of municipal cycling networks. It is thus important to include Gatineau Park as a destination in the trail signage project of NCC and municipal networks **(28)**. Integrated signage will help users better orient themselves and encourage Park access by active modes. Such signage would be appropriate on cycling trails around the Park, such as those along Allumettières Boulevard, Lac-des-

Fées Parkway and the Voyagers Trail. Directions to the Park could also be shown on the signs of the municipal network. Conversely, Park signage could direct users to different places in the city. This signage should include distances to and from major intersections, sites and destinations in the Park.

Pedestrians and cyclists share the shoulder along the section of Gamelin Street between Des Fées Street and Lac-des-Fées Parkway due to a lack of sidewalks. There are no special measures for pedestrian and cyclists along Gamelin Street between Gatineau Parkway and Des Fées Street. This route is however heavily used by commuter cyclists and dedicated infrastructure for active modes should be considered. The closure of Gamelin Street (between Gatineau Parkway and Des Fées Street), well as different designs for the section between Saint-Raymond Boulevard and Des Fées Street were being studied at the time of writing of this report. It goes without saying that the closure of a section of Gamelin Street to drivers would make it more convivial for active modes. The creation of a continuous and safe cycling link along Gamelin Street, between Saint-Raymond Boulevard and Lac-des-Fées Parkway, is desirable **(29)**.

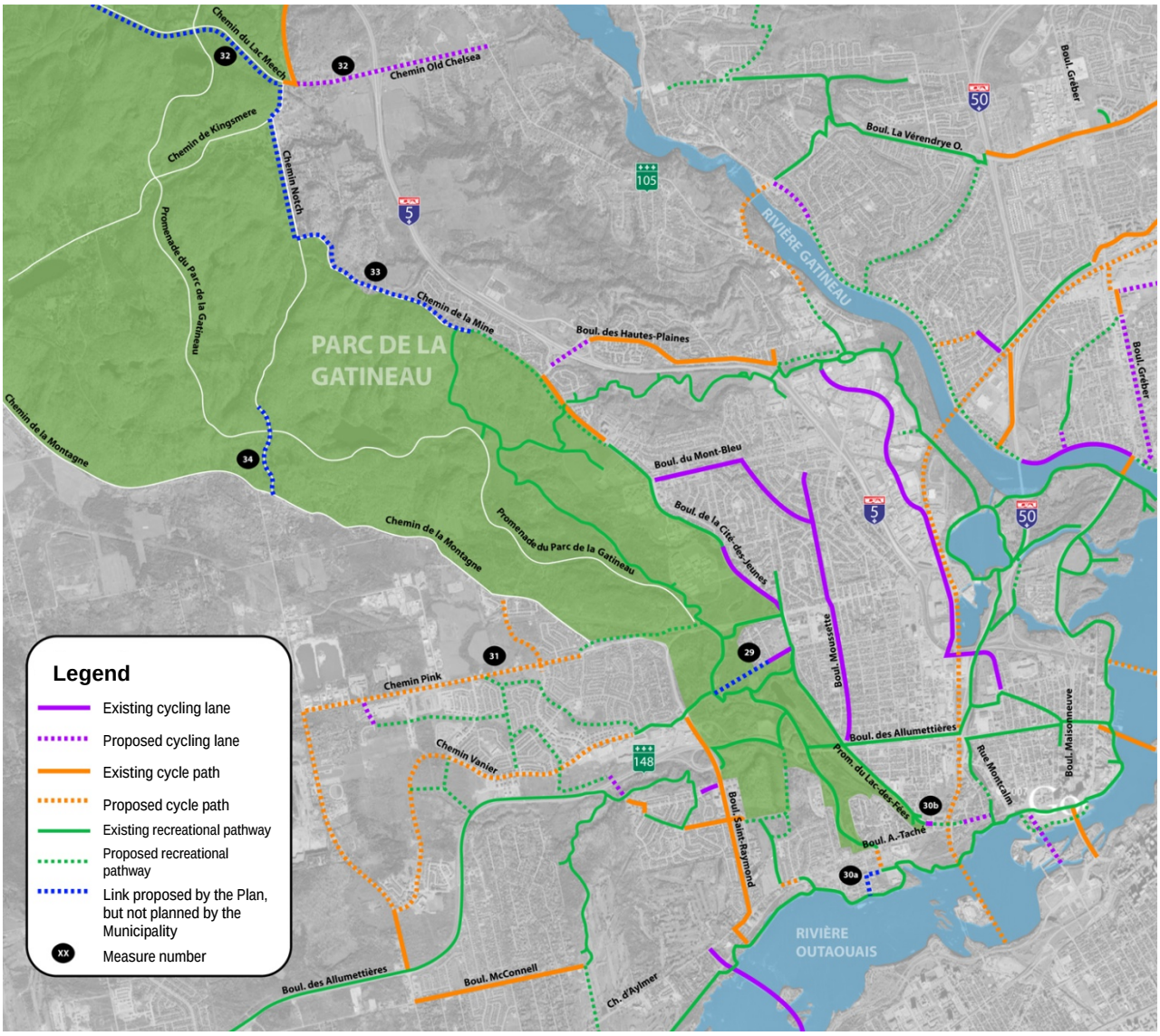
Figure 4-2 Gamelin Street on Both Sides of Des Fées Street

Gamelin Street east of Des Fées Street

Gamelin Street west of Des Fées Street

The cycling networks of the City of Gatineau and the NCC are generally well developed around Gatineau Park. However, some connections are either in poor condition or missing. The following measures deal with the creation of cycling lanes or shared recreational trails to facilitate access to Gatineau Park by active modes. These cycling connections are presented in Figure 4-3.

Figure 4-3 Proposals for New Cycling Connections



It is recommended to encourage the City of Gatineau to create connections between the Voyagers Trail, which follows the Ottawa River, and the trails of Gatineau Park **(30)**. Two connections are proposed.

The first connection **(30a)** would connect the Voyagers Trail to Gatineau Parkway via Coallier Street, Lucerne Boulevard and Belleau Street. Only signage indicating the sharing of the roadway between cars and bikes would be necessary on Coallier Street and Lucerne Boulevard. On Belleau Street, a bi-directional cycling lane on the west side of the street is already planned by the City of Gatineau. This cycling lane would be aligned with a Park trail as illustrated in the adjacent photo. The crossing of Alexandre-Taché Boulevard should

be improved through the creation of a pedestrian and cycling crossing with crosswalk buttons located at spots easily reachable by trail users.

A second cycling connection **(30b)** would improve access to the Lac-des-Fées Parkway cycling trail. A cycling lane along Duquesne Street would provide access to the *Parc des Chars de Combat*. Then, a multi-use trail would connect to Murray Street, from where cycling lanes would join the existing cycling trail on Taylor Street. This new connection would also cross the planned multifunctional trail in the Rapibus corridor. Together, these new connections would provide access to the trail along Lac-des-Fées Parkway from the Voyagers Trail.

The City of Gatineau's Cycling Master Plan indicates that a new cycling lane along Pink Road between Vanier Road and Gatineau Park is planned. Encouraging the City of Gatineau is proposed to create this cycling connection **(31)**.

The NCC should also collaborate with the Municipality of Chelsea to create a new cycling connection along Old Chelsea and Meech Lake Roads **(32)** to facilitate cycling along this corridor. The poor condition of Meech Lake Road and the absence of a paved shoulder discourage biking in the area. The proportion of cyclists on this section is much lower than the rest of the parkways. Better infrastructure would likely encourage more users to get to the Park directly by bicycle; this is in contrast to the usual practice of driving to one of the parking lots along the parkways prior to going cycling. Furthermore, the relatively flat topography between Chelsea and Meech Lake would make the route accessible to many users. Finally, the addition of cycling lanes along Meech Lake Road also acts as a speed reducing measure.

Similarly, the addition of cycling lanes along Mine Road **(33)** and on Notch road between Mine and Kingsmere roads would encourage biking to Gatineau Park by providing an alternative to the steep parkways that are not accessible to everyone. The poor condition of the roadway and the lack of paved shoulders make this route unsafe and unattractive.

Another useful route could be created through the installation of a recreational trail along Notch Road, from Mountain road with connections to the parkways and trail no. 15 **(34)**.

Ecological corridors between the Park and natural areas have been identified. Recreational trails could be created in some of these corridors **(35)** if there are existing trails within the Park from the point of connection with the corridors.

Finally, to encourage cycle touring, it would be opportune to encourage the Municipalities of Chelsea and La Pêche, as well as the Ministry of Transportation, to create a cycling connection between urban areas and Philippe Lake **(36)**. Some infrastructure between Chelsea and Wakefield already exists, such as the cycling lanes and paved shoulders on Scott Road and Route 105. Moreover, on summer Sundays between 9 am and 2 pm, River Road, from Route 105 to Wakefield, is reserved for local traffic only. This route should be extended all the way to Philippe Lake and advertised in tourism and cycle touring guides. It would be relevant as well to facilitate cycling along Lac-Philippe parkway between road 366 and Philippe lake beaches.

	Issue – Quality Experience for All	No.	Specific Measures
8	**Speeding on parkways and Meech Lake Road**	23	Raise awareness to reduce speeding
		24	Increase policing to incite drivers to respect speed limits
		32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads

In order to reduce ***speeding*** on parkways and on Meech Lake Road, three measures are proposed. They involve raising awareness **(23)**, policing **(24)** and the creation of a bicycle lane along Meech Lake Road **(32)**. These measures were described in the previous section.

	Issue – Quality Experience for All	No.	Specific Measures
9	**Vandalism, public safety and noise generated by night time traffic**	37	Close the parkways at night

To control vandalism, increase public safety by eliminating speeding, and ensure the peace for neighbouring areas at night, it is proposed that access to parkways be restricted at night **(37)**. The exact closure period must be studied. For this measure to be effective, it must apply to all parkways. Partaking in legitimate activities will still be possible and the Park will be accessible from other points.

