



ANIMATING THE RIDEAU CANAL

A study of the Rideau Canal in Central Ottawa

Queen's University Master of Urban and Regional Planning Project Course

This report is the culmination of the Land Use Planning project course at the School of Urban and Regional Planning at Queen's University. This course allows students an opportunity to work on projects with clients from the public or private sector. The School of Urban and Regional Planning partnered with the Policy Development and Urban Design Branch of the City of Ottawa's Planning and Growth Management Department for this project.

The project course demands a rigorous application of problem definition, problem-solving, and critical evaluative skills and acts as a synthesis of the theories and skills learned at the School of Urban and Regional Planning.

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Executive Summary

Animating the Rideau Canal

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Why study the Rideau Canal?

The Rideau Canal has been an important part of Ottawa throughout its history, and has shaped and been shaped by the city. In its current state as a greenway corridor the Canal is used predominantly as a movement network for cars, cyclists, and pedestrians. Policies intended to protect the Canal have in many cases resulted in keeping it static. As a result, there is a lot of untapped potential for place-making on and adjacent to the Rideau Canal. This study outlines a proposed plan to animate the Rideau Canal between the Ottawa Locks and Hog's Back and transform the underutilized Corridor into a centrepiece of urban life in Ottawa.

Who and What Inform this Study?

Several sources of information contributed to the Animating the Rideau Canal project, including a site visit and consultation with the City of Ottawa, the National Capital Commission and Parks Canada. Additionally the existing conditions and policies governing the Canal were analysed and compared with 28 national and international precedents of waterways and interventions. These findings were then built upon in a design charette that was attended by various land use planning and urban design professionals. Lastly, six key stakeholders were identified and interviewed for a local perspective.

Strengths <ul style="list-style-type: none"> • Open space and transportation corridor extending through the City • Proximity to existing neighbourhoods and downtown • Greenspace and passive recreational uses • High scenic and historic value • Popular winter destination during Winterlude Festival • Functioning waterway in the heart of the city 	Weaknesses <ul style="list-style-type: none"> • Adjacent neighbourhoods and universities do not address the Canal • Few crossings across the Canal • Physical barriers, poor user access and vehicular traffic • Few destinations and gathering areas • Limited number of uses, activities and amenities • Water acts primarily as a barrier vs. amenity
Opportunities <ul style="list-style-type: none"> • Lansdowne Park redevelopment and future Fifth Ave. pedestrian bridge • Preston St. Intensification at Dow's Lake • Future University LRT station • Build on existing temporary use pilot projects by NCC • Attract new users will enhance appreciation of Canal and heritage interpretation • Create strategic partnerships 	Challenges <ul style="list-style-type: none"> • Multi-jurisdictional policies and management • Restrictive zoning and heritage designations • Limited utility and servicing connections

Vision and Goals

The Rideau Canal is a vibrant and integral element of the City of Ottawa that improves connections and balances past and future identities of the Nation's Capital.

Goal 1: Improve Connectivity across the Canal.

Goal 2: Integrate the Canal with surrounding neighbourhoods.

Goal 3: Create a journey and destination.

Goal 4: Respect the Canal's character and significant heritage.

Goal 5: Create Partnerships.

These goals stem from the vision for the Canal and will serve to focus the objectives, policies and strategies of this report as outlined in the diagram to the right. These goals will be accomplished through supporting policies as part of a comprehensive planning approach.

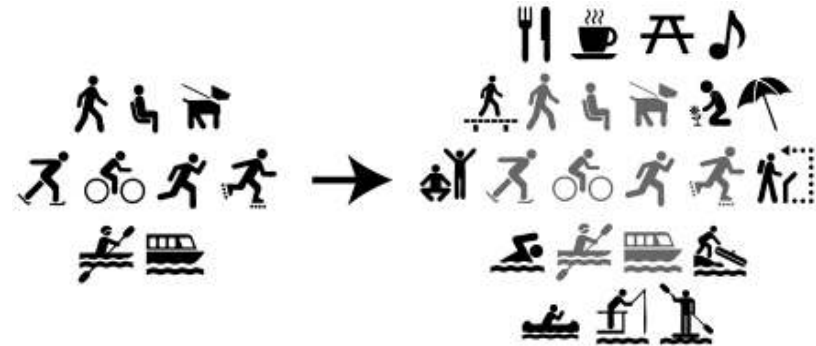
Comprehensive Approach

It is imperative that any planning or policy framework that addresses the Canal consider connectivity to and across the Canal, public space along the Canal, and the land uses surrounding the Canal. These elements must be examined comprehensively with consideration of past and future identities to develop policies and strategies that will guide future animation and partnerships that reflect the local and national importance of the Canal. The specific policy objectives for each of the three Corridor building blocks, including land use and built form, connectivity and public space, are outlined below.



Public Space

1. Increase the diversity of public spaces along the Rideau Canal Corridor.
2. Provide a variety of land and water based uses and activities along the Rideau Canal Corridor.
3. Ensure public spaces are comfortable and safe to support use at different times of the day and year.
4. Ensure public spaces have an authentic and unique identity that celebrates the canal's rich historic character.
5. Enhance the edges of public spaces and provide clear transitions with surrounding neighbourhoods.



Connectivity

1. Enhance user access to the Rideau Canal waterway corridor.
2. Enhance movement networks on and adjacent to the Rideau Canal waterway corridor in a manner that balances all modes of transportation.
3. Enhance and develop new linkages both across the Rideau Canal waterway corridor and into adjacent neighbourhoods.
4. Enhance safety and comfort for all modes of transportation.
5. Enhance connectivity throughout Rideau Canal waterway corridor through partnerships.

Land Use + Built Form

1. Offer a variety of land uses that enhance areas surrounding the Canal.
2. Buildings adjacent to the Canal and parkways should be at a height that is appropriate to the neighbourhood character and context.
3. Create interesting and unique building designs that contribute to the visual integrity of the Canal.
4. Infill projects should be a tool to improve, rather than capitalize on the Canal's value.
5. Promote temporary land uses at key activity points along the Rideau Canal.
6. Integrate traditional mainstreets to provide a wide range of land uses for the Canal Corridor.
7. Enhance streets parallel to parkways, with direct Canal frontage, to include uses and building forms similar to traditional mainstreets.
8. Ensure a cohesive relationship between the Lansdowne Park redevelopment, the Glebe and the Rideau Canal.

Implementation

Partnerships: Partnership will be utilized to facilitate coordination between key stakeholders.

Projects: Projects will be used to implement policies that may be controversial by framing interventions as temporary, low cost, low impact.

Policies: Public policy tools will be critical to defining the parameters and setting fundamental goals for each proposed policies.

Conclusion

Prioritize the Canal: There is an immediate need to make the Canal a priority within its neighbourhoods. This entails ensuring that policies of the City of Ottawa recognize and integrate the Canal as central feature and vibrant City asset.

Partnerships: Moving forward it is essential that all jurisdictions explore and capitalize on new opportunities for partnerships. Successful long-term animation of the Canal requires a comprehensive approach, in which all agencies and stakeholders recognize each other's strengths and work together with the spirit of collaboration.

Place-making: The Canal is currently a corridor for vehicles, pedestrians and cyclists, but it can become a set of destinations for the greater community through new place-making initiatives and citizen-led tactical urbanism interventions.



Recommendations

Short-term: Small-scale interventions that can be achieved with minimal resources, marginal amendments to existing regulations, and in a short timeframe. These recommendations are focused on enhancing currently underutilized spaces along the Canal, including neighbourhood parks, national spaces, open spaces adjacent to the Canal, and the waterway.

Medium-term: Support interventions that upgrade existing infrastructure within and adjacent to the Rideau Canal Corridor. These recommendations focus on increasing accessibility to and along the Canal, enhancing under-utilized spaces under bridges, and installing new amenities, facilities, and programming within priority public spaces.

Long-term: Characterized by larger budgetary requirements, extended planning and construction phases, and need for amendments to existing policies and regulations. These recommendations are focused on the enhancement and development of buildings in neighbourhoods adjacent to the Canal. Additionally, building partnerships is the key to the implementation of this phase.

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List of Acronyms

BIA	Business Improvement Area
BRT	Bus Rapid Transit
CEAA	Canadian Environmental Assessment Agency
DND	Department of National Defence
FHBRO	Federal Heritage Building Review Office
ICOMOS	International Council On Monuments and Sites
LRT	Light Rail Transit
NAC	National Arts Centre
NCC	National Capital Commission
OIC	Ottawa Improvement Commission
OP	Official Plan
SEEG	Ottawa Sports and Entertainment Group
PPS	Provincial Policy Statement
SURP	School of Urban and Regional Planning
SWOC	Strengths - Weaknesses - Opportunities - Challenges
RCC	Rideau Canal Corridor
TOD	Transit-Oriented Development
UNESCO	United Nations Educational, Scientific and Cultural Organization

1

Introduction

1.1 Intent

Traditionally, the Rideau Canal has not been a significant feature in the planning framework of the City of Ottawa. The objective of this project was to explore how the Canal fits into the structure of the City and to develop a strategy for animating the Rideau Canal Corridor.

This visioning exercise provides an overall direction for the future of the Rideau Canal by presenting stimulating ideas to encourage alternative ways of thinking about how the Canal supports urban life of Ottawa. In particular, this report takes a comprehensive approach to the urban space surrounding the Canal by examining public spaces, connectivity and land use and built form to generate new ideas and opportunities for the City of Ottawa and its partner jurisdictions.

1.2 Project Mandate

As part of their core curriculum, second-year graduate students at Queen's University's School of Urban and Regional Planning (SURP) undertake a major project course in which they act as a consultant group for a public sector client. In fall 2013, a team of 11 students partnered with the City of Ottawa to develop a vision for animating the Rideau Canal Corridor. The objective of this project is to provide the students with experience in preparing a plan under conditions that simulate professional practice, while addressing the immediate needs of a real client.

1.3 Location & Significance

The Rideau Canal study area is located in City of Ottawa and extends more than eight kilometres from Hog's Back to the Ottawa River, as shown on Map 1. The Rideau Canal is a defining element of the National Capital and provides a continuous open space and transportation corridor in the centre of the City. The study area also extends into several surrounding neighbourhoods and areas, including Centretown, ByWard Market, the University of Ottawa, the Glebe, Old Ottawa East, Old Ottawa South, the Experimental Farm and Carleton University. As the Nation's Capital and a growing city of nearly one million people, the City of Ottawa should prioritize and integrate its Canal as a centrepiece of urban living, similar to the established efforts of other influential national capitals.



Map 1. Rideau Canal study area

2

Rideau Canal Analysis

2.1 History

The Rideau Canal has shaped Ottawa since the British decided to build it in the early nineteenth century. The Canal was first used as a means of transporting people and supplies to Upper Canada without using the St. Lawrence River, which would have been threatened by American forces in the event of conflict. When the Canal was officially opened in 1832, Ottawa, called Bytown at the time, had a population of approximately 1000 people (Bytown Museum, 2013). The Canal quickly took on a significant role as a transportation route through a wilderness with few roughly constructed roads.

The Canal remained a vital commercial link until the middle of the 19th century when new locks on the St. Lawrence and the arrival of the railway changed the character of the national transportation network.

When the railway came to Bytown in 1854 the establishment of rail infrastructure, coal sheds, lumberyards, and other industrial sites along the Canal followed (Parks Canada, 2012). The Rideau Canal's edges became an important area for industrial development in the new city and became important for the transportation of goods locally. In 1856, the Rideau Canal was transferred from British military control to the government of the Province of Upper Canada (Watson, 2012).

By the end of the 19th century, Ottawa had changed from a lumber town to manufacturing city to a National Capital. The edge of the Canal did not reflect this status. In 1899, the Ottawa Improvement Commission (OIC) was established to improve the city. One important task was to beautify the banks of the Rideau Canal (National Capital Commission, 2013). By the 20th century, Ottawa and the Canal began to be shaped by formal plans such as Frederick Todd's 1903 report for the OIC (Gordon, 2002) which supported the development of a parkway and enhancing natural beauty and views (Todd, 1903).

The Canal remained an industrial area until the latter half of the 20th century. The Gréber Plan of 1950 had a transformative effect on the city and the Rideau Canal. Industry around the Canal was moved to external sites around the city to free up land for other purposes (Gréber, 1950) and the rail lines along the Canal were replaced by Colonel By Drive in the mid-1960s.

The 20th century saw an increasing recognition of the scenic, recreational and historic value of the Rideau Canal. The Canal was designated a National Historic site in 1925, the scenic drive along the Canal was enhanced in the 1960s, a national institutional use, the National Arts Centre built in 1969, and special alternative uses such as the Rideau Canal Skateway began over the winter of 1970-71. Parks Canada assumed control of operation of the Canal in 1972.

In 2000, the Rideau River including the Canal was designated a Canadian Heritage River and seven years later the Rideau Canal was inscribed on the World Heritage Site list. This history shapes our understanding of the city and informs future animation of the Canal.



Image 1. Industrial character of the Canal, early 1900s.



Image 2. The Rideau Canoe Club, 1906

2.2 Existing Conditions

This section provides a summary of the background analysis that informed the comprehensive approach for animating the Rideau Canal. An in-depth assessment of the study area's physical conditions and community makeup was a crucial first step in identifying the main opportunities and challenges facing the Canal in the City of Ottawa.

2.2.1 Land Uses

In the Rideau Canal Corridor study area; there are four predominant land uses, which include commercial, institutional, residential and open space. These land uses are described in this section, and illustrated in Map 2.

Commercial

The commercial uses vary widely along the Canal. The downtown section of the corridor has many employment, shopping, cultural and entertainment uses that add significantly to the character and attract residents from throughout the region. Some of the most notable uses include the Rideau Centre, the ByWard Market and several large office buildings along Elgin Street. There are also several uses that support tourism and business events, including the Château Laurier, the National Conference Centre and the Ottawa Convention Centre, south of Laurier Avenue. Commercial uses next to the Canal are uncommon, occurring only along major streets that intersect the Canal,

including Hawthorne Avenue, Bank Street and Carling Avenue at Preston Street. Along the Canal, only two commercial uses sit directly next to the waterway. The Dow's Lake Pavilion houses three restaurants, a small marina and canoe and skate rentals shop. The Canal Ritz restaurant is located at Fifth Avenue. It is the only restaurant with Canal frontage between the AC and Dow's Lake. The limited range of commercial uses expands for several weeks each winter during Winterlude, as a range of food and rental shops are placed along the Skateway from the downtown to Dow's Lake.



Image 3. Canal Ritz on the western bank of the Canal

Institutional

Institutional uses provide a dynamic range of services along the Canal Corridor and vary in size and type within study area. Within the urban section of the study site is the federal Houses of Parliament and the National Arts Centre (NAC). However, the change in elevation at the northern edge of the study area from the Houses of Parliament to the Rideau Canal's flight of eight locks, limits the flow of users and the NAC does not openly address the Canal. There are two schools adjacent to the Canal Corridor, Lisgar Collegiate Institute and Immaculata Catholic High School, which are both located just south of the Pretoria Bridge. In addition, two large post-secondary institutions exist along the Canal corridor. Carleton University borders the Canal Corridor in the south end of the study site, and the University of Ottawa runs adjacent to the eastern edge of the Canal Corridor south of Laurier Avenue Bridge (see 2.2.2 for more information on the Universities). Furthermore, the main campus for Saint Paul University is located along Main Street in the Midtown section of the study site. In addition to these recognizable institutional uses, there are also several elementary schools, foreign embassies and high commissions, museum facilities and places of worship that dot the landscape along the Canal Corridor and within adjacent neighbourhoods.

Residential

The Rideau Canal is bordered by several predominantly residential neighbourhoods that are host to a variety of housing types. The Glebe, Old Ottawa South and Old Ottawa East are inner-city suburbs dating mostly to the early 20th century. The northern section of the Rideau Canal, from

Pretoria Bridge to the Ottawa River locks, borders the part of Centretown known as the Golden Triangle. There is a tremendous variety of housing types in this part of the city, including large single-detached homes, townhouses, houses subdivided into apartments, and small mid-rise apartments. Several Modernist high-rises are prominently visible from the Canal. To the north of Dow's Lake, Little Italy's residential land use is a mixture of smaller single-detached homes with occasional apartment buildings. Much of the area bordering Carling Avenue is slated for redevelopment into high-rise condominiums. With the exception of mid-rise apartments above retail on Bank Street and Bronson Avenue—which features mid-rise apartments and condominiums and a high-rise apartment building—housing in the Glebe and Old Ottawa South is comprised mostly of single-detached homes in Craftsman and American Foursquare styles.



Image 4. The Canadian parliament buildings over the Canal

These neighborhoods saw limited conversions to multi-unit dwellings and have both gentrified to a significant degree. Residential homes with views of the Rideau Canal are generally large and luxurious. Old Ottawa East has a greater variety of housing types—including apartment buildings and townhomes adjacent to Echo Drive and the Rideau Canal—and more diversity of architectural styles and periods, including mid-century modern houses and occasional contemporary infill buildings.



Image 5. Residential infill in Ottawa East

Parks and Open Space

The Rideau Canal Corridor provides a wide range of parks and open spaces. The Canal waterway itself, managed by Parks Canada provides a continuous open space corridor in an urban context. In winter, the Rideau Canal Skateway is a popular recreation site that brings vibrant animation to the Canal. In the summer, the waterway provides a scenic navigable channel for a variety of vessels.