	Issue – Quality Experience for All	No.	Specific Measures
10	**Lack of Park access for residents on the west side of the Park**	31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway
		34	Encourage municipalities to create cycling lanes along Notch Road, including connections to the parkways and trail no. 15
		38	Evaluate the impact of unofficial trails and study the possibility of formalizing a trail at La Brise Street

The Eardley Escarpment running along the southwest edge of the Park limits Park access from this side. The Eardley Escarpment is the richest ecosystem in Gatineau Park. Inhabited by numerous rare and protected species, the ecosystem has been evaluated as one of great value. Thus, to protect the richness of this ecosystem, the three specific measures proposed to ***improve access for residents to the west of the Park*** are only for active modes of transportation.

As previously mentioned, the NCC should encourage the City of Gatineau to create a cycling connection along Pink Road between Vanier Road in Aylmer and Gatineau Parkway **(31)**. The Municipalities of Gatineau and Chelsea should be encouraged to create a recreational trail along Notch Road starting from Mountain Road. This would include a connection to Gatineau Parkway and trail no. 15 **(34)**.

Furthermore, an unofficial hiking trail connects La Brise Street in the Plateau to the Hickory Area. The impact of formalizing this trail will be studied **(38)**.

These measures would lead to the creation of three new trails providing access to Gatineau Parkway from the west side of the Park.

	Issue – Quality Experience for All	No.	Specific Measures
11	Traffic conflict zone at the intersection of Alexandre-Taché Boulevard, Gatineau Parkway and Bégin Street.	**39**	Collaborate with the City of Gatineau on the redesign of the intersection of A-Taché/Bégin/Gatineau Parkway

Lastly, ***the intersection of Alexandre-Taché Boulevard and the Entrance to the Park*** facing Bégin Street is a zone of conflict for traffic. The traffic light in place is for pedestrians, but drivers sometimes use it to turn onto Alexandre-Taché Boulevard from Gatineau Parkway. This makes the intersection dangerous for pedestrians. The City of Gatineau is already planning to redesign and rebuild the intersection **(39)**.

Intersection of Gatineau Parkway and Alexandre-Taché Boulevard

4.1.3 Specific Measures – Management of Peak Traffic Conditions

Eight specific measures are proposed to address the four issues related to the management of peak traffic conditions. Proposed measures do not depend on the season (autumn, winter or summer), as evidenced by the following table.

	Issue – Management of Peak Traffic Conditions	No.	Specific Measures
12	Congestion near the South Entrance (Gatineau and Gamelin Parkways) and full parking lots along the route from Gamelin to the Champlain Lookout in autumn	**25**	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)
		44	New sources of financing to support shuttle services

	Issue – Management of Peak Traffic Conditions	No.	Specific Measures
13	Congestion near to the Chelsea Visitors Centre and full parking lots (P3, P8, P9, P10 and Camp Fortune) on winter weekends	25	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)
		44	New sources of financing to support shuttle services
		45	Study the possibility of creating a winter trail following Gatineau Parkway between Gamelin Street and A.-Taché Boulevard
		46	Create a winter trail between Chelsea village centre and the Park's network of trails
14	Parking lots at Meech Lake (P11, P12 and P13) are full on summer weekends	25	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances

Specific measures to manage peak times involve demand management, creating a shuttle service and charging drivers fees.

❖ **Awareness, Advertising and Information**

Raising awareness on the use of carpooling and other modes of transportation than the automobile **(25)** could potentially reduce the number of vehicles in the Park and relieve heavy demand on parking lots.

A simple measure to reduce traffic in the Park during peak periods is to better inform visitors of alternatives during these times. This could include promoting activities and areas of interest on the Park's periphery **(40)**. To encourage these activities, it would be helpful to better indicate trails and their lengths. Another example is to inform visitors of places and times to avoid during the day and to recommend other sites or less busy times.

To reduce the saturation of parking lot P3 (at the south entrance), the use of the parking lot at the Asticou Centre should be encouraged. Currently, 40 spaces at the centre are reserved for Park users on weekends. The possibility of increasing this number should be explored with the owner. Parking lot P7, located on Kingsmere Road, has a capacity of 200 spaces. Generally, they are not fully occupied. This is also the case for the 150 space parking lot P6 at the Mackenzie-King Estate. Better advertising of these parking lots could reduce the demand on parking lots P8 and P10.

In order to reduce the number of drivers searching uselessly for parking in the Park and save users the irritation of arriving at parking lots that have already filled up, a dynamic parking management system **(41)** could be implemented. It would display the number of remaining parking spaces in the Park's main lots at Park entrances and on its website. This measure does however require the monitoring and management of parking lot usage. Thus, the dynamic parking management system could be combined with the measure to install automatic parking fee collection machines. The latter measure could also be used to manage parking lots at Philippe Lake and in the Meech Valley, where demand is likely to grow due to the extension of Highway 5.

The creation of winter trails starting from the Park's periphery could reduce the number of vehicle trips and reduce parking demand in lots in winter. For example, a trail could be created between Alexandre-Taché Boulevard and Gamelin Street **(45)**. As Alexandre-Taché Boulevard is somewhat served by public transit, such a link would increase accessibility of activities by other modes than the car. Fee collection and other services normally offered at trail heads should be included when creating this trail. Another example would be the creation of a winter trail between the Chelsea village centre and the Park's trail network **(46)** thus providing access to the Park's vast network of cross-country ski trails from a parking lot located on its periphery. It is necessary to coordinate the planning of trails with the Municipality of Chelsea's Special Planning Program for the village centre. A trail

connecting the parking lot of the Visitors Centre to the network is also possible. This measure could however induce greater demand on a parking lot which is already mostly occupied.

❖ **Shuttle Service**

To reduce traffic and parking demand during peak periods and encourage the use of public transport, **a shuttle service (42 and 43)** could be created. Based on traffic and parking lot usage data, two destinations are visited sufficiently at a specific time of the year to warrant the operation of a shuttle service. They are:

- The parkways on autumn weekends (from the end of September to the third weekend in October);
- Parking lots P8, P10 and Camp Fortune on winter weekends (beginning of January to mid-March).

Shuttle service to Meech Lake on summer weekends was evaluated, but this option was not retained (the reasons for which were described in section 4.2).

A detailed cost-benefit study is required to determine precise routes, stop locations, frequency, fares, bus type, financing, etc. At this stage, some considerations for the creation of a shuttle service are summarized below and presented in greater detail in Appendix A.

According to past experience as well as those of other jurisdictions, successful shuttle services required that it be well publicized, be offered at a sufficiently high frequency, and be run under conditions which allow it to be effective and competitive with other modes of transportation.

During the autumn when traffic difficulties and parking access problems are experienced, it would be necessary to close the parkways to car drivers, either completely or partially. The presence of several parking lots in the Parkways Sector on the Park's periphery could serve as shuttle embarkation points. Park access controls could be relaxed or made more flexible for persons with reduced mobility during this period. Exclusive shuttle passage on Meech Lake Road is less likely in the wintertime due in part to the presence of existing residential areas along the road. A winter shuttle would help to reduce the overuse of existing parking lots in the Park.

The exact routing of each of these shuttles has to be determined. The service could start from downtown locations and make several stops in the Hull sector before arriving at the Park. The service could also be a combination of regular transit services and a shuttle travelling within the Park. Several possible route options are presented in Appendix A.

The financing of the shuttle service cannot be met easily through charging fares alone. Other financing mechanisms are required, such as parking fees, driver access fees, sponsors, partnerships with private businesses, etc. The shuttle fare structure should be developed within the context of an overall fee structure to access the Park and its activities. In principle, the fee structure should make the use of the shuttle more advantageous than the use of the automobile.

❖ **New sources of financing to support shuttle services**

Measures to add funding sources include, among others, charging parking fees or driver access fees at Park entrances (44). A fee structure could be implemented in the long term. Several fee scenarios are also possible. A detailed analysis of the fee structure is beyond the scope of the present mandate. It is however possible to identify several options which merit further analysis.

Charging a parking fee in Gatineau Park could discourage single-occupant vehicle use and make the use of shuttle services more attractive. Currently, only parking lots where additional services are offered require payment (parking lots at Meech Lake, Philippe Lake, La Pêche Lake and the Mackenzie King Estate). During the summer season (end of April to end of October), there are close to 1,500 free parking spaces in Gatineau Park. During the winter time, there are 1,570 free parking spaces in the Park (cross-country ski access requires a fee). This is in addition to the 1,000 free spaces available at the Camp Fortune ski area.

Studies have shown that the price of parking has a notable impact on the use of the single-occupant vehicle. Even when no other viable alternative to the automobile is available, such fees encourage carpooling.

The option to require paid parking at peak times (or on all weekends) appears to be the best option possible from the travel management perspective. The application of a fee during peak periods helps manage demand more easily and influences visitor transport mode choice. This could however pose a problem of equity, for example for those who visit the Park only once, such as during the Fall Rhapsody, as compared with those who visit the Park regularly but outside of peak periods. In terms of a parking fee structure based on the level of occupancy, such a structure could have a positive impact on carpooling, but would generate additional costs for management in addition to increasing the complexity of the system.

At the present moment, the NCC is not equipped to charge parking fees at all lots. The method of collection should be studied. Since this measure is planned for the longer term, changes in ticket machine technology could be beneficial (for example, automatic collection machines powered by solar energy). Note that, in contrast to parking lots in urban areas, the Park's lots are located in remote locations and surveillance against vandalism is more difficult. This measure should be applied together with the creation of shuttle services. This could imply for example that the price of parking would be determined based on the services offered. Fees within the Park could however lead users to park on municipal roads on the Park's edge. These impacts should be studied.

An alternative solution to paid parking is to charge drivers fees to access the Park. Such a solution would, in contrast to paid parking measures, also charge drivers who only travel or sight see on parkways without stopping. It would also be more difficult to implement because of the numerous municipal roads which cross the Park.

	Issue – Management of Peak Traffic Conditions	No.	Specific Measures
15	**Anticipated pressure on visitor facilities in areas farther north following the extension of Highway 5.**	**20**	Facilitate taxi-bus service to Gatineau Park
		25	Raise awareness on the use of carpooling and alternative modes
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		47	Monitor the evolution of visitor traffic in the Meech Creek Valley area

Currently, there are no traffic or parking demand related problems in the **Meech Valley** area (P15, P16, P17). However, the extension of Highway 5 and the construction of a new interchange will facilitate access. Measures are proposed to prevent the problems associated with parking lot saturation in this area.

First, it is proposed that the evolution of visitor volumes in Meech Creek parking lots **(47)** be monitored in order to assess whether the extension of Highway 5 does indeed increase the appeal of the area and its facilities.

Previously proposed measures will also restrain parking demand in the Meech Valley Sector. The measure calling for the NCC to collaborate with the Corporation de Transport Collectif des Collines to accommodate taxi-bus within Gatineau Park could, among other things, include service to Meech Valley **(20)**. Raising awareness on the use of carpooling **(25)** could reduce parking demand. Finally, the use of a dynamic signage at main Park entrances displaying real-time information of parking space availability **(41)** could help to inform users of full parking lots and avoid overcrowding.

4.2 Measures Not Retained

Some proposed measures, which at first seemed relevant, were not retained for one of the following reasons:

- The measure did not respect all of the guiding principles of the strategic framework.
- Major technical constraints make it difficult to implement the measure.
- The costs required were disproportionate to the benefits potential.
- The measure is not effective in addressing identified mobility issues.

A dozen measures were not retained. They are shown in Table 4-2. The reason for which the measure was rejected and an explanation are provided.

Table 4-2 Explanations for Measures Not Retained

	Reason				
Measures not retained	**Strategic Framework**	**Technical feasibility**	**Financial feasibility**	**Effectiveness**	**Explanatory note**
Shuttle to Meech Lake on summer weekends		x			Heavy vehicles are prohibited from travelling on Meech Lake Road beyond P11 and beaches are already at capacity.
Shuttle to Philippe Lake on summer weekends			x	x	A significant distance separates Philippe Lake from the downtowns and the relatively low volumes of visitors would make operating costs too high with respect to demand. Moreover, the Philippe Lake Sector is especially popular with campers, which would make shuttle service less attractive to this type of clientele, who often need to transport a lot of equipment.
Reduce speed limits to less than 60 km/h on parkways				x	Changing speed limits will not change behaviour if limits are not adapted to the surrounding environment.
Turn parkways into one way loops, and dedicate one lane to active modes	x	x			A significant amount of signage as well as traffic management at parking lot entrances and exits are required. The latter also raises important safety issues. The possibility of active modes travelling in both directions in a dedicated lane would increase the risk of collisions between users. One way loops would increase the distance travelled by drivers and thus GHGs.
Extend the times when parkways are closed to drivers	x	x			When Park roads are closed to cars, road biking is favoured above all other activities normally accessible via parkways. According to the NCC, the ideal balance between the openings and closures of Parkways on weekends has been achieved. Access should be maintained for other users. Closing the parkways on weekday evenings would require verification that all vehicles have left the closure area.
Create recreational trails parallel to parkways		x	x	x	Such a trail would not prevent cyclists who ride in pelotons from continuing to train on parkways. The Park's topography would also make the creation of these trails difficult.
Install a stop on Saint-Raymond Boulevard near Gatineau Parkway		x			While this stop would provide an additional point of access to the Park by transit, it is not advisable for safety reasons. The speed limit of 70 km/h on the boulevard means that bus bays would have to be built. Furthermore, pedestrians crossing the road would create additional safety issues.
Build new parking lots in the Park	x				The parking supply within the park is sufficient to accommodate visitor volumes most of the time. In accordance with the Strategic Framework, the NCC does not wish to increase the number of spaces within the Park. It prefers transportation alternatives to get visitors to sites during busy periods when parking space is insufficient. Additional parking lots would only be added on the Park's periphery or at its visitor reception areas as set out in the Master Plan.
Build a round-a-bout at the intersection of Scott/Kingsmere/Old Chelsea Roads		x			A study evaluating several redesigns of this intersection, including a round-a-bout, concluded that there was not enough space available for the size of infrastructure required due to the presence of Meech Creek.
Charge fees at Park access points	x				The fee structure must be reviewed and should consider holistically Park access, parking lot use and activities in order to set a fee structure which is equitable. Fees will include incentives for the use of transportation alternatives.
STO service to the Chelsea Visitor Centre on			x	x	The STO has confirmed that the ratios justifying the addition of regular service have not been met. Furthermore, the period during the year for

Measures not retained	Reason				Explanatory note
	Strategic Framework	Technical feasibility	Financial feasibility	Effectiveness	
weekends					such a measure is very small: passenger demand is not sustained throughout the entire period during which regular service hours must remain constant, a fact which in turn reduces the chances of meeting the minimum ratios for service. In fact, it would be better to begin with a shuttle service to build traveller volume. With sufficient demand, the shuttle service can be transformed into a permanent service integrated within the STO's network.
Regular STO service to the South Entrance (Gamelin) on weekends			x	x	The STO has confirmed that the ratios justifying the addition of regular service have not been met. Furthermore, the period during the year for such a measure is very small: passenger demand is not sustained throughout the entire period during which regular service hours must remain constant, a fact which in turn reduces the chances of meeting the minimum ratios for service. In fact, it would be better to begin with a shuttle service to build traveller volume. With sufficient demand, the shuttle service can be transformed into a permanent service integrated within the STO's network.

4.3 Evaluation of Measures

Each measure that was retained was evaluated according to its conformity with the principal objectives of the Sustainable Transportation Plan, its ability to address identified issues, and its potential for implementation as well as the cost of implementation and operation. Furthermore, the conditions for success and constraints were identified for each measure. These evaluation criteria are described below.

4.3.1 Conformity

Conformity measures the degree to which a measure addresses the guiding principles of the Park, which are:

1) **Ecological Impact**: Park access, internal travel and visitor facilities must minimise their impacts on the natural ecosystems;
2) **Quality experience for all (during peak and off-peak times)**: Park access and internal travel will allow visitors to get to activity sites without negatively affecting the quality of the experience being sought.

The objectives tied to the three guiding principles were organized into two groups, while the objectives related to the management of peak traffic periods are integrated under various elements. For example, the objective to *Maintain access to activity sites without expanding parking lots within the Park* is found under the principle of *Quality experience for all*, while the objective to *Respect the capacity of individuals and organizations to finance initiatives* is evaluated under the cost criteria.

Thus, the conformity of each measure is determined based on whether it addresses the following objectives:

Guiding Principle	Main Objectives
Management of ecological impacts	Limit the fragmentation of ecosystems and habitats
	Reduce impacts related to road maintenance
	Reduce the risk of collisions with endangered fauna
	Contribute to reductions in GHG emissions
Quality experience for all	Maintain access to activities (peak and off-peak periods)

Guiding Principle	Main Objectives
	Increase user safety on parkways
	Enhance the outdoor experience by optimising non-motorized travel or public transit in the Park.

Each measure was evaluated against the seven objectives presented above. A score was attributed according to the impact, positive, neural or negative, of the measure. The scoring key is as follows:

Impact	Positive Strong	Positive Weak	Neutral	Negative
Score	2	1	0	-1

The evaluation of impact is done in reference to the existing situation. Thus, a measure that maintains the current situation is attributed a neutral score. A measure which improves the current situation is given a positive score. Conversely, one that causes a deterioration in the current situation is given a negative score. An average score was also calculated based on an equal weighting of the importance of each of the objectives.

4.3.2 Performance

The performance criterion evaluates the ability of a measure to resolve identified problems. This criterion attempts to predict the success of a measure in addressing problems, changing behaviours and protecting resources. A score from 0 to 3 is attributed. Measures receiving a score of 0 were not retained and were described in chapter 6. A score of 1 indicates that the proposed measure could alter behaviour to a small degree and is partially successful in resolving identified problems. An example of a measure receiving this score would be awareness campaigns. A score of 2 supposes that measures can offer interesting solutions to addressing a problem, or could strongly incite users to change their behaviour. Finally, a score of 3 is awarded when a measure, in addition to addressing identified problem successfully, also has positive impacts on other issues (added value). For example, the creation of cycling lanes along Old Chelsea and Meech Lake Roads will not only improve access for cyclists, but will also help incite drivers to slow down on Meech Lake Road, reduce traffic within the Park, and reduce GHG emissions.

Performance	Very poor or null	Poor to medium	High	High with added value
Score	0	1	2	3

4.3.3 Potential for Implementation

The evaluation of the potential for implementation of a measure is done by considering the **main constraints and conditions for success**. This criterion evaluates the chances that a measure will be fully implemented based upon the difficulties involved in its implementation/construction, difficulties in operation and public opinion. A score from 0 to 2 is assigned to each measure. A score of 0 indicates that constraints are too great and the chances of implementation are low or non-existent. These measures were not retained and were described in the previous chapter. A score of 1 indicates that certain constraints exist and that the potential for implementation is uncertain. A score of 2 indicates that a measure faces few constraints and the potential for implementation is high.

Potential for implementation	Low or null	Medium	High
Score	0	1	2

4.3.4 Cost

Cost is evaluated for the implementation/construction of a measure. Operational costs over a period of 10 years are also considered in order to allow comparisons between measures. Costs of implementation of a measure that are the responsibility of the NCC are identified. At this stage of analysis, different orders of magnitude for costs are estimated. They are represented by the following symbols.