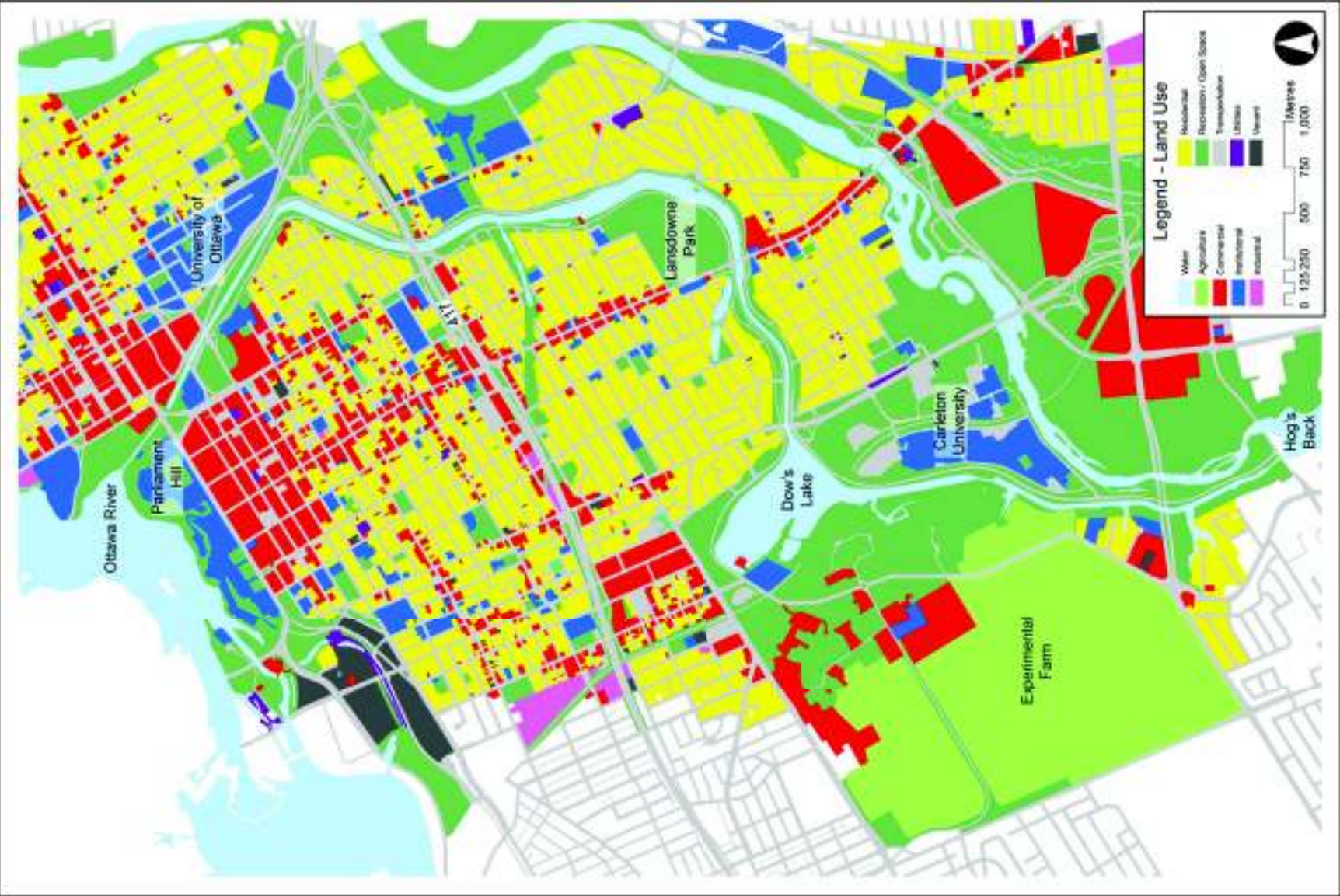
Image 6. The animated Rideau Canal Skateway

The parkways along the Canal are primarily managed by the National Capital Commission (NCC). The banks of the Canal adjacent to the parkways provide continuous greenspace and recreational opportunities. At the very North of the study area, adjacent to the Ottawa Lockstation, Major's Hill Park is a landmark destination and platform of civic activity and tourism. Moving south to the Hog's Back Lockstation, the Rideau Canal Corridor has almost continuous strips of greenspace on both the east and west banks. These open spaces are primarily composed of lawns, trees, and gardens, and the occasional park bench. They make the corridor a scenic journey, whether walking, cycling or driving. However, their design also limits the use of this greenspace. As open spaces they are very suitable for passive uses, such as a picnic, or reading a book, but generally do not provide

facilities for structured recreation. Only a few active uses are found on the Eastern and Western Rideau Canal Pathways. For example, these pathways are very popular among local communities for walking, jogging and cycling. They offer scenic connections to other popular pathways, including the Experimental Farm Pathway and the Ottawa River Pathway.

In addition to the waterway and NCC lands, the Rideau Canal Corridor also contains notable parks and open spaces managed by the City of Ottawa, Province of Ontario and the Ottawa Carleton District School Board. Confederation Park is a significant park in the urban section of the Canal, which often hosts major events and public functions. Additionally, the new Lansdowne redevelopment is expected to include a significant open space component. Many of these parks are vital for serving the surrounding neighbourhoods with their recreational needs. However, given the urban context of this section of the Canal, many City parks are limited in size and quantity. As a result, neighbourhoods such as Centretown in Ottawa's core have an undersupply of park space and rely heavily on the Rideau Canal as a neighbourhood park (City of Ottawa, 2013a).

Yet, many sections of the Canal's greenspace can be difficult to access. This is largely attributed to the high volume of traffic along Colonel By Drive, Queen Elizabeth Driveway, and Nicholas Street.



Map 2. Land Use

2.2.2 Neighbourhood Profiles

There are eight neighbourhoods that line the Rideau Canal from Hog's Back to the Ottawa River. It should be noted that the Canal acts as an edge between these communities, and that none of the neighbourhoods span the Canal. These neighbourhoods are outlined on Map 3.

For the purposes of this report, neighbourhoods have been categorized geographically based on our definitions of Urban, Midtown and Suburban. Urban consists of the downtown core from the Ottawa River to Pretoria Bridge. The Midtown section begins at the Pretoria Bridge and ends at the Bronson Street Bridge. It is characterized by older low to medium density housing. The Suburban section consists of the neighbourhoods south of the Bronson Street Bridge to approximately Hog's Back. This section is informed by the recent Ottawa Neighbourhood Study (2013).

Urban

The ByWard Market is a major tourist destination, but it is also home to many young adults and seniors. It has a large Francophone community and a strong sense of its history. Over 80% of housing in the ByWard Market is apartments (Ottawa Neighbourhood Study, 2013). Yet, there are affordability issues in the area tied to the housing stock. The neighbourhood's demographics are rapidly changing and could see some major changes in the coming years.

Centretown is the heart of downtown Ottawa, featuring national landmarks as Parliament Hill and Confederation Square. It boasts a young, highly educated population with roughly 30% of the population between the ages of 20 and

29 (Ottawa Neighbourhood Study, 2013). Residents generally walk or use transit to get to work and the neighbourhood features a low unemployment rate but a lower than average income as well.

Sandy Hill lies on the east side of the Canal just south of the ByWard Market. At the heart of the neighbourhood is the University of Ottawa, which draws a significant amount of student residents. Over 70% of housing in the area is apartments, and 47% of residents live in a one-person household (Ottawa Neighbourhood Study, 2013). With continuous student demand, housing is relatively expensive and there are issues of affordability. Furthermore, there are very few parks in the area, although residents can access the Rideau Canal and Rideau River.



Image 7. Elgin Street, Centretown neighbourhood

West Centretown was traditionally a hub for recent immigrants as far back as World War II, boasting large French-Canadian and Irish populations. It has a strong community and cultural presence, as many neighbourhood shops and restaurants serve the locals well. Housing is almost entirely apartments, although there are presence of single-detached and row houses in the area. Preston Street, which lies at the south end of the neighbourhood, has recently become the centre of intensification, including several proposed landmark high-rise buildings. This area is in transition, and will become a precedent of urbanization stretching out beyond the downtown core.

Midtown

Ottawa East is home to many young adults due to its proximity to the University of Ottawa, which lies on the opposite side of Highway 417. Roughly 36% of residents are age 20 to 29 and the neighbourhood is characterized by high and medium density buildings, which provide most of the housing (64% of all housing) (Ottawa Neighbourhood Study, 2013). There is no grocery store within the Ottawa East boundaries. Many residents have a lack of accessible healthy food options in existing commercial areas.

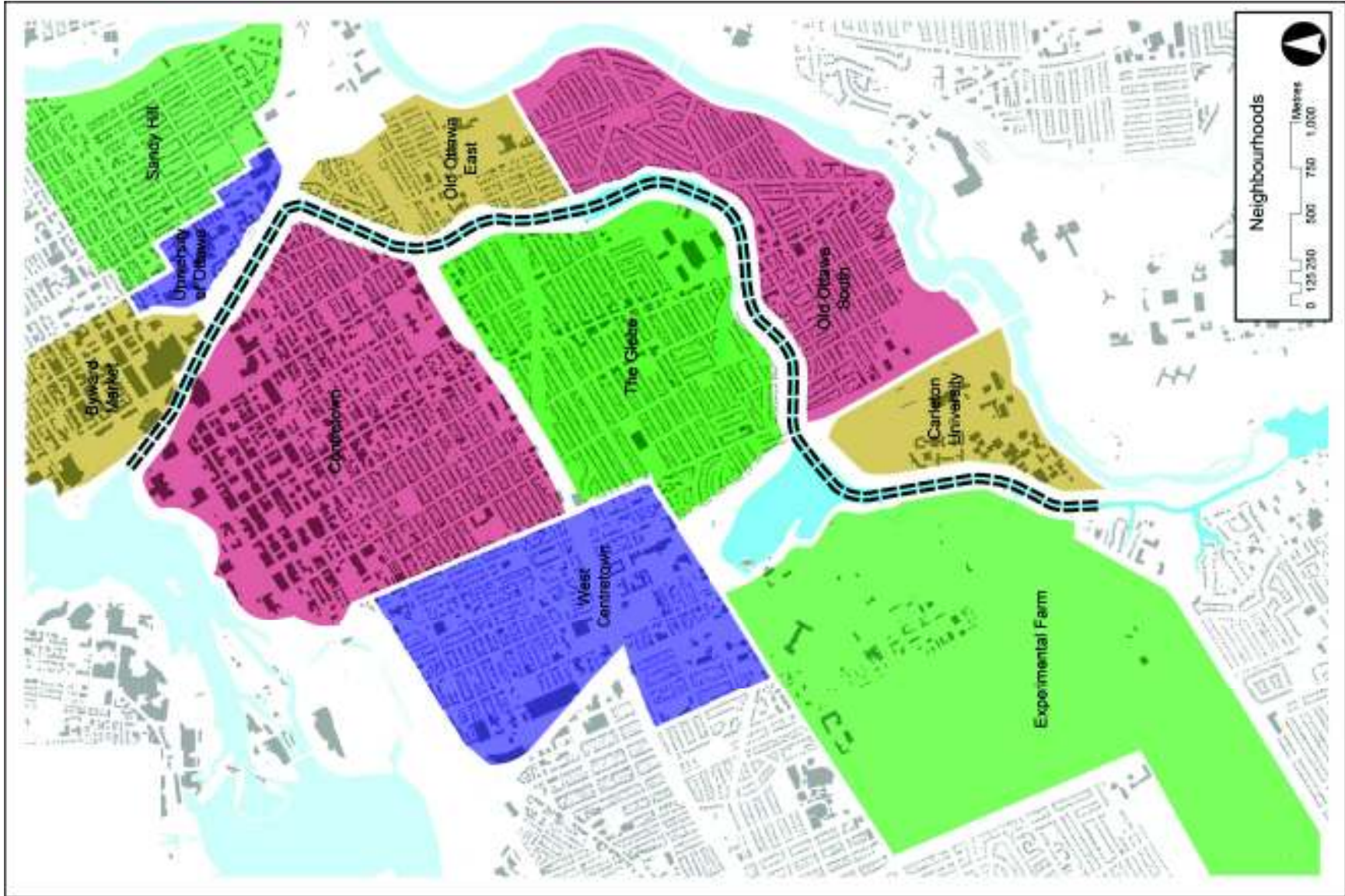
The Glebe is on the west side of the Canal just south of Centretown. It is well known as being a higher income neighbourhood, with relatively low unemployment. It has several parks and ready access to greenspace, including Dow's Lake. It has a good mix of housing options, with 36% of housing consisting of single-detached homes. The majority of the 41% apartments are low-rise (under 5 stories), keeping the height and scale of the neighbourhood well balanced (Ottawa Neighbourhood Study, 2013).

Old Ottawa South is a higher-income area with a high unemployment rate among youth. Residents fall evenly across all age groups making it a well-balanced area. 62% of housing consists of single-detached homes, compared to only 13% for low-rise apartments (Ottawa Neighbourhood Study, 2013). It is an older neighbourhood and many of the homes are in serious disrepair. Many of these homes are occupied by an increasing number of families living in poverty. There is a lack of greenspace, though residents can enjoy both the Canal and the Rideau River.

Suburban

Carleton University lies in between the Rideau Canal and Rideau River. The area around the university is largely student-oriented with over 60% of the housing stock consisting of apartments and roughly 21% single-detached homes. Furthermore, 48% of residents live in one-person households, similar to the University of Ottawa (Ottawa Neighbourhood Study, 2013).

The Experimental Farm Area touches the Canal in one corner, but the housing is separated by the Experimental Farm and Arboretum. Consequently, most of the residents live to the north or west sides of the Farm, a fair distance from the Canal. The residents are of all ages, well-educated and earn higher than average incomes. This suburban neighbourhood boasts an excellent balance of housing choices, including roughly 36% single-detached, 31% apartments, and 19% row houses (Ottawa Neighbourhood Study, 2013). The neighbourhood also has an abundant number of parks and greenspaces.



Map 3. Neighbourhoods around the Rideau Canal

2.2.3 Landmarks and Focal Points

Downtown 'Hub'

The intersection of Elgin Street and Wellington Street, and the surrounding area, is the most urban section of the Canal, it is a hub for tourist attractions and entertainment activities. The downtown 'Hub' links the Central Business District, Parliament Hill, the Rideau Centre and ByWard Market, while also interacting with the Canal. In this area, the historic Ottawa Lockstation features the original lock structures and heritage buildings of the Canal. The NAC is located on the western side of the Rideau Canal and operates Le Café restaurant, which has a patio overlooking the Canal. The Ottawa Convention Centre is across the Canal from the AC and features a large glass exterior facing the Canal. The Convention Centre is an important venue for the city and adds to its architectural diversity.

University of Ottawa

The University of Ottawa campus is a major landmark in the urban section of the Rideau Canal Corridor. With over 40,000 students in 2013 the university has a major influence on surrounding neighbourhoods (University of Ottawa, 2013). This includes Sandy Hill to the east and the Golden Triangle to the west (Bounded by Elgin and the Canal) across the Corktown Bridge. Nicholas Street and Colonel By Drive provide a key transportation link for vehicular traffic traveling from the south end of the City or Highway 417 to access the downtown core. These roads act as a barrier to pedestrians, and make it difficult for the University of Ottawa's student population to access the Canal. There is a pedestrian underpass at the Campus Bus

Station providing limited access to the Canal. A ribbon of park space exists on the Canal side of the underpass, and features the NCC project the '8 Locks' Flat Canal Bistro'. The first phase of Ottawa's LRT project will bring light rail to the University of Ottawa campus, and has an opportunity to highlight the Canal in the station design (City of Ottawa, 2013b).

Lansdowne Park

Lansdowne Park is a historic sports and exhibition facility located on Bank Street in the Midtown section of the Canal Corridor. Lansdowne Park is currently undergoing an extensive redevelopment as part of a public private partnership between the City and the Ottawa Sports and Entertainment Group (OSEG, 2013). The redevelopment includes a renovation of the football field and hockey arena, the creation of a new public park, two residential towers and a shopping and entertainment district (OSEG, 2013). The Lansdowne Park project has great potential to enhance the vitality to the Canal and serve as a corridor destination. Much of the surface parking at Lansdowne will be removed during redevelopment, which is a concern for accessibility.

Patterson Creek & Brown's Inlet

The Rideau Canal Corridor links a variety of greenspaces along the corridor. Patterson Creek and Brown's Inlet add depth to the greenspace network, by extending the greenspace adjacent to the Canal into the urban fabric of the surrounding Glebe neighbourhood. These greenspaces create a safe, accessible and inviting gateway to the Canal Corridor from the adjacent neighbourhoods.

Dow's Lake

Dow's Lake is an artificial lake located south of Carling Avenue and east of Bronson Avenue. The site features an existing pavilion building, which consists of several restaurants, boat rentals and moorings, a skate change area and washroom facilities. Dow's Lake is a popular location for interacting with the Canal year round. The pavilion provides direct access to the Canal for a variety of recreational uses (Image 8). Other built elements include the Canadian Forces Reserve Barrack Dow's Lake and a large parking lot. The Preston-Carling O-Train station is nearby; the site has good access to public transit.

Dow's Lake is located at the base of Preston Street, and nearby Little Italy. This area is home to some of the tallest building proposals in the city, some reaching over 40 storeys (Ottawa Business Journal, 2013). This future high density development will increase pedestrian traffic to the Canal, making Dow's Lake a potential thriving neighbourhood amenity.

The Dow's Lake area also has plentiful greenspaces nearby. These include the Arboretum, Fletcher Wildlife Gardens and Experimental Farm to the south, and Commissioners Park, home to the Canadian Tulip Festival to the northeast.

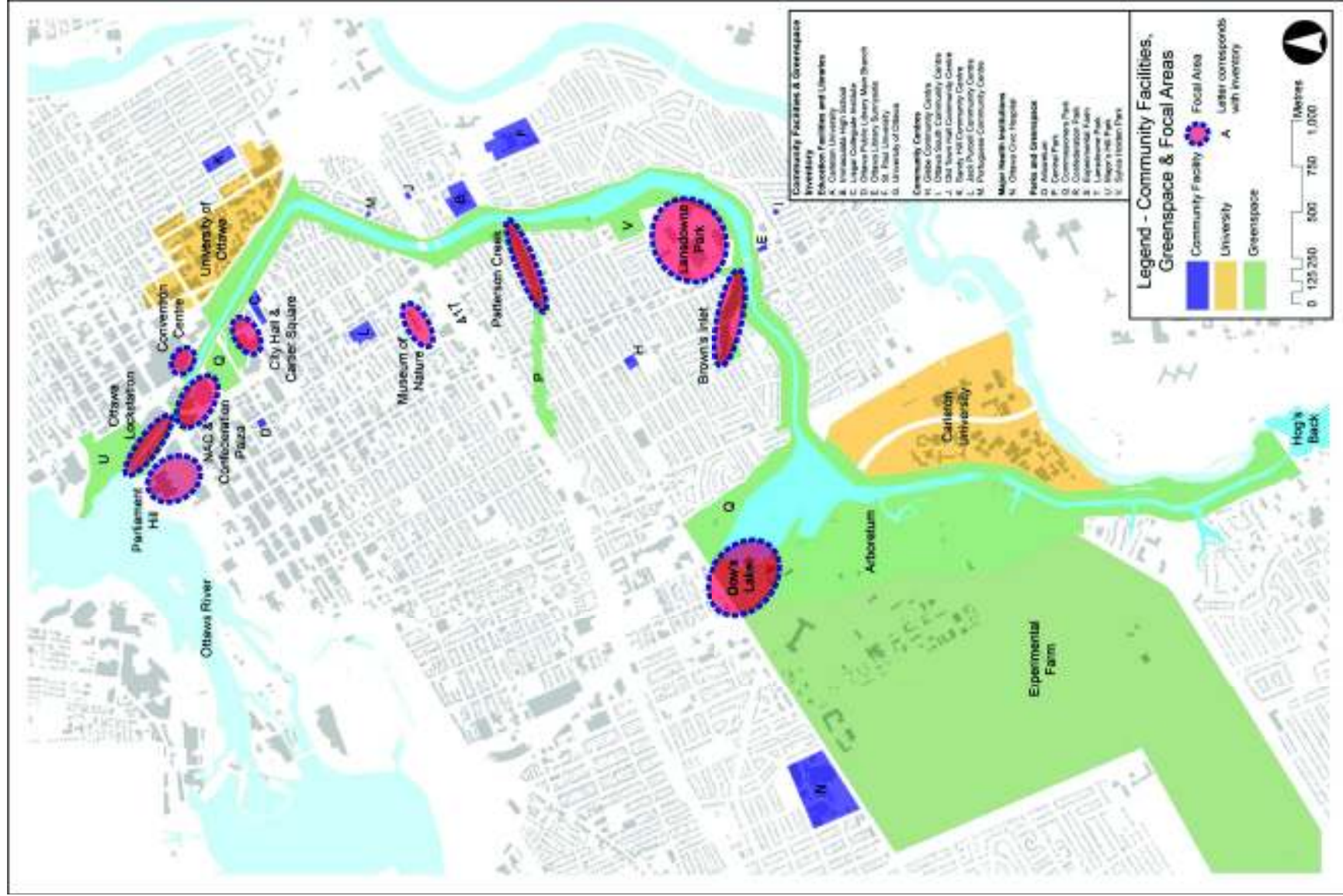
Carleton University

With over 25,000 students, Carleton University is a landmark, and important post-secondary institution in the Suburban section of the study area (Carleton University, 2012). In contrast to the urban University of Ottawa, Carleton University has a more suburban campus design. The site is located on the southern shore of Dow's Lake,

across from the pavilion. The Rideau Canal Eastern Pathway runs along the Canal banks at Carleton, providing views of the naturalized landscape across the water. However, accessing the Canal is not always easy from the campus, as there is a lack of safe pedestrian crossings along the busy Colonel By Drive corridor. With Anniversary Park at the north end of campus, Brewer park to the east, and Vincent Massey and Hog's Back to the south, Carleton University is surrounded by extensive greenspace. Carleton University's Master Plan calls for healthier, sustainable communities and a more urban campus form in the long term (Carleton University, 2010). The large, mostly vacant open space to the north of campus is a contaminated site, but has potential for campus expansion in the future.