- $: less than $100,000;
- $$: between $100,000 and $1,000,000;
- $$$: more than $1,000,000.

The Phase 2* report prepared by the consultant presents the 47 measures and results of their evaluation. A summary of the results is available in appendix.

* *Gatineau Park Sustainable Transportation Plan, Phase 2 Report: Development of Solutions, AECOM, October 2012.*

5 Strategic Environmental Assessment



A SEA was completed in conformity with the "Cabinet directive on the environmental assessment of proposed policies, plans and programs", updated in 2010. It takes into account the scope and nature of probable environmental effects, the need for mitigation measures to reduce or eliminate negative effects, as well as the probable significance of any negative effects on the environment after the application of mitigation measures. Environmental factors were completely assessed during the analysis of each of the measures developed during the solution development phase of the Gatineau Park Sustainable Transportation Plan. Measures whose impacts were too significant were discarded. The 47 measures retained in this study have the greatest positive impacts and the least amount of significant negative impacts on the environment. Mitigation and monitoring measures are also proposed for any residual impacts.

Table 5-1 presents the measures and different impacts expected on the environment (not necessarily located in Gatineau Park).

Table 5-1 Evaluation Matrix of Environmental Impacts

ACTION PLAN ELEMENTS		COMPONENTS OF THE ENVIRONMENT												NCC TARGETS AND OBJECTIVES (not covered by other components)			
		Biological Components							Physical Components			Human Components					
No.	Measure	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(M)	(N)	(O)	(P)
1	Continually evaluate the possibility of closing roads which are no longer necessary	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲			▲		▲	
2	Close and renaturalize roads which are no longer useful	●	●	●	●	●	●	●	▲	●	●	□	□		□		
3	Encourage the use of ecologically sensitive abrasives in the Park	▲	▲	▲	▲	▲	▲	▲		▲	▲				▲	●	
4	Prohibit parking on the shoulder of Eardley-Masham Road	●		●			●				●				●	▲	
5	Build a parking lot beside Eardley-Masham Road at the trailhead of trail no. 56										□	▲	▲				
6	Collaborate on the installation of protective measures for endangered species and signage around road infrastructure	●		●				●				▲	●		●		
7	Offer bicycle rentals on the Park's periphery	▲	▲	▲			▲		▲			●		▲			
8	Offer bicycles at the Philippe Lake Campground for travel around the site	▲	▲	▲			▲		▲			●		▲			
9	Install bicycle racks in parking lots serving the Park	▲	▲	▲			▲		▲			●		▲		▲	
10	Promote Relais plein air as the main entrance for public transit users	▲	▲	▲			▲		▲			▲		▲		▲	
11	Encourage the STO and OC Transpo to identify Park entrances on their transit network maps	▲	▲	▲			▲		▲					▲		▲	
12	Encourage the STO and OC Transpo to identify Park entrances on Plani-Bus and Travel Planner	▲	▲	▲			▲		▲			▲		▲		▲	
13	Show bus stops on Park maps	▲	▲	▲			▲		▲			▲		▲			□
14	Inform tourists of the possibility of getting to the Park by transit	▲	▲	▲			▲		▲			▲		▲			
15	Add information about the Park at bus stops serving the Park	▲	▲	▲			▲		▲				▲	▲			
16	Encourage the STO to install bus shelters at stops serving the Park	▲	▲	▲			▲		▲				▲	▲		▲	
17	Encourage the STO to improve service to the Relais plein air on weekends	▲	▲	▲			▲		▲			▲		▲		▲	
18	Encourage the STO to maintain or improve Park access via Saint-Raymond Boulevard	▲	▲	▲			▲		▲			▲		▲		▲	
19	Encourage the STO to add bicycle racks on buses serving the Park	▲	▲	▲			▲		▲			●		▲		▲	
20	Facilitate taxi-bus service to Gatineau Park	▲	▲	▲			▲		▲			▲		▲		▲	
21	Monitor the development of the Steam Train to Chelsea and Wakefield and study the possibility of								▲			▲		▲			

ACTION PLAN ELEMENTS		COMPONENTS OF THE ENVIRONMENT												NCC TARGETS AND OBJECTIVES (not covered by other components)			
		Biological Components							Physical Components			Human Components					
No.	Measure	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(M)	(N)	(O)	(P)
	creating links to the Park																
22	Develop a charter on sharing the road											▲				▲	
23	Raise awareness to reduce speeding	▲	▲	▲		▲	▲					▲					
24	Increase policing to incite drivers to respect speed limits	▲	▲	▲		▲	▲					▲					
25	Raise awareness on the use of carpooling and alternative modes	▲	▲	▲		▲	▲		▲			▲		▲		▲	
26	Evaluate the possibility of strategically paving shoulders on parkways	□	□	□			□				□	▲	▼	▲	▲	▼	
27	Examine the possibility of closing more of the “north loop” to drivers	▲	▲	▲		▲	▲					▲		▲		▲	
28	Include Gatineau Park as a destination in the Trail Signage Project of NCC and municipal networks	▲	▲	▲		▲			▲			▲		▲		▲	
29	Create a cycling and pedestrian link between the South Entrance and the Lac-des-Fees Parkway	▲	▲	▲		▲			▲			▲		▲			
30	Encourage the City of Gatineau to improve the connection between the Voyagers Trail and the trails of Gatineau Park	▲	▲	▲		▲			▲			▲		▲			
31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway	▲	▲	▲		▲	□		▲			▲	▼	▲			
32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads	▲	▲	▲		▲			▲		□	▲	▼	▲			
33	Encourage the Municipality of Chelsea to create a cycling lane along Mine Road and on Notch road between Mine and Kingsmere roads	▲	▲	▲		▲	□		▲		□	▲	▼	▲			
34	Encourage municipalities to create cycling lanes along Notch Road, from Mountain road including connections to the parkways and trail no. 15						□		▲		□	▲		▲			
35	Evaluate the possibilities to create cycling connections in some ecological corridors	□	□	□		□	□	□	▲		□	▲	▼	▲			
36	Encourage municipalities to create a cycling link between urban areas and Philippe Lake to encourage cycle touring	▲	▲	▲		▲			▲			▲		▲			
37	Close the parkways at night	▲	▲	▲		▲			▲					▲		▲	
38	Evaluate the impact of unofficial trails and study the possibility of formalizing a trail at La Brise Street							□	▲			▲		▲	□	▲	
39	Collaborate with the City of Gatineau on the redesign of the intersection of A-Taché/Bégin/Gatineau Parkway								▲			▲		▲			
40	Promote sectors and times which are less busy												▲				
41	Provide information on parking space availability through the use of dynamic signage at Park								▲				▲	▲		▲	

ACTION PLAN ELEMENTS		COMPONENTS OF THE ENVIRONMENT												NCC TARGETS AND OBJECTIVES (not covered by other components)			
		Biological Components							Physical Components			Human Components					
No.	Measure	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(M)	(N)	(O)	(P)
	entrances																
42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)	▲	▲	▲					▲			▲		▲		▲	
43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)	▲	▲	▲					▲			▲		▲		▲	
44	New sources of financing to support shuttle services								▲			▲		▲		▲	
45	Study the possibility of creating a winter trail following Gatineau Parkway between Gamelin Street and A.-Taché Boulevard								▲			▲		▲		▲	
46	Create a winter trail between Chelsea village centre and the Park's network of trails								▲			▲		▲		▲	
47	Monitor the evolution of visitor traffic in the Meech Creek Valley area											▲					

1. The parking lot infrastructure already exists. This is why there are no negative impacts on the biological environment.

●	Potential positive effect	(a)	Herpetofauna and wetland environments	(g)	Endangered flora and associated habitat
□	Potential negative effect	(b)	Mammals	(h)	Air quality
▲	Potential cumulative positive effect	(c)	Endangered species and associated habitat	(i)	Surface water quality
▼	Potential cumulative negative effect	(d)	Ichthyological fauna and habitat	(j)	Soil quality
		(e)	Avian fauna	(k)	Recreotourism activities
		(f)	Flora	(l)	Heritage

(M)	Climate Change
(N)	Biological resources and biodiversity
(O)	Greening of operations
(P)	Reduction of wastes

6 Plan Implementation

This plan will be realized through an implementation plan to be developed by the Capital Stewardship Branch which manages NCC lands. The implementation plan will attempt to prioritize implementation measures based on the most important issues identified by this plan, while considering appropriate partnership opportunities.

Implementation of the Gatineau Park Sustainable Transportation Plan involves, as required, the review of requests and proposals that affect federal lands. This occurs through the Federal Land Use, Land Transaction and Design Approval process, pursuant to the National Capital Act, Section 12. Requests and proposals are reviewed to assess the specific land use and design implications of a proposal and to ensure its conformity with the objectives and policies of the Gatineau Park Master Plan.

The need for a comprehensive review or update of the Plan will be assessed at least every 5 years following completion of the last plan or plan review. If a plan assessment indicates a need for a comprehensive review or update, this review or update will be initiated in a timely manner. In any event, a comprehensive review or update of the Plan shall be initiated within a 10-year period of the last plan or plan review.

Appendix A
Supplementary Information on the Implementation of a Shuttle Service in Gatineau Park

1 Implementation of a Shuttle Service in Gatineau Park

1.1 Past Experience

A shuttle service running on parkways was operated for several years at the beginning of the 80s. It was offered from 9:30 am to 5 pm on weekends. The service was run for four weeks between the end of September and mid-October. Shuttles ran every 30 minutes on Saturdays and every fifteen minutes on Sundays, although they were adjusted to meet demand at peak times. Shuttle fares were as follows:

- 0 – 5 years : free;
- 6 – 15 years : $1.00;
- 16 – 64 years : $2.00;
- 65+ : free;
- Family: $4.00.

The NCC hired buses and drivers from the STO and OC Transpo. Buses left from the corner of Wellington and Elgin Streets in Ottawa. Two stops were made in Hull: downtown (*Place du Centre* or *Maison du Citoyen*) and *Place Cartier* on Saint-Joseph Boulevard. From Place Cartier, the bus took Gamelin Street to reach Gatineau Parkway. Within the Park, the shuttle connected the Gamelin Entrance to the Champlain Lookout via Gatineau and Champlain Parkways. Nine stops were offered en route. The return trip followed the same route. The section of Gatineau Parkway between Gamelin Street and Champlain Parkway was closed to automobile traffic from noon to 6 pm.

Conservation officers and RCMP monitored illegal parking at lookouts and controlled traffic at the intersection of the Gatineau and Champlain Parkways. The peak period for the service was between 11 am and 4:30 pm. The service was appreciated by the population and passenger volumes in 1984 were around 5,000 persons per day.

The NCC studied the possibility of bringing back the shuttle service during the Fall Rhapsody in 2003. The project did not go ahead for financial reasons.

1.2 Considerations for the Creation of a Shuttle Service

There are several considerations linked to the creation of a shuttle service. They are presented below.

1.2.1 Demand

Table A-1 shows volumes recorded in 2009 entering the Park (number of vehicles per day). It can be used to compare potential volumes of different route options.

The Gamelin Entrance sees the greatest volumes on autumn weekends with an average of 2,500 vehicles per day. The greatest volume observed, 4,700 vehicles, was on Thanksgiving Monday. The Chelsea Entrance sees slightly fewer vehicles with an average of 2,300 vehicles per day on autumn weekends. Volumes are also high on winter weekends on Meech Lake Road, which saw an average of 2,500 vehicles per day.

Table A-1 Volumes at Peak Periods

Location	Time of Year (weekend)	Observed volumes in 2009 (vehicles/day/direction)	
		Average	Maximum
Gamelin Entrance	Labour Day to Thanksgiving	2,500	4,700
Chelsea Entrance	Labour Day to Thanksgiving	2,300	3,200
Meech Lake Road	Beginning of January to mid-March	2,500	3,500

1.2.2 Routing

The exact routing of each potential circuit must be determined. Preferably, the route would start from Ottawa and make several stops in Hull before getting to the Park, just like the shuttle service in the 80s. The route could be covered by two shuttles: one running from the downtowns to the Park and the second travelling within the Park. This way, the frequency could be high within the Park and provide better service to those wishing to arrive at the Park entrance in their own vehicle. Another option would be to combine the Park shuttle service with existing or increased STO service. For example, the CEGEP, the Relais plein air and the Asticou centre are already served by the STO. Note however, that the obligation to make a transfer has a negative impact on ridership.

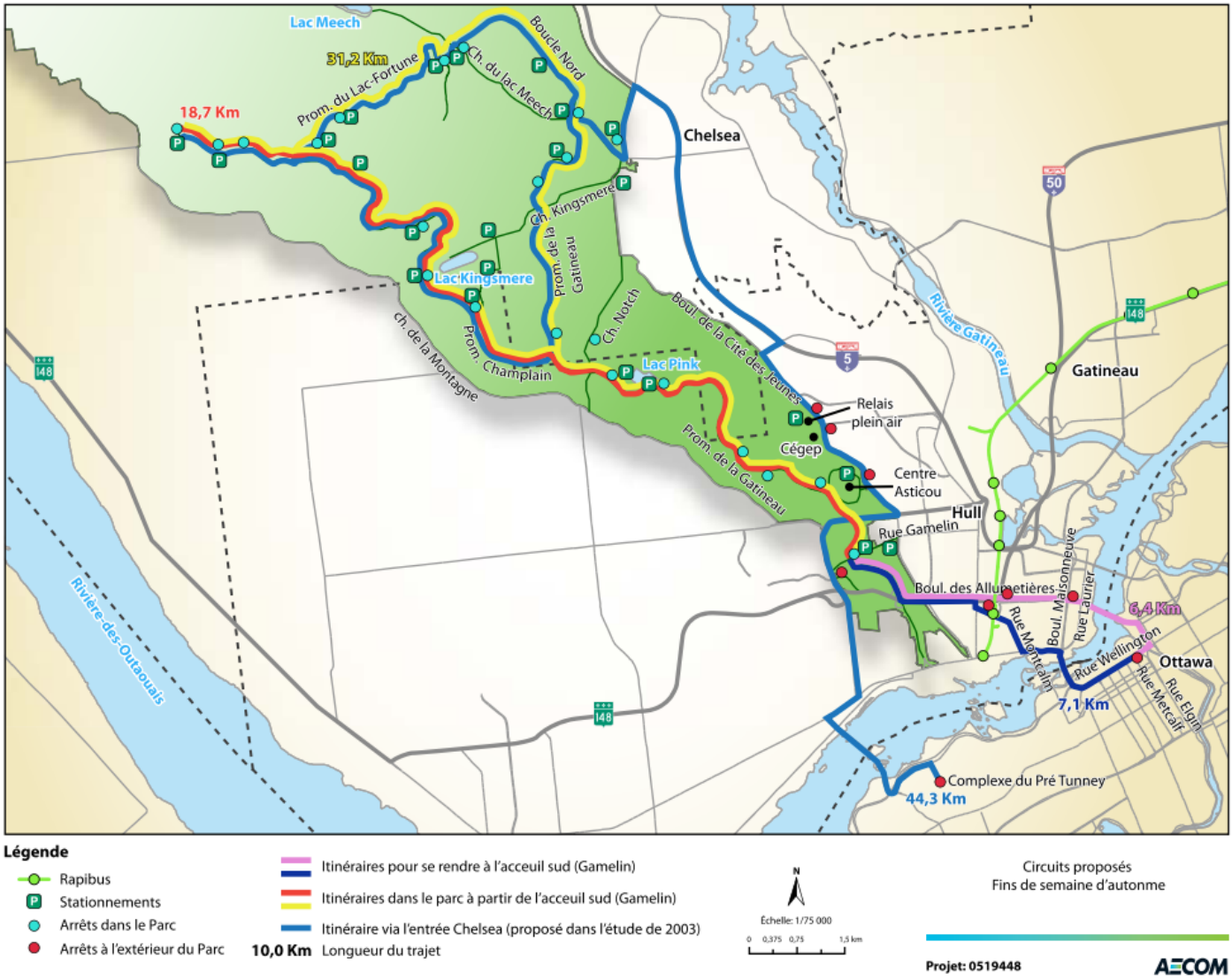
A departure from Ottawa could be made from downtown or Tunney's Pasture. Tunney's Pasture is located near to the Champlain Bridge, a location where parking is abundant on weekends (numerous federal buildings). Moreover, the site is well served by transit (near to a Transitway station) and would be even more so with future light rail service. The proposed route should have as many connections as possible with the transit networks in Ottawa and Gatineau. Several route options are illustrated on the maps below.

In terms of route options on parkways on autumn weekends, two routes are presented. One travels via the Gamelin Entrance and the other via the Chelsea Entrance. For routes via the Gamelin entrance, the eventual closure of Gamelin Street between Des Fées Street and Gatineau Parkway would make it impossible to use this street, as was the case for the shuttle in the 80s. Proposed routes travel via Allumettières Boulevard instead. One of the routes has a stop at the Montcalm Rapibus Station. From the Gamelin Entrance, two options are presented: either the shuttle makes a round trip to and from the Champlain Lookout (the route of the shuttle in the 80s), or the shuttle also makes a complete loop of the parkways. In the former case, the distance is shorter and the costs would be lower. In the latter case, the shuttle would travel to less visited locations of the Park, but offer hikers the possibility of getting off at point A and getting back on at point B. This would allow hikers to do a one way hike instead of having to retrace their steps.

In addition, another route similar to one proposed in the study done by the NCC in 2003[8] is presented. It connects Tunney's Pasture in Ottawa to the Park entrance in Chelsea via Saint-Raymond Boulevard, Cité-des-Jeunes Boulevard and Highway 5. The shuttle would then make a loop of the parkways as well as a stop at the Champlain Lookout. It would however not serve Pink Lake, a major attraction in the Park.