Image 8. Dow's Lake and the Dows Lake Pavilion



Map 4. Landmarks and Community Facilities around the Rideau Canal

2.2.4 Community Facilities

The community facilities along the Rideau Canal Corridor include educational institutions, community centres, health services, parks and greenspace. These types of facilities allow for better quality of life for local residents and enhance the livability of the area.

Neighbourhoods adjacent to the Canal, such as Centretown, contain a wide range of community facilities in a relatively urban context. These facilities are very accessible given the walkable, compact and mixed-use nature of the neighbourhood. However, other neighbourhoods adjacent to the Canal are more suburban in typology, and contain fewer facilities. Map 3 provides an inventory of community facilities, greenspace and focal areas. Map 4 illustrates community facilities around the Rideau Canal.

2.2.5 Transportation and Mobility

Pedestrian Networks

The Ottawa Pedestrian Plan outlines the areas of greatest pedestrian activity within the City. According to this study, Centretown's sidewalks are highly used and maintained in the winter to ensure pedestrians are not burdened by excess snow and ice. The downtown section also features shorter, more walkable blocks while the suburban blocks are generally long and winding with some pedestrian walkways providing shortcut access to major roads.

Along the Canal, the NCC Pathway is a shared-path that combines cycling, walking, inline skating and other forms of active transportation. This diversity of transportation modes

results in variety of speeds by the pathway users, including some using the corridor for commuting, while others casually stroll along the side of the Canal. In some areas the narrow mixed-use path means that pedestrians must be cautious of faster moving users that frequently pass by.

Canal crossings are very important to pedestrians as the Canal is a barrier between neighbourhoods, limiting the movement of pedestrians. The Corktown Footbridge provides University of Ottawa students with a connection to Centretown and is a successful example of improving connectivity across the Canal. Another footbridge is proposed at Fifth Avenue, which would connect the Glebe to Ottawa East. This stretch of the Canal provides no crossings for more than two kilometers. This pedestrian bridge would increase pedestrian access to Lansdowne Park while alleviating traffic associated with the future Lansdowne. It would also allow a much needed link between the Eastern and Western Rideau Canal Pathways and the Ottawa cycling network. Although a plan for a pedestrian bridge has been created, the estimated cost was \$18 million. The bridge is not likely to be built until after 2020 (Ottawa Citizen, 2013)

Cycle Networks

The Ottawa Cycling Map found online at <http://ottawa.ca/en/residents/transportation-and-parking/cycling/ottawa-cycling-map> demonstrates the extent of existing and proposed cycling lanes across the City. Cycling is permitted on all roads even if no dedicated lanes are provided. The cycling network is divided into five levels: existing dedicated lanes, existing segregated lanes, paved shoulder routes, off-road pathways and suggested dedicated routes.

Cyclists are able to ride along the Canal on both sides of the waterway. Segregated cycling lanes run between the Canal and the parkways, ensuring a greater level of safety along the Pathways. However, pedestrians also use these lanes as they offer better views of the Canal and are removed from the busy traffic of the parkways. This can cause some issues for cyclists, especially during peak commuting hours. The routes along the Canal are used for both transportation purposes and tourism, the latter of which could also impede commuters by moving at a slower pace. Cycling in the study area is primarily encouraged in the segregated corridor with some dedicated connections to cross the Canal. Within the surrounding areas especially on local roads, cyclists predominantly share the road with vehicles but many streets, such as Elgin Street and Main Street, are indicated as suggested routes on the Cycling Map.

Transit Access

The OC Transpo service offers a variety of public transit options including buses, the O-Train and a future Light Rail Transit (LRT) system. The entire fleet of buses is modified to accommodate general accessibility requirements and the Para Transpo offers door-to-door transportation for special needs (City of Ottawa, 2013c). The OC Transpo also offers a Park & Ride service for commuters as a way of reducing the volume of traffic from the suburban areas entering the City. The final component of the system is the Transitway, a dedicated system of roads and lanes for transit services (City of Ottawa, 2013c).

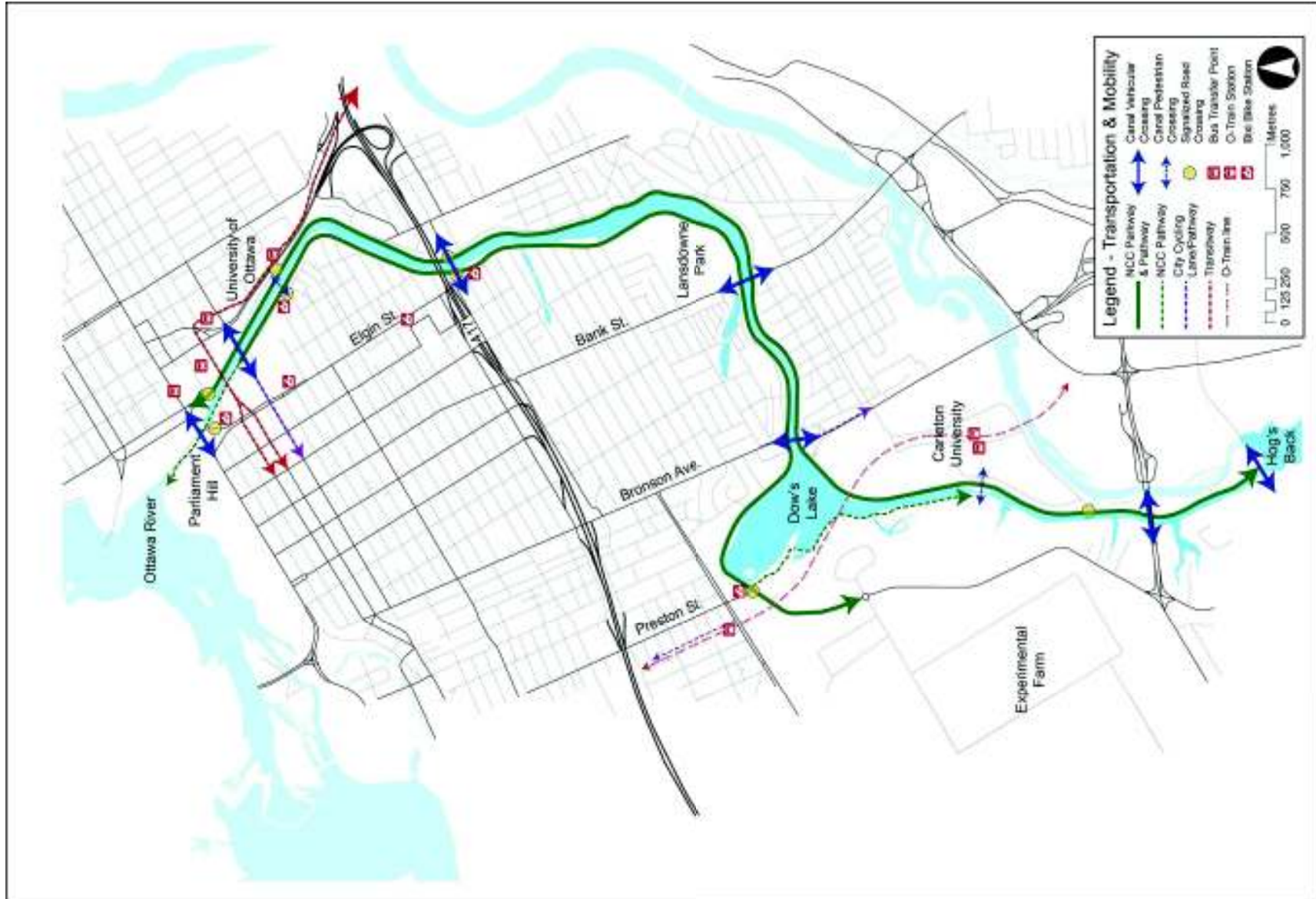
Buses serve most of the City and operate as a Bus Rapid Transit (BRT) system on the Transitway. The system is divided into four levels of service: Local, Express, Peak and

Transitway (City of Ottawa, 2013c). These levels intertwine at key hubs. Some hubs are located close to the Canal such as the Mackenzie King, University of Ottawa Campus and Laurier stations which are all located on the east side of the Canal. The O-Train spans eight kilometres and stops near the Canal at Carleton, and Carling Station near Preston Street. These two systems will be complemented by a future east-west LRT system named the “Confederation Line.” Two stops are located within the study area; on Rideau Street just east of the Canal and at the existing University of Ottawa Campus Station (City of Ottawa, 2013b).

Vehicular Networks

The Canal is bordered by two NCC parkways for most of the study area. Colonel By Drive begins at Hog’s Back in the south and passes along the east side of the Canal. It separates Carleton University and the University of Ottawa from the Canal although some pedestrian crossings exist. Colonel By Drive ends at Rideau Street where it continues as Confederation Boulevard. Queen Elizabeth Driveway runs along the west side of the Canal extending from Laurier Avenue to Preston Street where it becomes Prince of Whales Drive. These parkways are a scenic and ceremonial entrance route into the centre of the Nation’s Capital.

Many roads also cross the Canal providing vehicular connectivity between neighbourhoods. Between Centretown and the ByWard Market, bridges at Wellington Street and Laurier Avenue as well as the Mackenzie King Bridge provide personal and city transit vehicles access across the Canal. Further south, connections exist at Highway 417, the Pretoria Bridge, Bank Street and Bronson Avenue, Heron Road and Hog’s Back Road.



Map 5. Transportation Networks and Connections along and across the Rideau Canal

2.2.6 Waterway Access

The Rideau Canal stretches from Kingston, Ontario to the Ottawa River. It can be accessed from St. Lawrence River and Lake Ontario through Kingston Mills. Boaters from Quebec and New York can also access the Rideau from the Ottawa River to the north. Though the Canal has historically been used for military and industrial purposes, it exists today as a recreational waterway operated by Parks Canada. The Canal is well travelled by motorized vessels during the summer operating period although traffic has been declining by approximately 30% (Perrault, 2013). Some boaters blame this decline on reduced hours of operation in the peak season, and new rules instated by Parks Canada (Perrault, 2013). Small watercraft is permitted and available for rental at Dow's lake. The locks have set hours depending on the season and is a good indicator of which times larger boats will be passing through the Canal, requiring the set navigation channel.

In the winter months, the Canal becomes a famous skateway as a part of the Winterlude festival. Access to the skateway is provided at certain points along the Canal, as gates marked with signs provide winter-only access on many streets that end at the Canal. While tourists flock to the Canal for its scenic skating, locals are often seen using the waterway for transportation. Thus, the Canal operates as an important corridor year-round.

See Map 5 for transportation networks and connections.

2.2.7 Utilities

The main aim of this section is to undertake an analysis of current stormwater infrastructure servicing along the Rideau Canal Corridor. Municipal sewers can be classified as one of three types of sewers, partially separated, totally separated or combined. These sewer types refer to having sanitary sewers combined with stormwater sewers. In combined sewers (sanitary and storm), when precipitation levels rise, excess sanitary sewage can become discharged through stormwater outlets. In this event, point source pollution can result in receiving water bodies. It is possible that some of the more recently constructed streets are fully separated; however, full separation is very costly and historically did not take place within the City of Ottawa (Old Ottawa East CDP, 2011).

In terms of the study site, the majority of the stormwater collection systems in the surrounding communities were upgraded through the City of Ottawa's sewer separation program in the early 1970s. During this period, many sewers were converted from combined systems to a fully or partially separated system. Yet, City records indicate that some storm outlets discharge into the Rideau Canal, which may negatively impact the water quality.

For example, there is one minor storm outlet located north of the 417, and a major storm outlet situated at Lansdowne Park. The 600mm sewer outlet at Lansdowne Park drains approximately 4.5 hectares of land and contains no quality control measure (CEAA, 2012). In 2012, an Environmental Assessment was completed to address this outfall and improve the discharge reaching the Canal by limiting its function to only storm events greater than a 5-year event

(CEAA, 2012). With the Lansdowne Site Redevelopment, it is proposed that stormwater will be further addressed. From the limited data available, these two storm outlets are the only two identified that outlet into the Canal within the study area. Due to water quality concerns, the NCC has indicated that they will not permit any additional storm flow to be discharged into the Canal (CEAA, 2012).

Other forms of servicing include electricity, water and sanitary, all of which are absent from the linear open spaces directly adjacent to the Rideau Canal. However, these services cross the Canal Corridor at all major bridges. Therefore, sites adjacent to major crossings hold a great potential for further reanimation as they have more favourable access to servicing than most sites.

2.2.7. Environmental Constraints

Floodplains

With engineered hard edges lining the majority of the study site's waterway, there are no flood plan issues directly adjacent to the site. However, the nearby Rideau River due to its natural topography does have an associated floodplain. The eastern portion of Carleton University's campus falls within the Rideau River floodplain, which extends north to Sunnyside Avenue. Map 6 displays a segment of the Rideau Canal and Rideau River around Carleton University. The Rideau River's floodplain is outlined with a blue hatched polygon, and spans northward ending only approximately 330 metres south of Dow's Lake.



Map 6. Rideau River Floodplain map illustrated in blue hatch marks. The Canal has no floodplain

2.3 Policy Analysis

2.3.1 Introduction to Policies

The Rideau Canal is subject to various layers of international, national, provincial and municipal policy. The Canal itself and the associated historic features are managed by Parks Canada, while the navigable waterway is subject to regulations of the Department of Transport. Lands on either side of the Canal are owned and managed by the National Capital Commission (NCC).

The Canal runs through several neighbourhoods within the City of Ottawa, each with specific goals for long-term development. Several institutions border the Canal and all have their own goals and concerns for future growth. Based on this multi-jurisdictional policy framework, animating the Rideau Canal, integrating it with surrounding neighbourhoods and making connections to and from the Canal involves navigating a broad range of interests that do not always align. This chapter outlines the key policies and implications affecting the study area. More details about individual policies including implications for the canal within the City can be found in Appendix 2 Policy Analysis.



Image 9. Agencies that plan around the Rideau Canal

INTERNATIONAL	UNESCO	World Heritage Site Designation
NATIONAL	Department of Transport Parks Canada National Capital Commission Central Experimental Farm Federal Heritage Building Review Office	Canal Regulations Historic Canal Regulations Rideau Canal Management Plan Rideau Canal World Heritage Site Plan Parkways & Pathways Horizon 2067: 50 Year Plan National Historic Site Management Plan
PROVINCIAL	Ontario	Provincial Policy Statement
MUNICIPAL	City of Ottawa	Growth Management Plans Secondary Plans Community Design Plans Master Plans Zoning By-law

Table 1. List of the main policies that affect the Rideau Canal

2.3.2 Themes

There are three main themes running through most of the planning and policy documents that affect the Rideau Canal Corridor; cultural heritage, greenspace and transportation.

Cultural Heritage

The Rideau Canal is a significant cultural heritage site. Parks Canada, the NCC, FHBRO, the City of Ottawa all have

policies aimed at protecting the cultural heritage of the canal. UNESCO and Parks Canada are primarily concerned with the 19th Century Canal and associated structures and landscape. The NCC is concerned with the constructed landscapes of the Canal as part of the image of the Capital. The City of Ottawa is concerned with the Canal as a heritage site and the impacts of change on the heritage values of the individual neighbourhoods the canal passes through. All agencies have policies that protect the cultural heritage values of the Canal and restrict uses that could negatively impact its character.

Each agency is responsible for a limited geographical area with differing heritage goals. This has led to many restrictions, but no holistic approach to protecting the significant cultural heritage landscape of the Rideau Canal. This situation has put limits on possible interventions that could add vibrancy while respecting the heritage values of the Canal and could allow gaps where undesirable incremental development might negatively impact on the character of the Canal.

Greenspace

The City of Ottawa, the NCC, the Central Experimental Farm and the Universities express value in the greenspace along the Rideau Canal. These parks are a valued place and are protected as parks, open space and as a cultural landscape. All agencies want people to be able to enjoy these spaces and have policies in place to protect the greenspace. The City of Ottawa has zoned most of the area along the Canal as open space or a leisure zone and will only allow low intensity use. The NCC has some flexibility by having a primary concern with keeping the Canal lands as Greenspace, but allowing some limited and temporary secondary uses and pilot projects.

Transportation

The Rideau Canal is identified as a transportation corridor. The Canal itself is a navigable waterway with associated regulations. During winter the skateway serves as a recreational transportation corridor. The parkways and

Rideau Canal pathways are a scenic entryway into the City and an important commuter route for motor vehicles, cyclists and pedestrians. The Department of Transport, Parks Canada, the NCC and the City of Ottawa all have policies or regulations that ensure the transportation nature of the Rideau Canal is maintained and enhanced. A main goal of the City and NCC is to improve connectivity between their areas and better integrating the Canal pathways and City pathways together. The transportation function of the pathways and parkways is also a challenge for interventions in this area. Transportation activities cannot be suspended to use the lands in a different way. The nature of the built environment around the Canal and the way it addresses the parkways provides limited opportunities for the surrounding neighbourhoods to address the transportation network in new and innovative ways. Even though these opportunities are limited they do still exist where mainstreets approach and cross the Canal and in the downtown core.