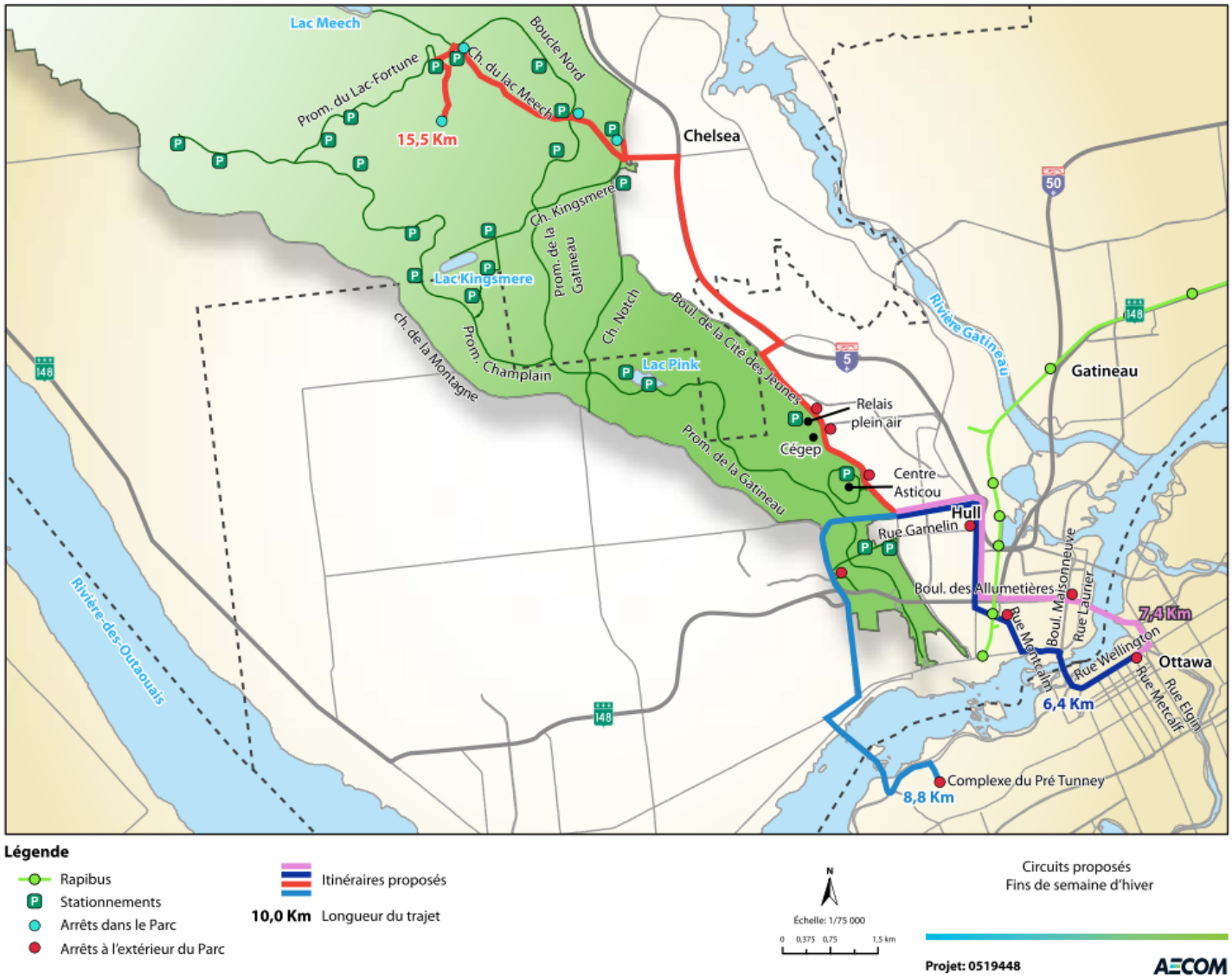
[8] The Action Plan to Establish a Shuttle System on Weekends of the Fall Rhapsody 2003 in Gatineau Park, NCC, August 2003.

Figure A-1 Proposed Routes on Autumn Weekends



On winter weekends, the parkways are closed to automobile traffic. They are transformed into cross-country ski trails. Entry into the Park to access parking lots P8, P10 and Camp Fortune is via the Chelsea Entrance. Proposed routes follow Cité-des-Jeunes Boulevard to provide access to the Asticou Centre, the CEGEP and the Relais plein air, locations from which ski trails are accessible. To access Cité-des-Jeunes Boulevard, three route options are proposed: (i) via the Alexandra Bridge, then Allumettières, Saint-Joseph and Saint-Raymond Boulevards; (ii) via the Portage Bridge, Montcalm Street, Saint-Joseph and Saint-Raymond Boulevards; or (iii) via the Champlain Bridge and Saint-Raymond Boulevard. In the first two cases, a stop at Place Cartier is proposed.

Figure A-2 Proposed Routes for Winter Weekends



1.2.3 Periods of Operation

Approximate periods of operation for the shuttle service are proposed in Table A-2. They should be evaluated in greater detail. For the moment, shuttles are proposed to run on Saturdays, Sundays and holidays. Exact service hours, which may vary by season, have to be defined.

Table A-2 Shuttle Destinations and Periods of Operation

Destination	Time of Year	Approximate Dates
Parkways	Autumn weekends	End of September to the 3rd weekend of October
Visitors Centre, P8, P10 and Camp Fortune	Winter weekends	Beginning of January to mid-March

1.2.4 Frequency and Location of Stops

Potential stops are shown on preceding maps. They are located in areas where parking is available, either in urban areas or at main Park attractions. In urban area, it is recommended that existing parking lots which are mostly empty on weekends be used (government buildings, educational institutions, park-and-ride lots). An expansion of the parking lot at the Visitor's Centre located on the shuttle route could be studied.

Parking lots at main shuttle departure points should offer spaces reserved for people with mobility impairments.

Shuttle connections with major transit stations in Hull and Ottawa (Rapibus, Transitway, light rail) are recommended. It would be opportune to offer stops at heated locations in winter. The addition of heated bus shelters at lots P8 and P10 could be studied.

Within the Park, the shuttle would stop at lookouts, trail heads and heritage sites. The possibility of getting off at one stop, doing a hike, a ride or a ski, and getting back onto the shuttle is preferred.

To make the service appealing, a high frequency is required. This is especially important in winter when the wait for a shuttle must be minimized due to cold temperatures.

1.2.5 Types of Buses

The operation of shuttles within the Park should consider road characteristics in terms of the quality of the rolling surface, its structure, width and turning radii. For example, the use of large buses could be problematic in some steep inclines in the Park. Space for manoeuvres should be set aside in parking lots where buses stop.

It would be preferable to run a shuttle equipped to transport equipment such as skis, bicycles, coolers, strollers, etc. An option that could be considered in autumn is the use of a bike trailer. Moreover, buses should be able to accommodate people in wheelchairs.

Hybrid diesel-electric, or completely electric motor technologies have progressed significantly in the last few years. To reinforce the image of a park for the protection of the environment, choosing a less polluting vehicle technology is recommended.

If two distinct shuttle services are run, one operated within the Park and the other to get to the Park, the choice of vehicle size and technology could differ between the two.

1.2.6 Advertising

The shuttle service should be publicized through a major advertising campaign. Tourist guides should make mention of it.

1.2.7 Exclusive Use of Roadway

Restricting other vehicles on parkways while the shuttle is in service would ensure that the latter is well used. Such restrictions however require additional management. Certain details require further study, for example, if the closure period for drivers is the same as that when the shuttle is operating. In the past, the shuttle started at 9:30 am, but road restrictions only started at noon. Furthermore, the possibility of allowing vehicles designated for the transport of mobility impaired persons should be studied.

In the case of shuttle service on Meech Lake Road in winter, restricting drivers does not appear to be a viable option and requires further analysis. The obligation to take the shuttle carrying ski equipment or to wait in the cold for the shuttle, or the closure of vehicle access to Camp Fortune and the management of traffic on this municipal road appear to be difficult constraints to address.

1.2.8 Financing

The shuttle would be difficult to finance based on fares alone. Other financing mechanisms should be put in place. Charging drivers to park, or to access the Park would be options.

If road access is not restricted to the shuttle, driver access and parking lots should be charged. A paid shuttle service cannot compete with free access by car. Costs for drivers when the shuttle is running should be higher than the cost for shuttle users.

Sponsors could also help finance the shuttle, as is the case of the shuttle operated in Acadia National Park in Maine. The company L.L. Bean, a sports clothing and equipment company, contributes to the financing of the Island Explorer Shuttle[9].

The shuttle service could also be implemented in partnership with private enterprises offering tours by bus. For the winter shuttle, an agreement could be made with a tourist operator to include the price of access to ski trails in the shuttle's fare.

[9] L.L. Bean has contributed more than $3.25 M to the organization, "Friends of Acadia", since 2002 for the protection and conservation of the park for scientific research, youth education programming and financing of the Island Explorer Shuttle.

Appendix B
Evaluation of Measures

Table B-1 Evaluation of Measures for Transportation in the Park

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
1	Continually evaluate the possibility of closing roads which are no longer necessary	Ongoing	▪ Ensure that the closure of these routes do not make present or future activities inaccessible	Fragmentation	HH	2	2	2	**NCC** Municipality
2	Close and renaturalize roads which are no longer useful	Depends on measure 1	▪ Requires ongoing evaluation of their role	Fragmentation *(Fauna, Deicing)*	HH	2	2	2	**NCC** City or Municipality
3	Encourage the use of ecologically sensitive abrasives in the Park		▪ Requires the participation of Municipalities ▪ Roads must be maintained to ensure user safety	Deicing	M	0	1	1	**V. Gatineau** **M. Chelsea**
4	Prohibit parking on the shoulder of Eardley-Masham Road	Measure 5	▪ Requires an increase in surveillance	Fauna	H	1	1	1	**NCC** MTQ
5	Build a parking lot beside Eardley-Masham Road at the trailhead of trail no. 56	Measure 4	▪ Requires surveillance to prevent vandalism ▪ Prohibiting parking (measure no. 4) will encourage the use of this parking lot	Fauna	H	1	2	2	**NCC**
6	Collaborate on the installation of protective measures for endangered species and signage around road infrastructure		▪ Requires the participation of the MTQ on road signage along Eardley-Masham Road	Fauna	H	1	2	1	**NCC** MTQ
7	Offer bicycle rentals on the Park's periphery	Market study	▪ Chosen sites must be near to bike trails as well as transit service if possible ▪ Requires a road or cycling network in good condition around rental locations ▪ Could be done in partnership with the private sector ▪ Electric bike rentals could be considered given the Park's topography	GHG	M	1	1	1	**S.Priv.** NCC