Conclusion

The Rideau Canal Corridor is subject to many levels of jurisdiction all with different yet similar goals. The interconnected nature of the heritage, greenspace and transportation values of the Corridor calls for a comprehensive approach to understanding the Rideau Canal. The current system of similar, but unaligned policies has created a very restrictive environment that presents a challenge to adding vibrancy and animation to this integral City feature and valued place.

2.4 SWOC Analysis

A strengths, weaknesses, opportunities and challenges (SWOC) analysis provides a way of synthesizing the most significant physical, socioeconomic and policy factors from the previous chapters. The key findings of the SWOC informed the goals and policies for Animating the Rideau Canal and are summarized in Table 2 below.

2.4.1 Strengths

The Rideau Canal is a valuable asset for the City of Ottawa. This continuous greenspace and transportation corridor extends through the City providing a valuable link from Hog's Back to the Ottawa River. This linear corridor sits adjacent to several neighbourhoods providing a valuable recreational amenity for numerous residents and visitors. The Canal also serves as a functioning waterway during the warmer months and attracts numerous visitors during winter when it is transformed into an outdoor skating rink. The high scenic and historic value of the Canal also contributes to a unique sense of place and meaning.

2.4.2 Weaknesses

There are several factors that restrict the connectivity and use of the Canal Corridor. The surrounding neighbourhoods and universities do not physically address the Canal. Accordingly, the Canal functions as an edge with only a limited number of crossing points. Physical barriers and vehicular traffic from the parkways obstruct access to and

along the Canal. There are few destinations and gathering places along the Corridor that invite people to stay and enjoy the Canal. This is largely due to the limited number of uses, activities and amenities that draw people to the Canal at different times of the day, particularly in the evening hours.

2.4.3 Opportunities

There are several underutilized sites situated along the Canal Corridor that should be focused on to ensure they integrate the Canal into the City's urban fabric. These sites include Lansdowne Park, the intensification Preston Avenue north of Dow's Lake and the future LRT station next to the University of Ottawa. In addition to these long-term developments, the NCC pilot projects provide a potential framework to transform underutilized spaces, such as bridge underpasses, through temporary interventions. There is also an opportunity to enhance heritage interpretation of the Canal by expanding the number of users.

2.4.4 Challenges

The numerous levels of government and conflicting policies intended to protect the Canal and present a challenge to implementing new and innovative uses. This stems from a viewing the Canal as a static heritage resource, which is restricted by the zoning of greenspace and heritage designations that limit the types of uses and development that can be placed along the Canal.

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Open space and transportation corridor extending through the City • Proximity to existing neighbourhoods and downtown • Greenspace and passive recreational uses • High scenic and historic value • Popular winter destination during Winterlude Festival • Functioning waterway in the heart of the city 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Adjacent neighbourhoods and universities do not address the Canal • Few crossings across the Canal • Physical barriers, poor user access and vehicular traffic • Few destinations and gathering areas • Limited number of uses, activities and amenities • Water acts primarily as a barrier vs. amenity
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Lansdowne Park redevelopment and future Fifth Ave. pedestrian bridge • Preston St. Intensification at Dow's Lake • Future University LRT station • Build on existing temporary use pilot projects by NCC • Attract new users will enhance appreciation of Canal and heritage interpretation • Create strategic partnerships 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> • Multi-jurisdictional policies and management • Restrictive zoning and heritage designations • Limited utility and servicing connections

Table 2. SWOC

3

Waterway Precedents

This chapter examines precedents of waterway and linear park interventions from cities around the world with a focus on northern and capital cities. The precedents have been divided into three main categories- established waterways, large-scale waterway interventions and site-specific waterway interventions (See Appendix 3 for more details).

3.1 Established Waterways

Waterfronts, canals, river and harbour front locales have become desirable places for people to connect with their local waterways. In some places the desirable nature of these places has evolved over time and in other cases specific interventions have been necessary to create a great place. Established waterways, whether preserved or revitalized, demonstrate a cohesive vision and multiple layers of use.



Image 10. Grand Canal in Venice, Italy

GREAT WATERWAY PRECEDENTS

- Alappuzha Canal, India
- Annecy Canal, France
- Birmingham Canals, UK
- Bruges Canal, Belgium
- Canal St. Martin, Paris France
- Chesapeake & Ohio Canal, USA
- Cheonggyecheon Canal, South Korea
- Chicago Riverwalk, USA
- Erie Canal, Buffalo USA
- Forth & Clyde Canal, Glasgow UK
- Giethoorn Canal, Netherlands
- Hertford Union Canal, London UK
- Hoi An Canal, Vietnam
- Lachine Canal, Canada
- Lechmere Canal, USA
- Leiden Canal, Netherlands
- Lijnbaansgracht Canal, Netherlands
- Liverpool Waterfront, UK
- San Antonio River Walk, USA
- Seine River, Paris France
- Venice Beach Canals, USA
- Zyanderood River, Iran



Image 11. Lieden Canal in Lieden, the Netherlands

The list of great waterways within this chapter is not exhaustive, but illustrates a dynamic sample of waterways based on three overlapping criteria – use, physical attributes, and character, found in section 2.5.4. The majority of these canals have public water access at many points along their corridor. They do not have restrictive physical barriers, such as a guard rail, lining the edges of the waterways and in certain cases there are no barriers at all. These waterways include comfortable and interesting places to sit, relax and engage, promoting social interactions along the waterways.



Image 12. Amsterdam Canal in Amsterdam, the Netherlands

Many of these waterways have formal or informal cultural and artistic installations and events along their edges. In many instances, the physical attributes around the waterway enhances cultural and artistic interventions. Some established waterways have had these activities for generations. Others have introduced them and adapted the water's edge to support these activities.

Great waterways have worked to preserve, interpret and feature good historical connections and design while encouraging innovative contemporary use and development.

The best examples of established waterways have evolved or have been designed so that people naturally come to and engage the public space and adjacent water. Minor interventions to the public realm, such as street furniture

further enhance the space as they add comfort and a sense of uniqueness to the area. Public amenities also create great canals as great established waterways, in certain instances, have places to eat, drink, converse, watch, contemplate, play and appreciating the landscape. Great established waterways also allow access between the terrestrial and water realms through a large variety of nodes, including places to put small watercraft in and tie up larger boats. Ultimately, along the majority of established waterways examined for this chapter, the water's edge is not understood as a barrier, but a transition zone.

3.2 Large-Scale Waterway Interventions

The precedents within the large-scale interventions category are projects that have been developed in order to address a multitude of issues associated with a specific urban waterway. These precedents illustrate the multi-dimensional approach that is necessary when attempting to revitalize an entire urban waterway. Many of the projects examined in this section include interventions that attempt to simultaneously address multiple issues including physical alterations to the built environment, preservation and enhancement of the natural environment, and programming of social and cultural activities.

There are a number of key features or themes, which connect the ten precedents analysed in this section. These features can be recognized as significant elements that have helped to make many of the projects a success and for the purposes of this document, a valuable precedent for the Rideau Canal.



Image 13. Calgary RiverWalk on the Bow River Calgary, AB

Many of the projects involve the reestablishment or improvement of connectivity both between the shoreline and the water. In addition to this, there is also a strong focus on connectivity between adjacent urban area and the waterway corridor. Projects including, the Ohio Canal Towpath, the Calgary RiverWalk and the Glasgow Canal Regeneration Project are ideal examples of how improving access to the water and reengaging the larger urban landscape with a waterway is a critical step to creating vibrant public places.

Another significant aspect of the projects identified is the development of multi-use spaces, in which activities, amenities and facilities combine to promote a diversity of users and uses at different times of the day. Some of the large-scale projects that have attempted to achieve multi-use spaces include the Lachine Canal in Montréal, the Chicago Riverwalk and Canalside in Buffalo.

The revitalization or implementation of accessible and engaging infrastructure is another significant aspect of many of the large-scale projects. The revamp of the Ljubljana Banks and Bridges in Slovenia's national capital, Liffey Boardwalk in Ireland's national capital, and RiverWalk along the Bow River in Calgary are good examples of projects that were able to bolster their urban waterways by developing both innovative yet understated infrastructure, including boardwalks, floating piers, public plazas/lookouts, terraced steps, and pedestrian bridges. These combined elements have enhanced individuals' opportunities to engage and reconnect with waterways and their greater community.

Many of the projects attempted to change more than just structural characteristics of the buildings and landscape surrounding the waterway. For instances, certain large-scale waterway interventions have implemented a variety of social and cultural programming to create active and engaging spaces. Projects such as the Lachine Canal in Montréal, and the City Centre Waterfront Program in Fort McMurray addressed the need for public events such as art shows, musical performances, cultural festivals and recreation-based programs.

3.3 Site-Specific Waterway Interventions

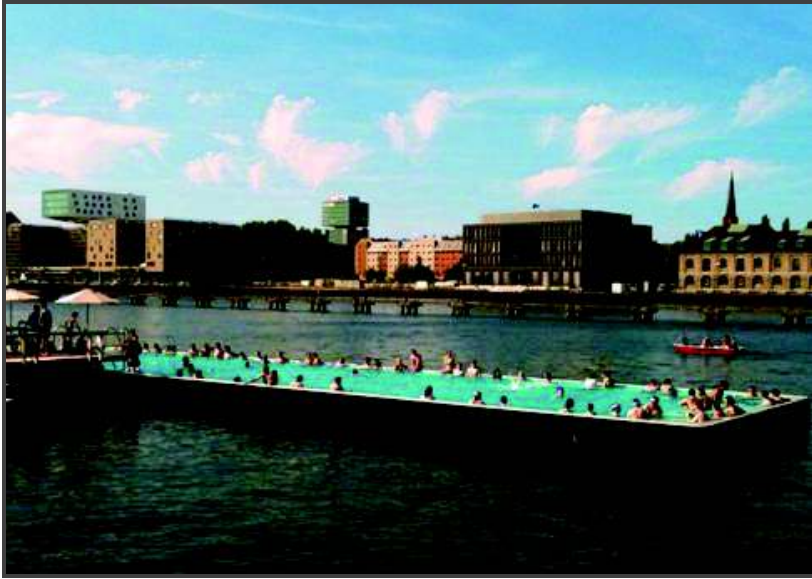


Image 14. Badeschiff, Spree River in Berlin, Germany

With multiple jurisdictions influencing the study site and a series of heritage designations placed on the Rideau Canal, site-specific waterway interventions offer the most potential in terms of reanimating the Rideau Canal. As a flexible, temporary and effective means of reclaiming unused and underutilized space both adjacent to and directly on waterways, site-specific waterway interventions are an innovative way to enhance the public realm and add a new layer of diversity to a character of the waterway.

Most importantly, site-specific interventions are efficient and timely, and can occur with minimal delays as their temporary nature enables initiatives to emerge relatively quickly without regulatory delays. For example, the recent Dutch project,

Tussen-ruimte (between-spaces), occurred within the closed-off spaces of the Amsterdam Canal area, a recognized UNESCO World Heritage site, in an attempt to transform the spaces in between historical canal buildings and improve the livability of the area. Implemented in the summer of 2013, several pilot projects were executed with the approval of adjacent landowners, including a music installation to create a place of calmness in a former morgue alleyway and an art installation to create a space for contemplation between two canal houses. These pilot projects were meant to demonstrate the potential of enhancing residual spaces without altering the physical heritage. In addition to pilot projects open at various times during the summer, there were also open houses, tours, concerts, performances, film nights and lectures all focused on how to use site-specific interventions to improve the diversity of spaces and avoid turning the canal area into a large-scale static museum.

Site-specific waterway interventions also vary in size and form. In some instances, project teams set out to develop temporary and movable landmarks in the form of floating swimming pools and structures directly on formerly contaminated waterways. The Badeschiff Spreebrücke along the Spree River in Germany's national capital, Berlin and the Havnebadet along the harbour of Denmark's national capital, Copenhagen are ideal examples of this strategy. While in other cases, project teams focused direct changes on adjacent lands such as reclaiming auto-orientated or underutilized spaces through the creation of artificial beaches and user-friendly public spaces. These direct changes to adjacent lands were best illustrated through the temporary precedent of the Paris Plages project along the Seine River in France's national capital and the permanent example of Clock Tower Beach in Montréal. Additionally, interventions also

focused on introducing innovative lighting strategies as well as programming to enhance waterways, such as Folly for a Flyover along the Lea Navigation Canal in England's national capital, London, and Waterfire in Rhode Island's state capital, Providence.



Image 15. A warming hut at the Forks in Winnipeg, MB

Finally, site-specific interventions examined for this project focused on initiatives that enhance waterways during winter. The Trail River in Winnipeg was an innovative precedent to pursue because of the addition of elements to the City's Skateway to build nodes and enhance the public realm, including a pop-up restaurant on ice and an international design competition for warming huts along the canal.

3.4 Qualities of Great Waterfronts

In addition to examining waterway precedents and projects from capital and central cities in four season climates, precedents were further explored based on their capacity to embody the qualities great waterfronts. These qualities were divided into three criteria: uses, physical attributes, and character (see Table 3).

Uses

A mix of uses both adjacent to and on the waterway attracts diverse users at different times and seasons. For example, the Lechmere Canal Park has successfully integrated a variety of uses including commercial, recreational, residential and open space. In comparison, the City Centre Waterfront Program in Fort McMurray treats the waterfront as a space for public art, events and performance and includes a civic centre facing the water's edge. Another example is Badeschiff Spreebrücke in Germany's national capital, Berlin, which is an innovative floating project that supports year round activities. The project not only has been successful in summer through daily swimming and music festivals, but in winter, its conversion to a set of saunas and a heated pool, has attracted a diverse array of users to the Spree River. Furthermore, creative amenities increase comfort and enjoyment. For instances, RiverWalk project in Calgary, Alberta features a series of riverfront observation decks, a new lighting strategy, public art installations, outdoor and movable furniture, washrooms and terraced steps leading to the edge of the Bow River.

Physical Attributes

In addition to a mix of uses, physical attributes near a waterway are integral to the vitality and livability of the area. The Onondaga Creekwalk has focused on permeability and connections. It connects neighbourhoods and connects the Erie Canal to other trail systems as part of the Greater New York State Canalway Trail. Similarly, the Revamp of the Ljubljana Banks and Bridges initiative not only improved longitudinal connectivity along both sides of the Ljubljana River, but it also created permeability across the river through multiple pedestrian bridges. Diversity of public spaces along the waterfront is another important factor. For example, the Riverwalk in San Antonio has promoted mixed-use development along the San Antonio River including shops, bars, restaurants, and hotels all connected with a network of pedestrian pathways. Finally, it is important that waterfronts connect to the surrounding neighbourhoods. The Ohio Canal Towpath is a strong example of a cohesive corridor that extends through public and private land, and through neighbourhoods, cities, towns and countryside.

Character

Great waterways create a strong sense of place and ownership for local citizens. These waterways can recognize and celebrate cultural heritage. An example of this can be found in the City of Liverpool, where council has passed legislation to address management issues of the properties. This legislation controls large-scale development near UNESCO heritage designations. Another example is Tussenruimte project in Amsterdam's Canal area which attempts to use experiment, contemporary art and architecture to reinvent underutilized spaces along Amsterdam Canal. The

Havnebadet takes advantage of the water through a set of enclosed pools in the Copenhagen Harbour. This creative design also uses reclaimed materials from decommissioned factories to make a unique public space and builds a strong sense of identity along the waterfront.

3.5 Conclusions from Precedents

These three categories provide precedents for potential strategies along the Rideau Canal. These include established waterways, large scale waterway interventions and site-specific waterway interventions. Great established waterways illustrate a clear vision for public space and accommodate multiple uses. They have few or no physical barriers to public water access, and include amenities to encourage social interaction. They enhance cultural and artistic interventions, and respect historical connections while incorporating contemporary uses and development.

Large-scale interventions are needed when addressing multiple issues with the revitalization of urban waterways. They improve site and neighbourhood connectivity and help create lively public places. A mix of uses attracts people to the waterway at different times of day. New infrastructure projects integrate into the existing landscape and help individuals to reconnect to the waterway. Social and cultural programming help bring users to the waterway. Site-specific waterway interventions offer a temporary and flexible approach to creating new uses along the Rideau Canal without infringing on heritage designations. They are quick, relatively inexpensive and create dynamic public places with a variety of uses at different times of the day. They can vary in size and scale, and can be located on the water or on land

adjacent to the waterway. They can also be geared towards specific seasons such as winter or summer festivals.

Precedents were selected based on their incorporation of qualities that make great waterfronts. These qualities are based on uses, physical attributes and character. A mix of uses are illustrated that attract diverse users at any time of the day and year. The physical attributes of the precedents improve waterfront connectivity to adjacent areas and improve site permeability. The character of waterfronts is emphasized by incorporating elements that celebrate local heritage.

The precedents included here address a variety of issues by focusing on different scales. Together with the criteria for great waterfronts, these precedents illustrate a variety of ideas and opportunities for intervention along the Rideau Canal.

Great Canal Characteristics	
Uses	Mix of uses to attract diverse users at different times
	Supports year round activities
	Creative amenities that increase comfort and enjoyment
Physical Attributes	Surrounding buildings enhance public space
	A diversity of public spaces recurring along the waterfront
	Continuous waterfront system connected both visually and physically
	Well linked to surrounding neighbourhood with few barriers
	Accessible by wide range of transportation methods
	Iconic buildings serve a variety of functions and are reflect the human scale
Character	Creates a unique sense of place and identity
	Recognizes and celebrates cultural heritage
	Takes advantage of waterway and corridor

Table 3. Great Canal Characteristics

4

Charette & Stakeholder Analysis

4.1 Design Charette

On October 18th, 2013 the project team held a design charette for this project. This intensive half-day session was intended to stimulate discussion and generate creative ideas to animate the Rideau Canal. The charette brought together key stakeholders and planners, including City of Ottawa staff, professional planners, and students and faculty from the Queen's University School of Urban and Regional Planning.

The charette began with a brief welcome and presentation followed by a round of participant introductions. The participants were then instructed to breakout into three small groups and visit various poster stations for more detailed topical presentations. These corner sessions led by

team members were designed to familiarize the participants with three major components of the project background analysis: the history of the Rideau Canal, existing conditions around the Canal and precedents of other great canals. These initial sessions also gave the opportunity for participants to provide feedback and ask questions about each topic.

Following this first stage, the participants were split into five distinct workshop groups for the design stage. Each workshop group examined a smaller geographical area of the Canal or a theme along the canal.



Image 16. Fraser McLeod sharing great waterway precedents

Workshop Groups:

- The 'Urban' section: The Canal from the Ottawa River to Highway 417.
- The 'Midtown' section: The Canal between Highway 417 and Bronson Avenue.
- The 'Suburban' section: The Canal between Bronson Avenue and Hogs Back Lock Station.
- The 'Canal Corridor': A broad perspective on the entire study area focusing on transportation and connectivity.
- Tactical Urbanism: A broad perspective focusing on temporary, creative interventions.

The charette concluded by having representatives from each of the workshop groups summarize the main themes and key ideas that emerged and are summarized in Table 4. The invited guests provided concluding thoughts and comments regarding the next steps of the project.

Charette Implications

The charette helped the team explore design ideas for the project, and propel the team towards creating a vision and goals for animating the Canal. The charette allowed for a problem solving approach that engaged multiple stakeholders, often with opposing perspectives, to take on a single challenge. The charette also provided the team with experience taking the large study area and attempting to segment in a logical and appropriate way. It provided an opportunity to take an area of land that is generally very restrictive in its policy and apply the risk-taking and creativity that students offer, with the realistic and practical points of view from professional planners. The charette brought forth a number of key issues and design ideas that were previously not considered by the team, which in turn helped to inform our final policies and strategies.



Image 17. Charette working group

Workshop Station	Overall Comments
Urban	<ul style="list-style-type: none"> • Year round amenities, places to eat and drink would be beneficial • Stimulate more boat activity • More canal access (railings act as barriers) • Major roadways are a barrier, add safe crossing areas • Unique section of the canal (most urban, most tourist oriented)
Midtown	<ul style="list-style-type: none"> • Need for new pedestrian destinations • Lansdowne has great potential to bring vibrancy to Canal • Need to re-examine relationship between Canal and Echo Dr. • Canal acts as important greenspace and parkland for residents of the Glebe, Centretown and Old Ottawa East
Suburban	<ul style="list-style-type: none"> • Bronson Avenue has potential to be a vibrant mainstreet • North end of Carleton University's campus has potential to address the canal • Potential connection between Dows Lake Pavilion, Little Italy and Carleton University.
Corridor	<ul style="list-style-type: none"> • Lack of parking in many areas (reduces accessibility) • Need for greater variety of street furniture • Canal acts as barrier for pedestrians • Need for greater signage and Canal marking
Tactical Urbanism	<ul style="list-style-type: none"> • Important themes: Create destinations, improve linkages and add to the life of the Canal. • Potential to connect Universities to canal open space • Temporary structures will not interfere with current canal operations allow for flexibility and risk-taking

Table 4. Charette Implications

4.2 Stakeholders

Stakeholders are the people, organizations or institutions who are either affected by the project or who will impact the project. A stakeholder analysis is a useful tool that can help identify potential misunderstandings or areas of conflict, predict outcomes and show potential avenues for cooperation amongst the various stakeholders. The Rideau Canal Corridor Study Area has a wide range of stakeholders, at the federal, municipal and local community levels. Parks Canada is a key stakeholder in the operation of the waterway, and the canal structure itself. The open spaces and parkways on either side of the canal are managed by the NCC. The City of Ottawa manages the land use of the surrounding City. These separate stakeholders can make comprehensive canal planning challenging, however they provide great opportunities for mutually beneficial partnerships.

List of some key stakeholders

- City of Ottawa
- National Capital Commission
- Parks Canada
- Carleton University
- University of Ottawa
- National Arts Centre
- Department of National Defence,
- Neighbourhood associations
- Local residents
- UNESCO
- Experimental Farm and Arboretum

Stakeholder Interviews

The stakeholder interviews were an essential part of the background information process. They provided an opportunity for an in-depth discussion with key stakeholders and representatives of the local communities. It was necessary to obtain feedback directly from stakeholders for their local expertise and considerations regarding implementation.

The interviews took an open-ended approach, in which a broad range of canal related issues could be discussed, and follow-up questions could be asked. Generally the discussion revolved around the importance, functionality, and user experience of the Canal. More specific questions were asked, dependent on the stakeholder, and their geographical areas of expertise. The interviews were conducted via telephone, and were roughly 30 minutes in length. The stakeholders that were interviewed represented the University of Ottawa, the Capital Ward, and local community associations (Glebe, Ottawa South, and Ottawa East). Appendix 5 provides a detailed summary of the key themes and information that emerged throughout the interviews.

Summary

The stakeholder interviews resulted in excellent feedback to help shape our vision for the Rideau Canal. It is a vital greenspace and corridor through the City, providing park space that adjacent neighbourhoods and the University of Ottawa lack. The Canal is a nice, functional space. It is valued and some areas do not need significant

interventions. The quiet character of the canal is important and people want to access the Canal.

The Canal is basic and functional. Attempts to enliven the space such as 8 Locks Flat and ongoing activities like the skateway and Winterlude are highly valued. People would like to see more of this, more events and more opportunities for good urban experiences.

The Canal also has several problems. There is conflict between people using all of the different modes of transportation along the canal. The parkways were initially designed for early 20th century leisure driving by horse and carriage. Today, they are overwhelmed with higher speed commuter traffic. Pedestrians, cyclists and drivers use this space to commute. The paths are not wide enough for pedestrians and cyclists, and the traffic on the roads is high speed and dangerous for sharing or crossing. There are not enough safe crossing points to the Canal and therefore access to this vital greenspace is difficult.

Implications

The stakeholder interviews provided an opportunity to engage the local residents to whom the Canal is of upmost importance. It provided better understanding of the issues and opportunities of the Canal, which this project aims to address. Some of the recurring issues identified the stakeholders included: accessibility, a lack of amenities or 'things-to-do', and the importance of the Canal Corridor as a neighbourhood park space, which is scarce in many central Ottawa communities. The findings of the stakeholder interviews helped inform the vision and policies of this report.

5

Vision, Goals & Canal Corridor Planning Approach

5.1 Vision

The Rideau Canal should be a vibrant and integral element of the City of Ottawa that improves connections and balances past and future identities of the Nation's Capital.

The vision statement is supported by a set of goals. Supporting principles are proposed to achieve these goals.

5.2 Goals

Goal One: Improve Connectivity across the Canal.

- Reduce physical barriers to the Canal.
- Provide more access points to the waterway.
- Create links across the Canal.
- Protect and enhance existing high quality sightlines.



Image 18. Cyclists along the Corktown Bridge

Goal Two: Integrate the Canal with surrounding neighbourhoods.

- Improve compatibility of surrounding built form.
- Encourage appropriate surrounding land uses.
- Provide a variety of public space types appropriate to surroundings.
- Transform the Canal from an edge to a spine.



Image 19. Urban life of ByWard Market

Goal Three: Create a journey and destination.

- Improve safety for users.
- Create vibrant public spaces and landmarks.
- Promote new uses and activities.
- Connect points of interest.
- Rediscover lost spaces.



Image 20. Kayaking along the Rideau Canal

Goal Four: Respect the Canal's character and significant heritage.

- Preserve significant cultural heritage values and elements.
- Maintain scenic viewscapes.
- Promote civic and national identity.
- Enhance appreciation and interpretation of Canal heritage.



Image 21. Hartwell Locks, Rideau Canal

Goal Five: Create Partnerships.

- Improve inter-jurisdictional collaboration.
- Involve stakeholders in planning processes and implementation.



Image 22. Official opening of the Corktown footbridge

These goals stem from the vision for the Canal and will serve to focus the objectives, policies and strategies of this report as outlined in Image 23. These goals will be accomplished through supporting policies as part of a comprehensive planning approach.

5.3 Planning Approach



Image 23. Planning approach hierarchy

The remaining sections in this chapter look at the Rideau Canal first at the city scale, then at the neighbourhood scale and conclude by providing a rationale for this comprehensive approach.

Rideau Canal Corridor

The Rideau Canal has been a predominant feature of Ottawa throughout its history, and has shaped how the City has grown over time. The Canal is currently used as a greenspace corridor for cars, cyclist and pedestrians. The identity of the Canal is associated with both the cultural heritage of the waterway and the surrounding parkway greenspace. While the Canal provides a positive year-round asset for the City, there is very little daily animation.

The image of the Canal is tied closely to the operation of the locks for boats in the summer and to skating during the winter. In addition, the Canal is a distinct and recognized example of 19th century engineering. Yet this recognition does not always translate into ongoing activities and use throughout the year.

Solutions to address the limited use can be reconciled through a comprehensive approach and partnerships. For example, existing seasonal festivals elsewhere in the City could hold more intimate events near the Canal, making it a destination while promoting awareness of the World Heritage Site. Additionally, the City of Ottawa needs to coordinate with the NCC and Parks Canada to integrate ideas and policy directions for the Canal with the surrounding areas of the City.

At the city scale, the Canal has the potential to be a City centrepiece for urban living and experience, while showcasing its dynamic past. Better integration of the Rideau Canal into the city context must unite three essential building blocks of the City: land use, connectivity and public space.

Adjacent Neighbourhoods

At a regional scale, the Rideau Canal passes through the heart of Ottawa, but upon closer examination at a local scale, it frequently acts as a barrier between neighbourhoods. It is important to consider how these neighbourhoods address the Canal from a policy, built form and user experience. Although no neighbourhood extends across the Canal, the waterway acts as a common element to all adjacent neighbourhoods and provides a continuous open space feature to residents.

Enhancing connections across the Canal and in between neighbourhoods can enhance the image and activity within the Corridor. For example, the Corktown Bridge has provided a pedestrian link between previously unconnected neighbourhoods. As a result, students from the University of Ottawa have improved access to Centretown, which provides an alternative to the Sandy Hill neighbourhood. Furthermore, the bridge has other intangible effects, including new views, enhanced experiences and enhanced activity and surveillance. The impact of the Corktown Bridge demonstrates the capacity of Canal crossings to have a transformative effect on neighbourhoods, and its success suggests a demand for more crossings.

Neighbourhoods can benefit from the Canal not just as a transportation corridor, but as a recreational amenity and gathering space. This advantage coupled with existing rich heritage both along the Canal and in surrounding neighbourhoods can create new synergies and senses of place that permeate into the surrounding urban fabric.

Objectives, Policies and Strategies

The current state of the Canal is a result of stakeholders and agencies working in isolation. The NCC's policies for managing the greenspace along the Canal have preserved the Corridor's transportation and scenic function. Parks Canada has focused on maintaining the navigation channel and preserving the Canal's integral heritage. The City of Ottawa's secondary plans largely treat the Canal as an edge and reinforce the Canal's continued use as a transportation corridor. In addition, the City has not provided connections across the canal and discouraged new uses and activities. These policies from different jurisdictions and agencies have fallen short of providing a comprehensive planning strategy.

It is imperative that any planning or policy framework that addresses the Canal consider connectivity to and across the Canal, public space along the Canal, and the land uses surrounding the Canal. These elements must be examined comprehensively with consideration of past and future identities to develop policies and strategies that will guide future animation and partnerships that reflect the local and national importance of the Canal.

The following chapters will outline a comprehensive planning approach to reanimate the Canal. Building on the vision and goals of this chapter, specific objectives, policies and strategies are identified for each of the three Corridor building blocks, including land use and built form, connectivity and public space.

6

Public Space

6.1 Overview, Challenges and Opportunities

The centre of the Rideau Canal study area is defined by a linear open space system that extends eight kilometres through the City of Ottawa. Although the majority of open space is federally owned, it adds tremendously to the City's overall greenspace network while providing recreational opportunities for both local residents and tourists. The perimeter of this open space defines the edge of the surrounding neighbourhoods, which consist primarily of residential properties, city-owned roads, sidewalks, parks and several major institutions. Building on these existing functions, the public space strategy aims to enhance the quality and diversity of the Canal's public realm in order to

transform it from an edge into an integral part of the surrounding neighbourhoods.

This chapter outlines the main issues and opportunities that relate to public space along the Canal Corridor. This is followed by objectives and policies for enhancing public space, which are then applied to the Canal through site specific strategies.

Challenges

The existing of public space along the Canal is uniformly treated as a linear greenspace that functions as a movement corridor and an edge to the adjacent neighbourhoods. Although this greenspace provides high scenic and recreational value, the Canal lacks a variety of public space types and activities. As a result, there are few destinations and gathering areas that add to the Canal's richness and

vibrancy. There is often dense vegetation and an abundance of empty space at the transition between NCC and City jurisdiction along the Canal. This tends to cut the surrounding neighbourhoods off from the Canal by blocking views and creating voids. These factors all contribute to the ongoing treatment of the Canal's open space as an underutilized edge that inhibits integration with the adjacent neighbourhoods.

There is a range of physical and administrative challenges to enhancing the public realm. Poor sightlines, lighting and limited night uses reduce the feeling of safety along some stretches. The ability of the open space to support new uses will need to consider the limited infrastructure on lands directly adjacent to Canal. The City of Ottawa does not own any of the open space or water along the Canal, so interventions will need the support of Parks Canada and the NCC. Parks Canada's interests lie in conserving the Canal's cultural heritage and maintaining a functioning waterway. The NCC envisions the Canal as defining feature of Canada's Capital, which reflects its image and identity.

Opportunities

There are several opportunities to add to the diversity of public spaces and activities, better integrate the Canal with surrounding neighbourhoods and build cooperative and mutually beneficial partnerships. Underutilized and strategically located sites can be targeted to introduce new amenities and activities while emphasizing the waterway as a unique and defining element. Enhancing new spaces could build on existing NCC pilot projects that use tactical urbanism or temporary interventions in order to test new ideas in a low impact and cost-effective manner. Improving the transition spaces with adjacent neighbourhoods and extending the public realm into the urban fabric could transform the current

edge function of the Canal. Collaborating with local communities to implement new uses that serve their needs would encourage innovative and place responsive ideas while fostering active stewardship. Ultimately, the public space strategy aims to build these existing strengths in order to increase the public's use and appreciation of the Rideau Canal.

6.2 Objectives and Policies

The objectives and policies aim to create a series of unique public spaces that add to the Canal as a whole while integrating it with the surrounding City and neighbourhoods. The policies focus on providing a diversity of both land and water-based spaces that are identifiable, support a mix of activities and users, are comfortable and reflect the character and interests of both the National Capital Region and local neighbourhoods. The policies apply to all NCC, Parks Canada and City owned public space. Although the majority of land is not owned by the City of Ottawa, both national and civic interests will benefit by creating a more vibrant and diverse of public realm.

1) Spaces

Increase the diversity of public spaces along the Rideau Canal Corridor.

- Utilize seven different types of public space based on their unique functions and settings, including national, civic, neighbourhood, water, transition, bridge underpasses and the Arboretum.
- Enhance the Canal's open space network by creating a series of complementary and linked public spaces that

4) Identity and History

Ensure public spaces have an authentic and unique identity that celebrates the Canal's rich historic character.



Image 24. The historic Ottawa lockstation

The historic Ottawa Lockstation is a key feature that connects the history of the Rideau Canal to City of Ottawa.

- Utilize and build upon the inherent qualities of each site, including significant views, access to the water, heritage elements, as well as the character and scale of the built form.
- Celebrate and integrate the Canal's rich heritage into public spaces through a range of interpretative opportunities including public art and lighting.

- Encourage landscape treatment that reflects the surrounding neighbourhood character while repeating the use of materials and elements, such as wood, stone, native plants and water to unify the public spaces.
- Conserve cultural heritage landscapes, including the Arboretum, lock stations and parkways.

5) Edges

Enhance the edges of public spaces and provide clear transitions with surrounding neighbourhoods.

- Encourage adjacent neighbourhoods, universities, and buildings to contribute to the use of public spaces by creating active edges and ground level uses around the perimeter that spill out into public spaces.
- Locate high activity spaces in the most visible locations, such as at bridge crossings and mainstreet intersections.
- Introduce new temporary uses where perimeter uses are limited or too far away.
- Improve sight lines and connections with adjacent neighbourhoods and sites to provide a sense of continuity and passive surveillance.
- Integrate Canal open space with adjacent municipal parks, such as Brown's Inlet and Patterson Creek, through the provision of neighbourhood based spaces and uses.

6.3 Public Space Strategies

The proposed public space strategies aim to transform the current Canal open space network from a uniform corridor into a series of unique public spaces. Seven different types of public spaces are recommended with each type supporting a unique set of characteristics and activities. Each public space aims to build on the existing site context and features, while proposing new, innovative and complementary uses that will add diversity to the current open space network and better integrate the Canal with the surrounding neighbourhoods. Map 7 identifies the locations of the seven different types of public space proposed along the Canal Corridor. The diversity, distribution and links to these spaces provide a good foundation for a comprehensive public realm network.

6.3.1 National Spaces

In the centre of downtown Ottawa, stretching from the Ottawa River to Laurier Avenue, there are several significant national spaces that are located directly adjacent to the Canal. These spaces include the NAC terraces, the Conference Centre walkway, Confederation Square, the Plaza Bridge and the Ottawa Locks. Currently, these national spaces function in isolation. The strategies in this section aim to ensure these National spaces reflect the image and identity of the Nation's Capital by providing inviting, unified and vibrant spaces that emphasize the surrounding monumental buildings.

- Introduce pop-up uses, such as food vendors, along the edges of the NAC and Convention Centre.
- Provide temporary crossings across the Canal at water level.
- Provide access for paddling on the Canal during non-boating hours.

- Remove the guardrail and add a range of moveable and informal step seating that encourage people to linger along the Canal's edge.
- Encourage new day and night programming, events and activities such as water-based performances that face the grassy slope beside the NAC, and beneath the plaza bridge.
- Explore the potential to incorporate a combined water fountain, light and music show to complement Mosaika
- Create transformable winter spaces that provide shelter during the cooler months and celebrate Canada's winter culture through a range of programming that starts before and extends beyond Winterlude.



Image 25. Confederation Square



Image 26 & 27: The edge of the Canal beside the NAC existing and with possible pop-up uses and seating

6.3.2 Civic Spaces

The Public Space Plan identifies four civic spaces located next to the Canal, including Confederation Park, City Hall Plaza, Dow's Lake Square and Lansdowne Park. Currently, Ottawa City Hall and Confederation Park are close to the Canal but have no visual or physical connection with the waterway. Dow's Lake and Lansdowne Park are two proposed civic spaces that are strategically located next to the Canal. All of these sites feature iconic public buildings that contribute to the City's image and provide a large gathering area for public events. The strategies in this section aim to enhance the relationship of existing spaces with the Canal and to create two new city destinations that support both large events and everyday use.

Strategies

- Design Lansdowne Park and Dow's Lake civic spaces to be flexible, multi-purpose and provide sufficient space to accommodate large events.
- Provide new amenities at Dow's Lake, including a swimming pool, saunas, a water sport centre and public square.
- Integrate the Lansdowne Park redevelopment with the Canal, by creating strategic views of the Canal and Aberdeen Pavilion by increasing permeability of the existing vegetated buffer to better link the site to the adjacent NCC open space. Add ground level uses to the stadium structure fronting the Canal open space.
- Improve the transition between the Canal and Ottawa City Hall by framing views and providing a continuous promenade and water feature that leads users to move between these sites.