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
8	Offer bicycles at the Philippe Lake Campground for travel around the site		▪ Necessitates operational and surveillance costs ▪ Must require payment, but remain cheap and easy to use	GHG	M	1	1	2	**NCC**
9	Install bicycle racks in parking lots serving the Park	Prioritize sites which are most visited by cyclists	▪ Certain bicycle parking areas within the Park could be poorly used given the Park's topography	GHG	M	1	1	2	**NCC** V. Gatineau
10	Promote Relais plein air as the main entrance for public transit users	Ensure more reliable services are offered at the Relais plein air Implement together with measures 14, 15, 16, and 17	▪ Requires services at the Relais plein air to be offered more reliably, something which depends on volunteers ▪ Would benefit from an official connection with the CEGEP	TRANSIT *(GHG)*	HH	1	2	2	**NCC** S.Priv.
11	Encourage the STO and OC Transpo to identify Park entrances on their transit network maps	Implementation with measure 12	▪ Requires the collaboration of the STO and OC Transpo ▪ Maps are updated once per year in summer and published at the end of August	TRANSIT *(GHG)*	HH	1	1	2	**STO** **OCT**
12	Encourage the STO and OC Transpo to identify Park entrances on Plani-Bus and Travel Planner	Implementation with measure 11	▪ Requires the collaboration of the STO and OC Transpo ▪ The site can be updated regularly, thus Park entrances could be added at anytime	TRANSIT *(GHG)*	HH	1	1	2	**STO** **OCT**
13	Show bus stops on Park maps	Completes measures 11 and 12	▪ Requires updates to Park maps based on changes to transportation services	TRANSIT *(GHG)*	HH	1	1	2	**NCC** STO
14	Inform tourists of the possibility of getting to the Park by transit	Inform tourist agencies	▪ Requires the participation of tourism agencies	TRANSIT *(GHG)*	HH	1	1	2	**NCC** A.Tour.
15	Add information about the Park at bus stops serving the Park	Make sure there are clear directions between bus stops and park trails	▪ Risk of vandalism	TRANSIT *(GHG)*	HH	1	1	2	**NCC** STO

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
16	Encourage the STO to install bus shelters at stops serving the Park	Check with STO if the stop of the Relais plein air meets the location requirements for a bus shelter. Implement together with measures 10 and 17	▪ There are criteria for the location of bus shelters based on volumes. If the NCC wishes to have bus shelters at specific locations, costs could be shared ▪ Sheltered bus stops are being tested at the Allumettières park and ride lot. This pilot project is measuring cost-effectiveness and the potential for vandalism ▪ This measure would be more useful if better transit service is offered **(measure 17)**	TRANSIT *(GHG)*	HH	0	1(*)	2	**STO** NCC
17	Encourage the STO to improve service to the Relais plein air on weekends	Implement with measures 10 and 16	▪ It is difficult to increase service frequency on weekends when it is not justified by demand ▪ Service frequency must remain constant all season long. For example, it is not possible to increase service only on weekends in February. ▪ Could be combined with service of the CEGEP, since the latter is relatively well served (including on weekends). ▪ Requires services at the Relais plein air to be offered more reliably, something which depends on volunteers ▪ The addition of a refuge at a reasonable distance from the Relais plein air would increase its appeal	TRANSIT *(GHG)*	HH	1	2	1	**STO**
18	Encourage the STO to maintain or improve Park access via Saint-Raymond Boulevard	Implement together with measure 19	▪ The addition of a stop on Saint-Raymond Boulevard (northbound) near the fire station would be most beneficial in combination with the implementation of **measure 19**	TRANSIT *(GHG)*	HH	1	1(*)	2	**STO**

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
19	Encourage the STO to add bicycle racks on buses serving the Park	Implement together with measure 18	▪ The STO plans to equip some of its buses with bike racks in the next few years ▪ The assignment of a bus with bike racks on a specific route (one which serves the Park) could however create additional operational costs ▪ Bus stops served must be easily accessible from the bicycle network	TRANSIT *(GHG)*	HH	1	1	1	**STO**
20	Facilitate taxi-bus service to Gatineau Park	Implement a mixed personal transport structure. Evaluate needs with representatives of the MRC	▪ Drop-off or waiting areas for these taxi-buses could be installed	TRANSIT *(GHG, H-5)*	HH	1	2	2	**NCC** MRC
21	Monitor the development of the Steam Train to Chelsea and Wakefield and study the possibility of creating links to the Park	Does not appear to be a viable project at the moment	▪ The chances of implementation are dependent on investments in this project and on reinstating train service ▪ The Chelsea Train Station is more than 2 km from the entrance of the Park; a connecting service will also be necessary	TRANSIT *(GHG)*	HH	1	1	0	**NCC**
22	Develop a charter on sharing the road	Consult cycling and outdoor activity groups Publicize well	▪ The message must provide clear directions ▪ Requires the participation of road users (drivers and cyclists) ▪ Effectiveness depends on good visibility	Cohabitation	HH	1	1	2	**NCC**
23	Raise awareness to reduce speeding	Measure 24	▪ Must be reinforced by policing ▪ Displays in real time of actual speed could be useful	Speed *(Cohabitation)*	H	0	1	2	**NCC**

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
24	Increase policing to incite drivers to respect speed limits	Measure 23	▪ Since the NCC does not police activities within the Park, it depends on other police forces (RCMP, MRC des Collines) ▪ Limited resources available to police forces could reduce the effectiveness of this measure ▪ Could be combined with a photo radar system	Speed *(Cohabitation)*	H	1	2	1	**RCMP** **MRC**
25	Raise awareness on the use of carpooling and alternative modes		▪ The saturation of parking lots in addition to a paid parking charge could encourage carpooling ▪ Would be more effective if the Park were well served by transit and a good cycling network	Autumn-Winter-Summer *(GHG, H-5, Cohabitation)*	HH	1	1	2	**NCC**
26	Evaluate the possibility of strategically paving shoulders on parkways	Conduct a study to evaluate sites where these enlargements would be appropriate for safety reasons or where they would be technically feasible	▪ Should be accompanied by line markings to properly identify zones reserved for bikes ▪ Road lines should restrict the width of travel lanes to between 3.0 to 3.2 m to reduce speeding ▪ Could contradict the Cultural Heritage Plan ▪ The addition of paved space should not impact the natural elements of the Park	Cohabitation	HH	1	2	1	**NCC**
27	Examine the possibility of closing more of the “north loop” to drivers	Evaluate impacts on traffic conditions on Meech Lake Road	▪ Generates additional traffic on Meech Lake Road ▪ Limits access to one parking lot, but no trails ▪ Impact on drivers is limited since this route is less scenic than other parkway sections ▪ The North Loop’s relatively gentle topography makes it appealing to a large number of active transport users	Cohabitation *(GHG)*	HH	1	2	2	**NCC** M. Chelsea

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
28	Include Gatineau Park as a destination in the Trail Signage Project of NCC and municipal networks	Participate in meetings of the Interagency Committee of Multiuse Trails	▪ This measure could be examined by the interagency committee on multiuse trails (City of Gatineau, City of Ottawa and the NCC)	Cycling	H	1	1	2	**NCC** Municipality
29	Create a cycling and pedestrian link between the South Entrance and the Lac-des-Fées Parkway		▪ Its configuration depends on the closure of the west side of Gamelin Street ▪ Must be direct (in contrast with the recreational trail south of Gamelin Street) and must be shared among pedestrians and cyclists (in contrast to the cycling lane in the eastern section).	Cycling *(GHG)*	H	1	1	2	**NCC** V. Gatineau
30	Encourage the City of Gatineau to improve the connection between the Voyagers Trail and the trails of Gatineau Park		▪ This cycling connection is already included in the Cycling Master Plan of the City of Gatineau	Cycling *(GHG)*	H	1	2	2	**V. Gatineau** NCC
31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway	Alignment study in part of the park	▪ This cycling connection is already included in the Cycling Master Plan of the City of Gatineau	Cycling *(GHG, West Access)*	H	2	2	2	**V. Gatineau** NCC
32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads	Feasibility Study	▪ The addition of a cycling connection on Old Chelsea Road is currently being studied by the Municipality of Chelsea and the MTQ ▪ The road right of way must be large enough on Meech Lake Road	Cycling Speed *(GHG, Cohabitation)*	H	2	3	2	**M. Chelsea** **MTQ** NCC
33	Encourage the Municipality of Chelsea to create a cycling lane along Mine Road and on Notch road between Mine and Kingsmere roads	Feasibility Study Coordinate with the Active Transportation Master Plan	▪ Road right of way must be sufficiently large ▪ Represents a significant cost for the Municipality of Chelsea	Cycling *(GHG)*	H	2	2	1	**M. Chelsea** S. Chelsea NCC
34	Encourage municipalities to create cycling lanes along Notch Road, from Mountain road including connections to the parkways and trail no. 15	Feasibility Study Coordinate with the Active Transportation Master Plan	▪ The topography makes this route difficult by bicycle ▪ This road crosses two municipalities ▪ There could be negative ecological impacts (tree cutting, addition of pavement)	Cycling *(GHG, West Access)*	H	2	2	1	**V. Gatineau** **M. Chelsea** S. Chelsea NCC

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
35	Evaluate the possibilities to create cycling connections in some ecological corridors	Feasibility Study Agree on opportunities with municipalities	▪ Some lands are privately owned	Cycling *(GHG)*	H	1	1	1	**NCC** Municipalities
36	Encourage municipalities to create a cycling link between urban areas and Philippe Lake to encourage cycle touring	Feasibility study	▪ Exact routing has not yet been defined	Cycling *(GHG)*	H	1	1	1	**NCC** S. Chelsea M. Chelsea M. La Pêche MTQ VQ V. Gatineau
37	Close the parkways at night	Cost-benefit study	▪ The cost of managing the closure must be less than the benefits ▪ Requires personnel everyday ▪ Restricts accessibility to night time activities (e.g. star gazing) ▪ The exact times have to be determined	Night-time *(Fauna, GHG, Speed)*	M	1	2	1	**NCC**
38	Evaluate the impact of unofficial trails and study the possibility of formalizing a trail at La Brise Street	Feasibility study	▪ The trail must connect to the parkways ▪ The trail already exists among the winter trail network	West Access	M	1	1	2	**NCC** **V. Gatineau**
39	Collaborate with the City of Gatineau on the redesign of the intersection of A-Taché/Bégin/Gatineau Parkway	Underway	▪ The redesign of the intersection of Begin Street is being studied by the City of Gatineau	Taché	L	1	2	2	**V. Gatineau** NCC
40	Promote sectors and times which are less busy	Evaluate supply and demand to ensure a coherent message – Improve the signage of trails on the periphery of the park	▪ Requires excellent knowledge of the times and locations of sites which are extremely busy to ensure coherent messaging ▪ Would be more effective if the signage of trails on the Park's periphery is improved	Autumn-Winter-Summer	HH	0	1	2	**NCC**