- Improve the transition and sightlines between Confederation Park and the Canal pathway by using a similar urban plaza treatment as the Canal Esplanade located across from the Convention Centre. Continue paving materials across access road.
- Encourage temporary interventions and installations that promote city initiatives, public engagement and community-based organizations, such as pop-up town halls.



Image 28. The Lansdowne Park redevelopment plan

The redevelopment of Lansdowne Park will add Civic Space to the Canal Corridor, but it must integrate with the waterway.



Images 29 & 30. Before and after a pool in Dow's Lake

A temporary and moveable pool in Dow's Lake will create a landmark and public venue that enhances Ottawa and the Canal. (See Appendix 3 for more information)

6.3.3 Neighbourhood Space

There are four existing and potential neighbourhood spaces that extend from the Canal into the surrounding neighbourhoods. These spaces include Patterson Creek, Brown's Inlet and King's Landing. Although these spaces are strategically located, they currently lack amenities and facilities that support the local community's needs and events. The strategies within this section focus primarily on enhancing use by surrounding residents while contributing to the sense of community.



Image 31. Central Park at Patterson Creek in the Glebe

Strategies

- Provide new amenities that support the recreational needs of local residents. Emphasize amenities that encourage interaction with water, such as splash pads, step seating, fishing docks and launching areas for paddle sports.
- Maintain the park setting while strategically adding amenities at intersections and access points to create parkettes with more defined edges and active uses.
- Construct low-key and integrated public facilities in Central Park and Brown's Inlet Park that support community gatherings and events, such as a gazebo or amphitheatres.
- Enhance the landscape treatment to reflect the identity of local neighbourhoods through gateway features, ornamental community gardens and local art installations.
- Naturalize the water's edge while maintaining low growing vegetation to frame views of Patterson Creek and Brown's Inlet. These natural areas could provide natural playscapes and nature interpretation opportunities for children.
- Encourage local stewardship and partnerships through community-led initiatives and events such as tree planting, communities in bloom, barbeques, small performances and movies in the park.

6.3.4 Water Spaces

Several water-orientated spaces are proposed along the length of the Canal (See Map 7). Currently, the open space system provides very few spaces that invite users to the water's edge or allow them explore the waterway itself. The strategies in this section focus on creating more water-orientated spaces and adding uses that encourage greater interaction and enjoyment of the Canal Waterway. There are several good examples of water based space on the Canal including the Canal Esplanade. These should be enhanced and added to.



Image 32. The Canal Esplanade



Image 33. The RiverWalk in Calgary, AB

The RiverWalk in Calgary provides terraced steps along the riverbanks, maintains open views and a functional public space directly adjacent to the water. Implementing this type of treatment for stretches from the NAC to the Corktown Pedestrian Bridge would provide ample seating, less restricted views and a space where residents, students, workers and tourists can linger at the water's edge (See Appendix 3 for more information).

Strategies

- Create a variety of seating options that are orientated towards the canal, including stepped seating, moveable chairs, sitting walls and benches. Guardrails should be limited in these areas to keep views open, while seating could be used to create a protective barrier for cyclists.
- Provide facilities for water sports at different points along the canal.

- Implement temporary structures, such as boardwalks, observation decks, urban beaches and floating pop-up retail and services to animate the water's edge.
- Providing additional docking locations at key nodes to support water-based activities, uses and performances, such as tailgating adjacent to Lansdowne Park and movies or symphony on the Canal near the downtown.
- Naturalize portions of Dow's Lake's shore to add visual interest and ecological diversity to the existing landscape.



Image 34. Public canal space in Ljubljana, Slovenia

Image 34 is an example from Slovenia's capital, Ljubljana, illustrating a site specific public space feature that provides users with an area for passive recreation (See Appendix 3 for more information).

6.3.5 Transition Spaces

There are many open grass or vegetated areas found along the length of the Canal that lie between NCC's parkways and the surrounding neighbourhoods. These spaces, highlighted in purple on Map 7, act as a transition zone between the parkway landscape and the bordering neighbourhoods, but they currently sit empty and underutilized and can block vies and access between the canal and neighbourhood. The strategies in this section aim to enhance the interface of the Canal and surrounding neighbourhoods by introducing complementary uses that transform these empty spaces into active places. Additionally, the proximity of transition spaces to existing neighbourhoods makes them well-suited for community driven interventions.



Image 35. Under-utilized space along the Canal Corridor

Strategies

- Transition spaces should reflect the character of the surrounding neighbourhoods through distinct landscape elements that reflect the architectural style and materials and provide clear sightlines with the Canal.
- Commission local artists to create public art at primary transition points that reflect the character of each neighbourhood. Major access points and intersections are well suited for gateway features.
- Introduce new uses that meet the needs of the local resident and foster community building through pop-up interventions in areas with high pedestrian and cycling traffic. Innovative ideas from local residents should be encouraged and may include food trucks and vendors, seating areas, pop-up parks, and small-scale community events and performances. Less travelled sites are well suited for adopt-a-boulevard program where community groups maintain ornamental gardens and undertake tree planting.
- Provide active recreation facilities, such as outdoor exercise areas and small sports courts in areas with adequate setbacks and screening from parkways.
- Encourage future development at Carleton University to establish gathering spaces that are orientated to the Canal. Future development at the north edge of campus provides excellent views of Dow's Lake. Both Universities should establish clear gateways adjacent Hartwell's Locks and the Nicholas Pedestrian underpass.



Image 36. Tactical urbanism revitalizing a square in Philadelphia, PA

6.3.6 Bridge Underpasses

These spaces are located under major expressways and arterial roads. Currently these areas are underutilized, bare and uninviting. The strategies in this section aim to transform these dead spaces into more vibrant and welcoming environment places. The 417 underpass (Image 37) is an example of such an uninviting and underutilized space. In London, England an underpass was transformed for several weeks into a theater and workshop space during the Create festival in 2011. This illustrates one way underpasses can become destinations (see Appendix 3 for more information).

Strategies

- Add unique lighting to create a welcoming and safe space, particularly under the Highway 417 and Bronson Avenue bridges.
- Incorporate public art under each bridge to create a unique experience while providing continuous points of interest along the length of the Canal.
- Enhance space below the Plaza Bridge through ongoing programming, such as heritage photo installations, musical and theatrical performances.
- Introduce pop-up retail and food vendors under the Plaza, Nicholas and Highway 417 bridges as the bridges already have servicing and utilities.



Image 37. The 417 bridge underpass

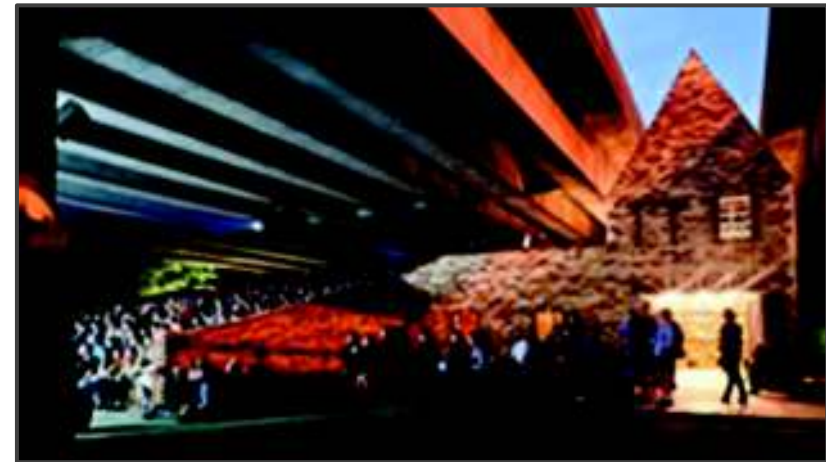


Image 38. Folly for a Flyover in London, England

6.3.7 Arboretum

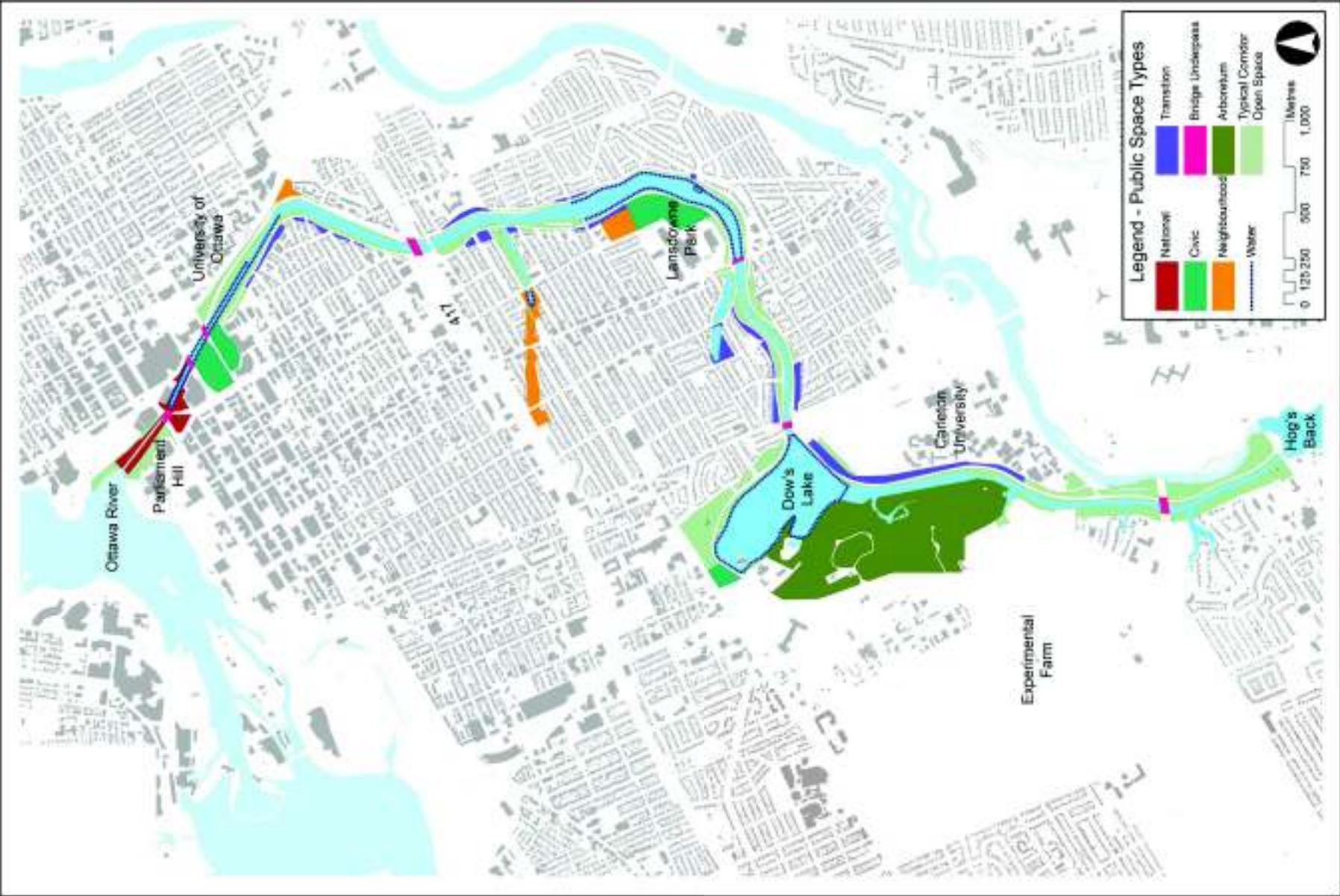
The Arboretum is a large and scenic greenspace of trees and winding paths. This site is a unique and natural space for walking and picnicking, but is isolated from the rest of the Canal's public space network. The strategies in this section aim to strengthen the visibility and visitor experience of this national historic site to promote the Arboretum and Experimental Farm's mandate and programs. An example of these ideas can be seen in image 39 a light show in a natural space in Chicago, Illinois.

Strategies

- Improve Arboretum entrance area at Dow's Lake Pavilion by creating a clearly identifiable gateway garden.
- Introduce uses and activities that support the mandate of the Experimental Farm, including learning landscapes, symphony in the park and a winter illumination festival.
- Utilize unique lighting displays along the trail loop to support greater nighttime use.
- Integrate a looping trail network around Dow's Lake that links Carleton, Commissioners Park and the Arboretum. Provide additional side trails and signage that link to other Arboretum sites.
- Naturalize Dow's Lake shoreline to add visual interest and ecological diversity to the existing landscape.



Image 39. Unique lighting enhancing a park in Chicago, IL



Map 7. Proposed public space around the Rideau Canal

7

Connectivity

7.1 Overview, Challenges, and Opportunities

The Rideau Canal Corridor is presently regarded as an urban greenway because local citizens and visitors utilize it as both a transportation corridor to move in and out of the urban centre and also as an open space corridor for recreational purposes. The Canal Corridor has potential to enhance connectivity by balancing a diversity of transportation modes along the waterway and throughout the City of Ottawa. However, in its present state the Canal faces a number of challenges that should be addressed to integrate the corridor into the surrounding City. The current character and design of the corridor remains limited in functions as a linear open space lined with auto-oriented thoroughfares on either shoreline.

The connectivity strategy outlines the main challenges and opportunities that relate to existing transportation networks within the Canal Corridor and connections to the City at large. It is followed by objectives and policies recommended for enhancing the connectivity.

Challenges

The Rideau Canal Corridor presently contains a substantial network of pedestrian, cycling and road infrastructure that can be enhanced to improve the connectivity along and across the Canal and into adjacent neighbourhoods and districts. Some of the key challenges which need to be addressed in order to facilitate a more accessible and safe movement network within the corridor include:

- A general lack of clear and distinct roadway crossings at numerous intersections along the corridor,
- Physical and psychological barriers created by heavy, fast moving traffic along both Colonel By Driveway and the Queen Elizabeth Driveway which isolates the Canal, long stretches of the Canal with no direct bridges or crossings over the waterway
- Limited public access to the water both in terms of dock infrastructure, and publicly-accessible methods of water transportation such as canoes, kayaks and water taxis.

The Rideau Canal Corridor appears to lack distinct connections to many bordering uses and networks in surrounding neighbourhoods. This disconnection creates barriers and a sense that the waterway is separated from the fabric of the surrounding City. In order to reanimate the Canal, it will be essential to not only enhance the infrastructure within the corridor, but also reintegrate the existing movement networks to adjacent uses and networks of the greater City.



Image 40. Lack of connectivity along the Rideau Canal

Opportunities

While the Rideau Canal Corridor has strong internal movement along the different transportation routes that line the waterway, there are several immediate opportunities to build stronger connectivity both with citizens and the fabric of the surrounding City. Enhancing access, movement, links and safety will make the linear corridor a more permeable and attractive space to current and future users. Simple interventions, such as new wayfinding signage and pathway improvements, can promote a greater sense of discovery along the Canal. More complex interventions, such as the proposed Fifth Avenue Bridge and separated bike lanes with bike priority signal lights can alter how users move in and out of the linear space in their daily routines. Additionally, there is great potential for temporary interventions, such as floating bridges during off-peak hours and narrowing road widths seasonally to improve the interface between pedestrians, cyclists and cars. Ultimately, animating the Rideau Canal will depend on improving existing connections between the Canal Corridor and surrounding spaces and networks, including mainstreets, universities, transit stations and the urban core of Ottawa.

Map 8. illustrates connectivity along and across the Rideau Canal and suggestions for new and improved connections.

7.2 Objectives and Policies

1) Access

Enhance user access to the Rideau Canal waterway corridor. See images 41-42 for before and after ideas.

- Develop clear and identifiable crosswalks at priority intersections and pedestrian islands at secondary crossings to increase the flow and frequency of users to the waterway.
 - Extend strong pedestrian links between priority mainstreets and the Canal Corridor.
 - Utilize traffic calming measures along Colonel By Drive and Queen Elizabeth Driveway through the implementation of existing city strategies to create safer access points to Canal pathways.
-
- Implement temporary structures, such as boardwalks and observation decks to encourage a diversity of small watercraft on the Canal during off-peak hours. This can be done in partnership with the NCC and Parks Canada to enhance users' access and interaction with the waterway.
 - Improve permeability at the water's edge through removal of physical barriers at key sites in partnership with NCC and Parks Canada.
 - Improve user experience and draw to the linear corridor by highlighting scenic and historical viewsapes along the Canal's pathway network.



Images 41 & 42. Enhanced access along the Canal

City of Ottawa Traffic Calming Strategies

- Raised or textured crosswalks
 - Pedestrian bulb-outs
 - Speed humps
 - Mini traffic circles
 - Turning prohibitions
 - Temporary street closures
 - Neighbourhood speed watch programmes
- (City of Ottawa, 2012)

2) Movement

Enhance movement networks on and adjacent to the Rideau Canal waterway corridor in a manner that balances all modes of transportation.

- Improve walking and cycling connections through and between public spaces.
- Separate pedestrians and cyclists by implementing wider multi-use pathways and expanding bike lanes seasonally onto Colonel By Drive or Queen Elizabeth Driveway.
- Create movement across and along the Rideau Canal through techniques that respect the heritage, scale and character of the waterway.
- Promote the placement of new bike-share locations along the Canal in order to provide users with the opportunity to take short canal-specific trips.
- Explore temporary floating structures to evaluate the desirability of additional pedestrian crossings in specific areas during off-peak hours as pilot projects in balance with Federal policies and agencies. See images 43-45 for temporary floating bridge ideas.



Images 43-45. Temporary floating bridge across the Canal

3) Links

Enhance and develop new links both across the Rideau Canal waterway corridor and into adjacent neighbourhoods.



Image 46. Illuminated parking lot signage in Germany

- Improve and expand permeability of pathways from the Canal into surrounding neighbourhoods.
- Integrate Canal pathways with broader citywide and regional cycling and pedestrian networks.
- Direct users to and from key areas both along the waterway and in adjacent neighbourhoods by utilizing consistent and innovative methods of wayfinding.
- Encourage institutions to integrate with Canal Corridor through new infrastructure and pathway partnerships to improve direct connections and sightlines.
- Connect Canal Corridor pathways to transit nodes and destination centres.



Images 47 & 48. Crosswalks and wayfinding signage

4) *Safety*

Enhance safety and comfort for all modes of transportation.

- Adjust lane widths seasonally in certain areas to improve safety of pedestrians and cyclists.
- Improve intersection safety for all modes of transportation at designated mainstreets, through design efforts such as raised pavement crossings, bulb-outs and innovative lighting strategies.
- Implement bike priority signals and develop shorter crossings at key intersections.
- Construct and retrofit all multi-modal Canal pathways to be based on universal design principles.
- Use strategic landscaping strategies and native plant species to mitigate adverse effects from major parkways adjacent to Canal Corridor.

5) *Partnerships*

Enhance connectivity throughout Rideau Canal waterway corridor through partnerships.

- Support and encourage coordinated planning efforts among City of Ottawa departments, the NCC and Parks Canada to ensure walkability, connectivity and active transportation for all are prioritized along the Rideau Canal Corridor.
- Promote cross-country skiing along the Rideau Canal Corridor with the NCC to offer an alternative to skating along the Canal and provide new opportunities to commute into the urban centre outside of the Winterlude period.

7.3 Connectivity Strategies

7.3.1 Parkway Network

Colonel By Drive and Queen Elizabeth Driveway are the two main thoroughfares that travel parallel to the Rideau Canal. These two rights-of-ways are used primarily for the movement of vehicular traffic both into and out of the downtown core of Ottawa. Although both of these roadways provide a pleasant and scenic route into the urban core, they have become additional barriers isolating the Canal from adjacent neighborhoods. The goal of the strategies in this section is to ensure that Colonel By Drive and Queen Elizabeth Driveway maintain their function as ceremonial routes into and out of the City while increasing permeability of pedestrian and active transportation users across the roadway.

Strategies

Colonel By Drive & Queen Elizabeth Driveway

- Enhance existing entrance treatments for Colonel By Drive and Queen Elizabeth Driveway to give visual cues to drivers that they are entering an integral national and civic space.
- Implement landscape planting strategies to mitigate adverse effects from parkways and create attractive micro-spaces between parkways and linear open space.
- Enhance secondary crossings across Colonel By Drive through implementing innovative pedestrian island interventions to improve the interface between pedestrians, cyclists and vehicular traffic.



Image 49. Pottery Road Pedestrian Crossing, Toronto, ON

- Enhance direct connections and viewsapes between both Lisgar High School and the Rideau Canal Western Pathway and Immaculata Catholic High School and the Rideau Canal eastern pathway by retrofitting existing and developing new path links.
- Alter parkways lanes seasonally to encourage active transportation modes over vehicular options and reduce conflicts between vehicles and cyclists in a manner that balances the NCC's Parkway Policy Review and interests.

7.3.2 Street Network

There are a number of established neighborhoods situated adjacent to the Rideau Canal Corridor. Some local streets within these neighborhoods terminate at the Canal, yet they lack the appropriate infrastructure and design to provide

pedestrians and cyclists a distinct and safe intersection to connect to the canal. The strategies within this section will focus on rejoining the Canal Corridor with the surrounding local street networks and mixed-uses with the goal of reconnecting the corridor into the urban fabric of the city.

Map 8 identifies the main collector streets which intersect with Colonel By Drive and the Queen Elizabeth Driveway with special emphasis on mainstreet intersections.

Strategies

All of the streets that connect to the Canal should:

- Maximize existing links between mainstreets and existing bridges and the Canal by ensuring continuous-sidewalks or multi-use pathways extend to existing Capital Pathway Network.
- Utilize sequential and clear sightlines to the Canal to build up anticipation as users transition from the surrounding environment to the Canal Corridor
- Ensure distinct intersections with clear and identifiable crosswalks.
- Promote use of the Canal through interactive signage and wayfinding installations to draw attention and users to different focal points and public spaces along the Canal.

7.3.3 Capital Pathway Network

The Capital Pathway Network, under the jurisdiction of the NCC, is a valuable resource, which provides both residents and visitors with a multi-functional, expansive, and scenic network of trails on which they can travel in and out of the City of Ottawa. The strategies proposed within this section will focus on promoting the enhancement of the existing cycling and pedestrian pathways along the Rideau Canal.

Strategies

Cycling

- Use a variety of distinct wayfinding methods to direct users between the Capital Pathway Network and adjacent City streets.
- Bridge fragmented links between the Rideau Canal Pathways and surrounding streets through implementing short connections, in the form of visible multi-use pathways and pedestrian islands along parkways.
- Enhance cycling related amenities around the Rideau Canal, such as bike-share facilities, bike lock-up stations, and repair stations near activity hubs.
- Promote intermodal transitions and greater use of the Capital Pathway Network at proposed LRT and existing O-Train stations, including Canal-specific signage and infrastructure from stations to the Canal.

Pedestrian

- Separate pedestrian from cyclists by developing multi-use pathways or shifting the bike lanes onto major parkways seasonally.
- Implement a direct link between the Rideau Canal Pathways and the Bank Street Bridge to improve connections to the mainstreet through infrastructure interventions, similar to the stair connections at the Laurier Avenue Bridge, the Heron Road Bridge and the MacKenzie Bridge.
- Develop pedestrian crossings in and around Dow's Lake to support a better integrated trail system.
- Lighting and art installations adjacent to pathways should create new experiences for pedestrians, especially nearby the arboretum.

- Explore the potential of implementing light-weight boardwalks and observation decks in partnership with the NCC and Parks Canada to provide relief from traffic and promote new engagement and experiences with the Canal. An ideal location for this would be the segment of the Rideau Canal Pathway beginning east of the corner of Echo Drive and Mutchmor Road and ending just North of the corner of Colonel By Drive and Echo Drive as there is no separation between traffic and the existing path users beyond the curb



Image 50. Liffey Boardwalk in Dublin, Ireland.

The Liffey Boardwalk has successfully addressed the uncomfortable nature of an existing footpath along a congested roadway. This type of intervention could be ideal for the segment of Colonel By Drive, which overlooks Lansdowne Park.

7.3.4 Water Crossing



Image 51. The Aquabus

The Aquabus is a privately-operated ferry service that acts as a water crossing amenity to commuters and tourists in False Creek in central Vancouver, BC. This illustrates a creative small-scale way to improve water crossings.

There are currently nine structures, including footbridges and overpasses that provide pedestrians, active transportation users and vehicles an opportunity to cross the Rideau Canal. Although the crossings are spread along the length of the Canal, there are a number of long stretches that lack crossing infrastructure. For example, there are no crossings between the Pretoria Bridge and the Bank Street Bridge. The goal of the strategies of this section will be to stimulate the transformation of the Canal from a barrier to a permeable space by enhancing the current crossing infrastructure while

also implementing innovative projects to increase the attraction and enjoyment of the Canal corridor.

Strategies

- Explore opportunities to convert guard rail barriers to gates in strategic areas and add additional docks to improve the interface between users and the water.
- Implement temporary crossings in the form of floating bridges during off-peak hours in partnership with Parks Canada to improve the flow of users between the both sides of the Canal, as shown on Map 8.
- Provide more access points to the Canal in winter that enable non-skaters the opportunity to cross from one side to the other.
- Encourage seasonal pilot projects focused on movement both along and across the Canal by means of water taxis. Potential stops are indicated on Map 8.
- Explore options for a pedestrian and cycling bridge for Carleton University to Dow's Lake to create easier access for students across the Canal in partnership with other stakeholders.
- Integrate the proposed Fifth Avenue Bridge with adjacent neighbourhoods through creating clear and identifiable crossings across both parkways.



Image 52. Connectivity in Ljubljana through bridges

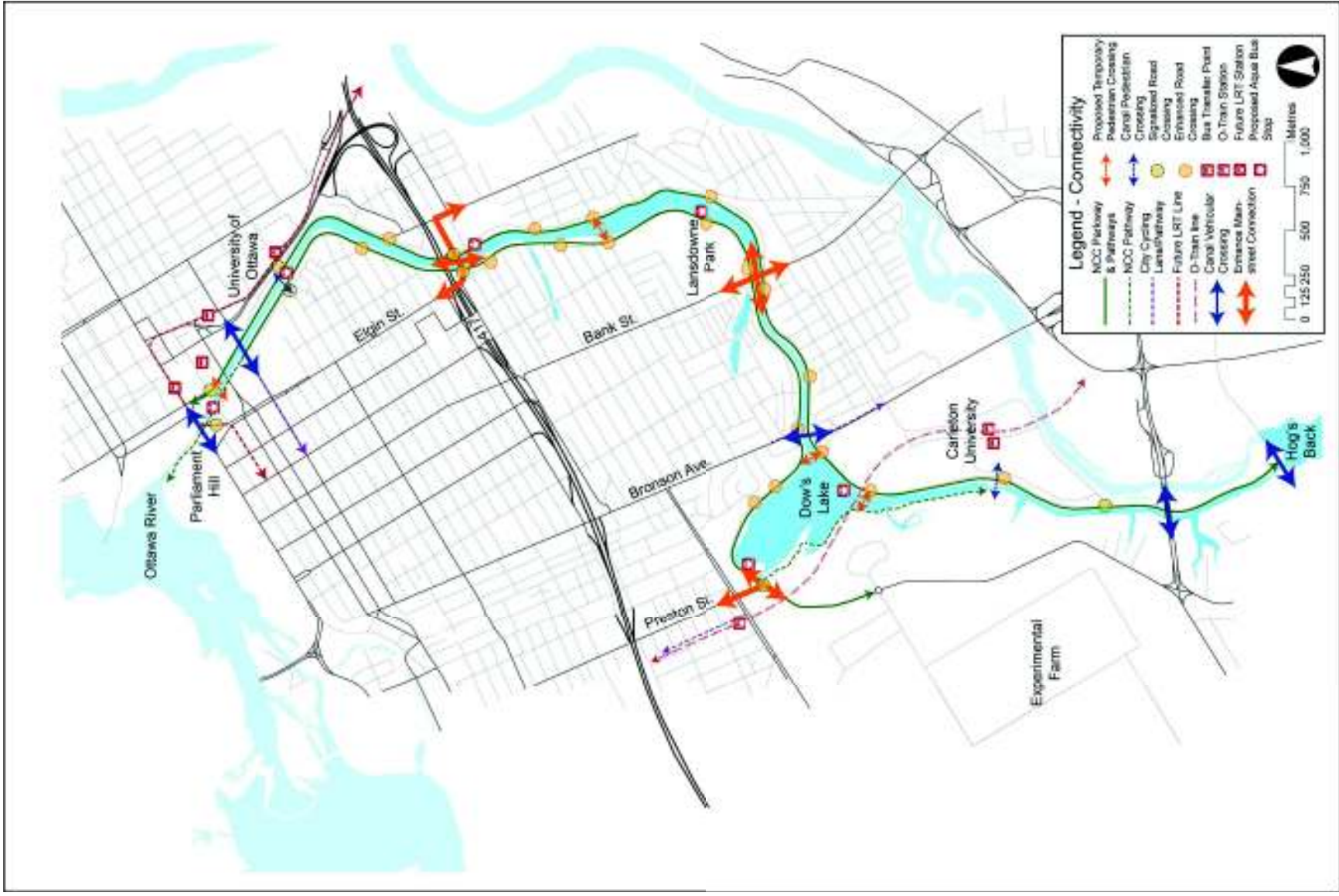
Example from Slovenia's capital, Ljubljana, illustrating how the importance of new footbridges implemented as part of a multi-year project of specific interventions along the Ljubljanica River (See Appendix 3 for more information)

7.3.5 Intersections

Intersections are the transitional spaces where different modes of transportation interact. However, with priority often given to vehicular traffic at intersections, pedestrians and active transportation users are often forced into vulnerable situations. To improve the interface between pedestrians, cyclists, cars and transit, we suggest the following strategies be implemented at locations identified on Map 8.

Strategies

- Develop clear and identifiable curb extensions and raised crosswalks.
- Develop a pilot project along parkways for separated active transportation lanes at intersections and protective traffic islands to give cyclists a priority and protected turning lane.
- Implement bike priority lights as a pilot project at intersections where protective traffic islands are not feasible.
- Install pedestrian priority push buttons where applicable.
- Paint advance yield lines at parkway intersections



Map 8. Proposed connectivity along and across the Rideau Canal

8

Land Use and Built Form

8.1 Overview, Challenges and Opportunities

The Rideau Canal Corridor intersects a wide variety of distinct neighbourhoods and land uses in the study area. The Canal adds significant value to the City and to the local residents, but also presents a number of challenges. At present, a broad mix of land uses, building types and densities abut the Rideau Canal. It is important to regulate how these buildings address and interact with the Canal.

The land use and built form section outlines the main issues and opportunities that relate to existing built form. This is followed by objectives, policies and more focused strategies for two special areas: North of Dow's Lake and Pretoria Bridge.

Challenges

The land directly abutting the Canal waterway is almost exclusively parks and open space for the entire study area. The planning of the areas along the Canal has resulted in few places for direct interaction with the waterway and a limited space for public facilities. Outside of the parkway system, areas adjacent to the Canal are primarily residential neighbourhoods. The Corridor provides local residents and visitors with a limited variety of destinations. Additionally, several existing buildings, such as the NAC, the Convention Centre and the department of National Defence, fail to address the Canal by having blank facades and utility facilities facing the water.



Image 53. DND and the Rideau Canal

The neighbourhoods bordering the Canal are also undergoing growth pressures. Old Ottawa South, Ottawa East, the Glebe and the Golden Triangle have been subject to infill projects at a variety of scales. It is essential to guide and regulate new buildings and infill around the Rideau Canal. These infill projects should respect the UNESCO's concerns regarding height and viewscales. Furthermore, it is important to integrate established neighbourhood character in surrounding areas.

Opportunities

The abundance of open space in and around the Rideau Canal provides a continuous parkway system. This allows for greenspace connections to major features in the City, such as

the Experimental Farm and the Ottawa River Pathway system. The Corridor also intersects a number of traditional mainstreets including Preston, Elgin and Bank Street. These streets have the potential to connect a wide range of urban uses to the Canal Corridor and continue the urban character of the surrounding City.

Currently, the Canal crossings at Preston Street, Bronson Avenue and Hawthorne Street create gaps in urban fabric that could be addressed through a more cohesive urban form. Lastly, it is important that the Rideau Canal's built form link to Transit Oriented Development (TOD) areas, such as Rideau, Laurier, University and Carleton.

8.2 Objectives and Policies

The objectives and policies provide a framework to regulate the land use and built form in areas adjacent to the Rideau Canal. They outline an approach to integrate the Rideau Canal into an urban fabric coinciding with existing City of Ottawa plans and policies. This section provides key objectives and policies that apply to all built form in and around the Rideau Canal.

1) Land Use

Offer a variety of land uses that enhance areas surrounding the Canal.

- Changes to land use designations should minimize disruption to residential neighbourhoods.
- Land uses should respect “character areas” and neighbourhood tradition.
- Land use designations should be adapted to allow greater mix of uses and greater activity along the Canal and adjacent areas.



Image 54. The San Antonio Riverwalk

The San Antonio Riverwalk highlights the importance of having a varied landscape with a diversity of facilities to stimulate economic and social activity.

2) Building Approach

Buildings adjacent to the Canal and parkways should be heights appropriate to the neighbourhood character and context.

- Buildings in close proximity to the Rideau Canal should introduce a setback to support a pedestrian environment. The determination of a setback should be based on location, building proportion and scale.
- Encourage pedestrian weather protection with colonnades, individual canopies, awnings and balconies in appropriate areas to encourage Canal level activity.

- Built form should coordinate with the principles and guidelines set forth by Community Design Plans, Secondary Plans and Campus Master Plans in adjacent areas.
- New development at the North end of Carleton University's campus should capitalize on its proximity to the Canal by using parking lots as placeholder land uses and creating safe pedestrian connections.
- University of Ottawa buildings should maximize views and accessibility to the Canal when possible.



Image 55. Carleton University

The Carleton University parking lots and open space on the South shore of Dow's Lake are underused.

3) Facades

Create interesting and unique building designs that contribute to the visual integrity of the Canal.

- Equal considerations should be given to all four facades of a building and blank walls should be avoided.
- Collaborate with institutional stakeholders to adapt current facades and ensure future building facades address the canal more directly.
- Address the existing blank walls adjacent to the Canal through creative and tactical urbanism.
- Create facades that are reflective of the historic nature of the Canal landscape.

4) Density

Infill projects should be a tool to improve, rather than capitalize on the Canal's value.

- Infill proponents must demonstrate to Ottawa's Urban Design Review Panel how their project enhances the Rideau Canal and follow the design principles of this report.
- Infill projects could occur on vacant properties so long as they keep to the neighbourhood character and are consistent with the City of Ottawa's infill policies.
- Building height restrictions should be maintained in areas North of Lisgar Street to maintain the visual integrity of Ottawa's Parliament Hill, see Map 9 for Parliament Hill view protection along the Rideau Canal.
- Infill projects should respect the surrounding neighbourhoods such as the Glebe, Old Ottawa East and Old Ottawa South and work with local stakeholders to determine appropriate use and built form.

- Tall buildings in close proximity to the Canal should explore the use of section 37 of the Planning act to exchange density bonusing for Canal improvements.



Map 9. NCC Capital view protection map

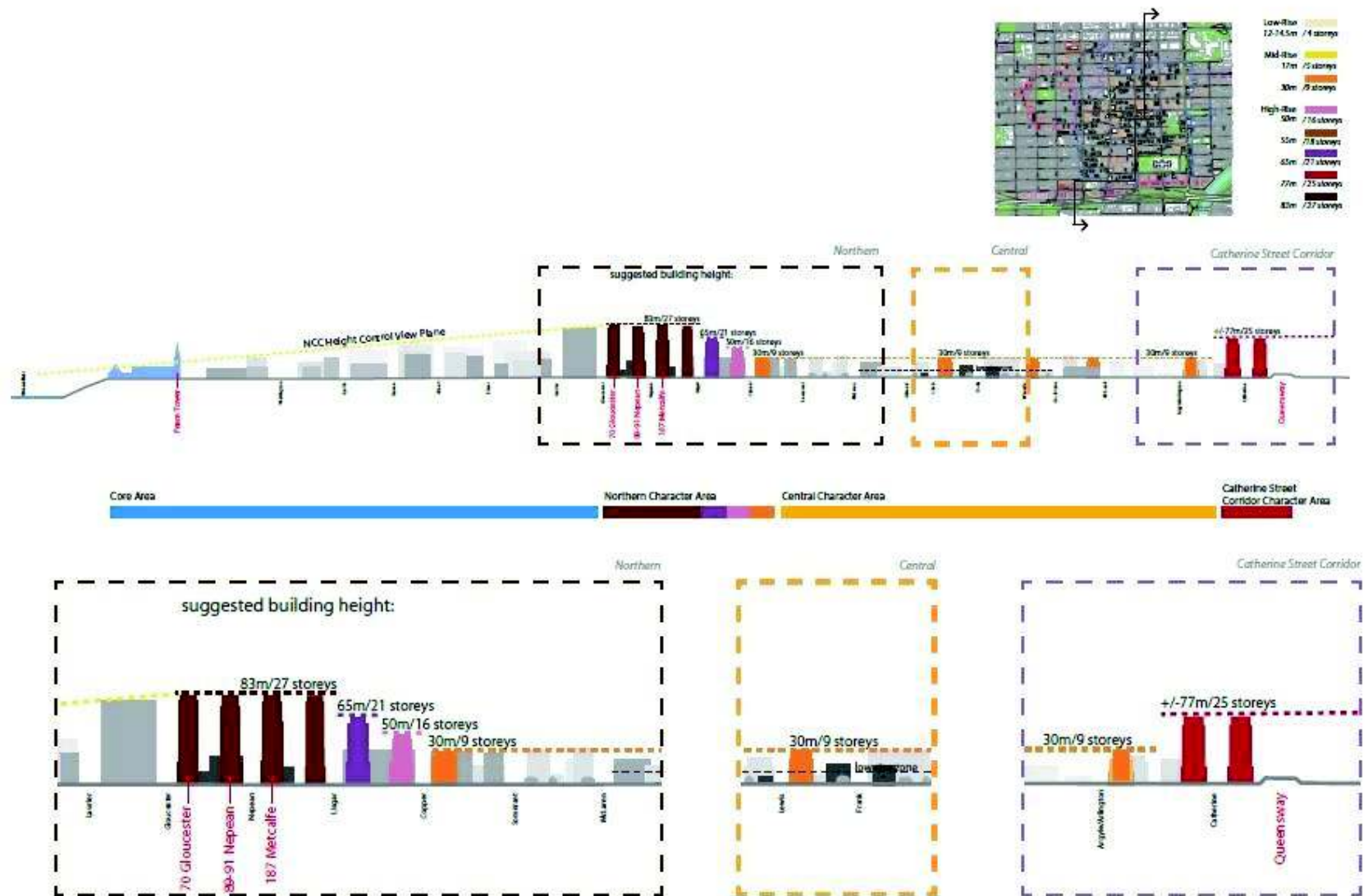


Image 56. NCC height control view plane diagram

5) Temporary Land Use

Promote temporary land uses along at key activity points along the Rideau Canal.