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
41	Provide information on parking space availability through the use of dynamic signage at Park entrances	Cost-benefit study	▪ Parking lots must be configured so as to segregate the entrances and exits ▪ Would be necessary only during certain times of the year ▪ Information must be accurate ▪ Availability of information on the internet would increase its use	Autumn-winter-summer *(GHG)*	HH	1	1	1	**NCC**
42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)	Detailed cost-benefit study to determine precise route, frequency, fare, etc.	▪ Making shuttle service the only possible transportation option would encourage its use ▪ If transit service is not the sole option available, fees should be charged for driver access and parking lot use to make the shuttle service competitive ▪ The service should be well publicized ▪ The frequency must be sufficiently high to respond to demand and make it appealing ▪ Some shuttles could be equipped with a bike trailer ▪ Fares may not be sufficient to finance the service ▪ Charging for parking or driver access could help finance the service ▪ Sponsors or partnerships with tourist operations could contribute to financing	Fall *(GHG,TRANS IT)*	HH	2	3	1	**NCC** STO OCT V. Gatineau

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)	Detailed cost-benefit study to determine precise route, frequency, fare, etc.	▪ Requirements for access to Camp Fortune, residences and the winter climate do not allow shuttle service to be offered as the sole option ▪ There are operational difficulties including the transport of equipment and waiting out in the cold ▪ Service frequency must be sufficiently high to meet demand and make the service appealing ▪ Fares may not be sufficient alone to finance the service ▪ Charging for parking or driver access could help finance the service ▪ Sponsors or partnerships with tourist operations could contribute to financing ▪ An agreement with a tourist operator could be made to include a ski ticket with the purchase of a shuttle ticket ▪ Parking lots at Camp Fortune are used beyond capacity at times; Camp Fortune may be interested in the shuttle service	Winter *(GHG,TRANSIT)*	HH	2	2	1	**NCC** STO OCT V. Gatineau M. Chelsea S.Priv.
44	New sources of financing to support shuttle services	Detailed cost-benefit study	▪ Potential for public controversy ▪ Operating costs should be covered by fees ▪ Requires surveillance of parking lots ▪ Use of new technologies could reduce the costs of management (e.g. solar powered ticket machines) ▪ Fees should be reasonable ▪ Fees should be part of a structure that covers access to activities ▪ Revenues should be used for other Park services. ▪ Could impact free municipal parking on the Park's periphery	Fall-winter *(GHG)*	HH	1	2	1	**NCC**

No.	Description	Complementary Action	Main constraint or condition for success	Primary issue (Secondary issue)	Priority of the primary issue (ref. section 3.6)	Conformity	Performance	Potential for implementation	Responsibility
45	Study the possibility of creating a winter trail following Gatineau Parkway between Gamelin Street and A.-Taché Boulevard	Feasibility Study	▪ North of Allumettières, the existing trail follows the parkway. Snow clearing operations on the latter could throw debris on the trail ▪ Incurs maintenance costs ▪ Adequate services should be offered at the trailhead	Winter	HH	1	1	1	**NCC**
46	Create a winter trail between Chelsea village centre and the Park's network of trails	Coordinate with the Active Transportation Master Plan	▪ The Municipality of Chelsea is interested in improving the connections between the village and the Park's trail network ▪ A trail connecting the parking lot of the Visitors Centre to the network is possible. It would however increase parking pressure on this parking lot, which is already heavily used	Winter	HH	1	1	2	**NCC** M. Chelsea S. Chelsea
47	Monitor the evolution of visitor traffic in the Meech Creek Valley area		▪ Monitoring of parking space availability should be done regularly	H-5 *(GHG)*	L	0	2	2	**NCC**

Note : (*) indicates that the performance of this measure depends on the implementation of a complementary measure

Appendix C
Issues and Measures

Tableau C-1 Ecological Impacts – Issues and Measures

No.	Issue	No.	Specific Measures
1	The presence of roads causes the fragmentation of habitat	1	Continually evaluate the possibility of closing roads which are no longer necessary
		2	Close and renaturalize roads which are no longer useful
2	Harmful effects of de-icing salts	3	Encourage the use of ecologically sensitive abrasives in the Park
3	Collisions with endangered species	4	Prohibit parking on the shoulder of Eardley-Masham Road
		5	Build a parking lot beside Eardley-Masham Road at the trailhead of trail no. 56
		6	Collaborate on the installation of protective measures for endangered species and signage around road infrastructure
4	Contributions to regional greenhouse gas emissions	7	Offer bicycle rentals on the Park's periphery
		8	Offer bicycles at the Philippe Lake Campground for travel around the site
		9	Install bicycle racks in parking lots serving the Park
		10-15	Promote existing transit services
		16-21	Encourage the development of new transit services to the Park
		25	Raise awareness on the use of carpooling and alternative modes
		29-36	Add connections for active transportation
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		42-43	Provide shuttle services
		44	New sources of financing to support shuttle services

Table C-2 Quality Experience for All – Issues and Measures

No.	Issue	No.	Specific Measures
5	Lack of transit service to the Park	10	Promote Relais plein air as the main entrance for public transit users
		11	Encourage the STO and OC Transpo to identify Park entrances on their transit network maps
		12	Encourage the STO and OC Transpo to identify Park entrances on Plani-Bus and Travel Planner
		13	Show bus stops on Park maps
		14	Inform tourists of the possibility of getting to the Park by transit
		15	Add information about the Park at bus stops serving the Park
		16	Encourage the STO to install bus shelters at stops serving the Park
		17	Encourage the STO to improve service to the Relais plein air on weekends
		18	Encourage the STO to maintain or improve Park access via Saint-Raymond Boulevard
		19	Encourage the STO to add bicycle racks on buses serving the Park
		20	Facilitate taxi-bus service to Gatineau Park
		21	Monitor the development of the Steam Train to Chelsea and Wakefield and study the possibility of creating links to the Park
		42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)
		43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option: departures from the downtowns)
6	Parkways shared by cars and bicycles	22	Develop a charter on sharing the road
		23	Raise awareness to reduce speeding
		24	Increase policing to incite drivers to respect speed limits
		25	Raise awareness on the use of carpooling and alternative modes
		26	Evaluate the possibility of strategically paving shoulders on parkways
		27	Examine the possibility of closing more of the “north loop” to drivers

No.	Issue	No.	Specific Measures
7	Some cycling connections to the Park are missing or are less attractive	28	Include Gatineau Park as a destination in the Trail Signage Project of NCC and municipal networks
		29	Create a cycling and pedestrian link between the South Entrance and the Lac-des-Fées Parkway
		30	Encourage the City of Gatineau to improve the connection between the Voyagers Trail and the trails of Gatineau Park
		31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway
		32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads
		33	Encourage the Municipality of Chelsea to create a cycling lane along Mine Road and on Notch road between Mine and Kingsmere roads
		34	Encourage municipalities to create cycling lanes along Notch Road, from Mountain road including connections to the parkways and trail no. 15
		35	Evaluate the possibilities to create cycling connections in some ecological corridors
		36	Encourage municipalities to create a cycling link between urban areas and Philippe Lake to encourage cycle touring
8	Speeding on parkways and Meech Lake Road	23	Raise awareness to reduce speeding
		24	Increase policing to incite drivers to respect speed limits
		32	Encourage the Municipality of Chelsea to create a cycling lane along Old Chelsea and Meech Lake Roads
9	Vandalism, public safety and noise generated by night time traffic	37	Close the parkways at night
10	Lack of Park access for residents on the west side of the Park	31	Encourage the City of Gatineau to create a cycling link between Pink Road and Gatineau Parkway
		34	Encourage municipalities to create cycling lanes along Notch Road, including connections to the parkways and trail no. 15
		38	Evaluate the impact of unofficial trails and study the possibility of formalizing a trail at La Brise Street
11	Traffic conflict zone at the intersection of Alexandre-Taché Boulevard, Gatineau Parkway and Bégin Street.	39	Collaborate with the City of Gatineau on the redesign of the intersection of A-Taché/Bégin/Gatineau Parkway

Table C-3 Management of Peak Periods – Issues and Measures

No.	Issue	No.	Specific Measures
12	Congestion near the South Entrance (Gatineau and Gamelin Parkways) and full parking lots along the route from Gamelin to the Champlain Lookout in autumn	25	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		42	Provide shuttle service from the South Entrance (Gamelin) to the Champlain Lookout on autumn weekends (option: departures from the downtowns)
		44	New sources of financing to support shuttle services
13	Congestion near to the Chelsea Visitors Centre and full parking lots (P3, P8, P9, P10 and Camp Fortune) on winter weekends	25	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		43	Provide shuttle service from the Chelsea Visitors Centre to P8/P10/Camp Fortune on winter weekends (option : departures from the downtowns)
		44	New sources of financing to support shuttle services
		45	Study the possibility of creating a winter trail following Gatineau Parkway between Gamelin Street and A.-Taché Boulevard
		46	Create a winter trail between Chelsea village centre and the Park's network of trails
14	Parking lots at Meech Lake (P11, P12 and P13) are full on summer weekends	25	Raise awareness on the use of carpooling and alternative modes
		40	Promote sectors and times which are less busy
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
15	Anticipated pressure on visitor facilities in areas farther north following the extension of Highway 5.	20	Facilitate taxi-bus service to Gatineau Park
		25	Raise awareness on the use of carpooling and alternative modes
		41	Provide information on parking space availability through the use of dynamic signage at Park entrances
		47	Monitor the evolution of visitor traffic in the Meech Creek Valley area