Image 57. Shipping container mall and coffee shop

Image 57 shows a temporary mall in Christchurch NZ that turned shipping containers into a lively, animated, public space and shopping destination. These containers offer flexibility in uses, while not requiring permanent infrastructure.

- Continue to create semi-permanent 'pop-up' tactical urbanism, following the NCC pilot projects to add a variety of uses and activities on the Canal. The current location of 8 Locks' Flat Canal Bistro, near the University of Ottawa would be an appropriate location.
- Create incentive programs to encourage small businesses to locate in the Canal Corridor.

- Designate areas for food trucks, to offer greater activity and flexibility of dining options.
- Enhance the use and understanding of heritage structures along the Canal through tactical urbanism interventions that attract users to the space.

6) Mainstreets

Integrate traditional mainstreets to provide a wide range of land uses for the Canal corridor.

- Encourage adjacent mainstreets such as Bronson Avenue, Bank, Main, Elgin, and Preston Street as landmarks and hubs of activity in the RCC.
- Encourage uses that are complimentary to the Canal parkway and pathway network.
- Commercial uses at grade should reflect the needs of parkway users and the local community.
- Extend the Elgin mainstreet area to Pretoria Bridge.
- Allow for urban fabric on mainstreets to be developed in close proximity to the parkway network.
- Locate temporary land use initiatives in close proximity to mainstreet entryways.
- Explore opportunities for the creation of new public facilities on mainstreets near the Canal. These facilities might include public washrooms, information services and recreational services.

7) Parkways

“Traditional Mainstreets generally present a *tightly knit urban fabric*, with buildings that are often small-scale, with narrow frontages and set close to and addressing the street. This results in a strong *pedestrian orientation* and *transit friendly* environment. Land uses are often *mixed*, with commercial uses at the street level and residential uses on the upper levels. These streets normally have a four-lane cross-section, on-street parking and adjacent development with *limited on-site parking*.” (Planning and Growth Management Department, 2006, page 1)

Enhance streets parallel to parkways, with direct Canal frontage, to include uses and building forms similar to traditional mainstreets.

- Allow residential zoning designations to include a greater mix of uses
- Increase accessibility and enhance street presence.
- Permit office space, and stand-alone commercial uses.
- Encourage pedestrian oriented commercial uses at grade.
- Uses should be complimentary with existing residential neighbourhoods, with minimal disruption to residents.

8) Lansdowne

Ensure a cohesive relationship between the Lansdowne Park redevelopment, the Glebe and the Rideau Canal.

- Explore possibility of expanding the patio structure at the Canal Ritz site, and amend open space zoning to introduce similar uses.

- Consider the opportunities for re-zoning Holmwood Avenue to fit better with the Lansdowne Redevelopment.
- Explore the potential for the development of a new parking structure in the Glebe, or potentially Old Ottawa East, that would serve local and regional purposes.



Image 58. The Lansdowne Park redevelopment

8.3 Special Areas

Areas that require special attention provide a significant opportunity to create new destinations along the Rideau Canal. There are key areas along the Canal that require further direction and special attention, see Map 10 for locations. The Special Areas section provides further policies for these locations. These strategies focus on regulating built form for two key areas along the Canal: North of Dow's Lake and the Pretoria Bridge

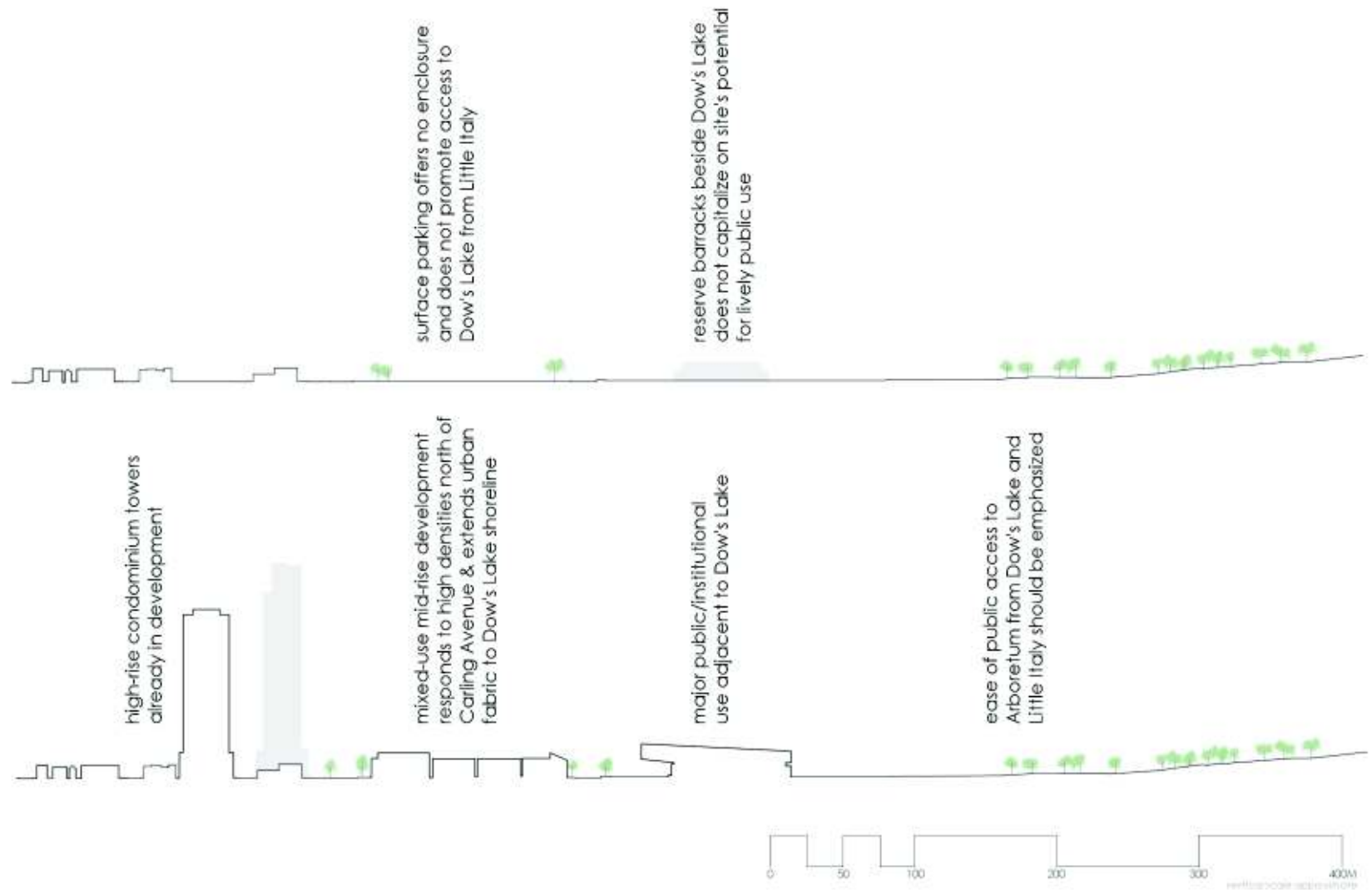


Image 59. Transect of current and possible development North of Dow's Lake

8.3.1 North of Dow's Lake

This special area is bound by Dow's Lake, the 417 Expressway, Bronson Avenue and Preston Street. This area was selected due to the numerous development opportunities and proposals at Preston Street and Carling Avenue. New buildings on the parking lots along Preston could form a continuous built connection to Ottawa's well-known Little Italy and provide a corridor that links with the Canal.

Strategies

- Encourage a built form corridor that extends the character of Ottawa's Little Italy from Preston and the 417 to the Dow's Lake Pavilion.
- Explore opportunities to upgrade and enhance pavilion facilities at Dow's Lake to expand its role as an active and passive recreation destination
- Encourage new and interactive building types along the various parking lots along Carling and Preston.
- Allow the Carling O-Train station to develop into a hub for activity in keeping with the City of Ottawa's TOD guidelines.
- Utilize the open space adjacent to the Dow's Lake Pavilion through temporary land use and tactical installations.
- Collaborate with stakeholders in the area, including the Department of National Defence, to create a unified and cohesive vision for the future.
- Recognizing regional transportation demand, the existing parking supply should be replaced through creative parking structure designs.

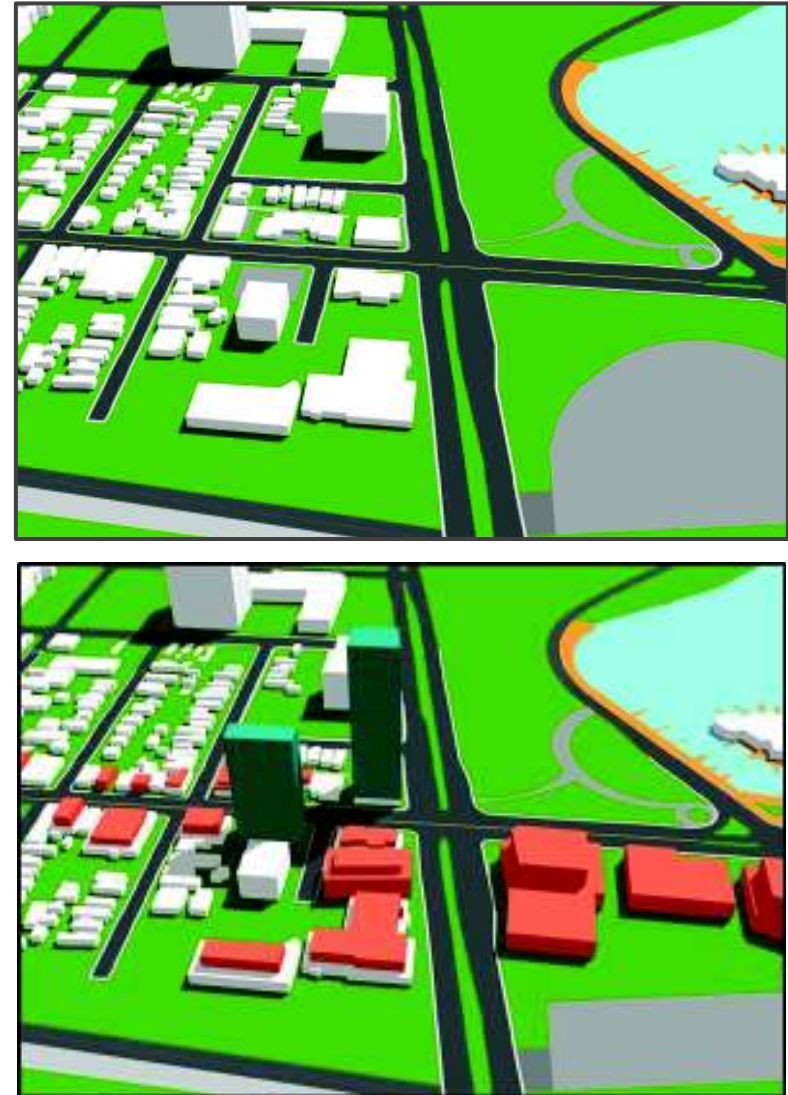


Image 60 & 61. Existing (white), development proposals (blue) and suggested built form (orange) at Preston Street and Dow's Lake

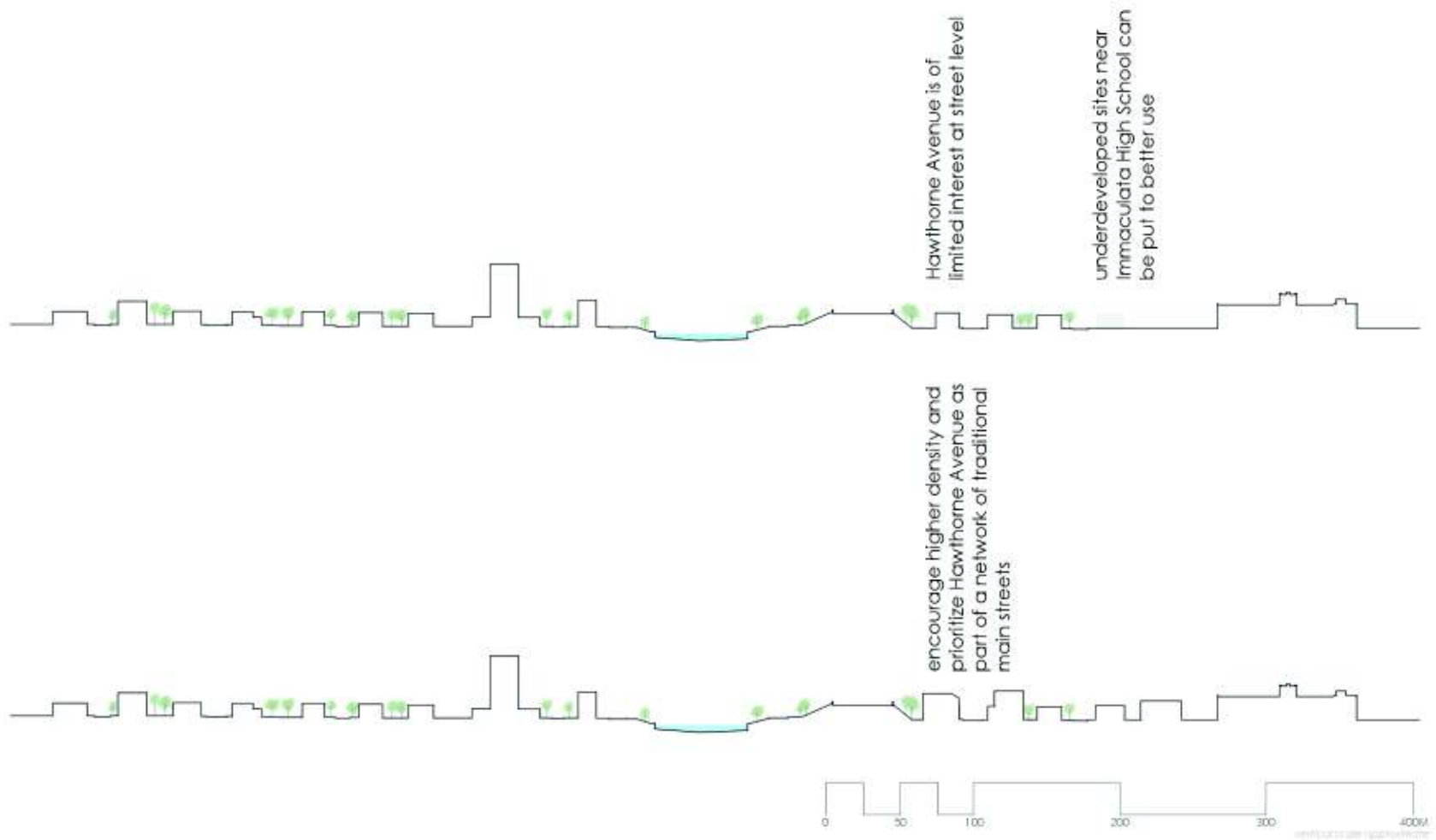


Image 62. Transect of current and possible development along Hawthorne Avenue



Image 63. Ottawa's Little Italy Gateway

Little Italy could extend from the gateway at Preston and Highway 417 past Carling to Dow's Lake integrating this part of the city and the Rideau Canal.

8.3.2 Pretoria Bridge

This area of focus is bound by Lees Avenue, Main Street, the 417 expressway and Metcalfe Street. This special area was selected because stakeholders identified it as an underutilized section of the Rideau Canal. Furthermore, its proximity to several mainstreets and historic amenities provides a key opportunity to create a destination in itself. The following strategies and massing visuals illustrate how development could occur.

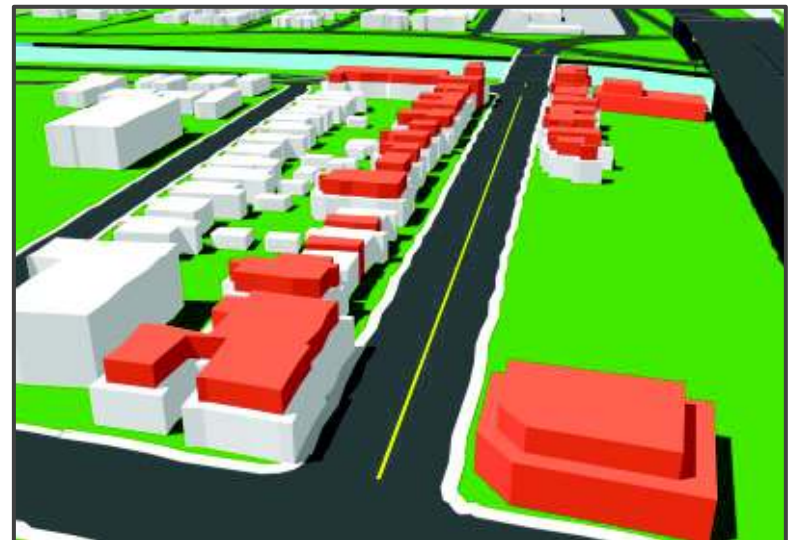


Image 64 & 65. Existing (white) and suggested (orange) built form at Hawthorne Street and Colonel By Drive

Strategies



Image 66. Elgin Street, a traditional mainstreet

Elgin Street is an example of a traditional mainstreet and a key commercial and retail destination that channels social activity to downtown Ottawa.

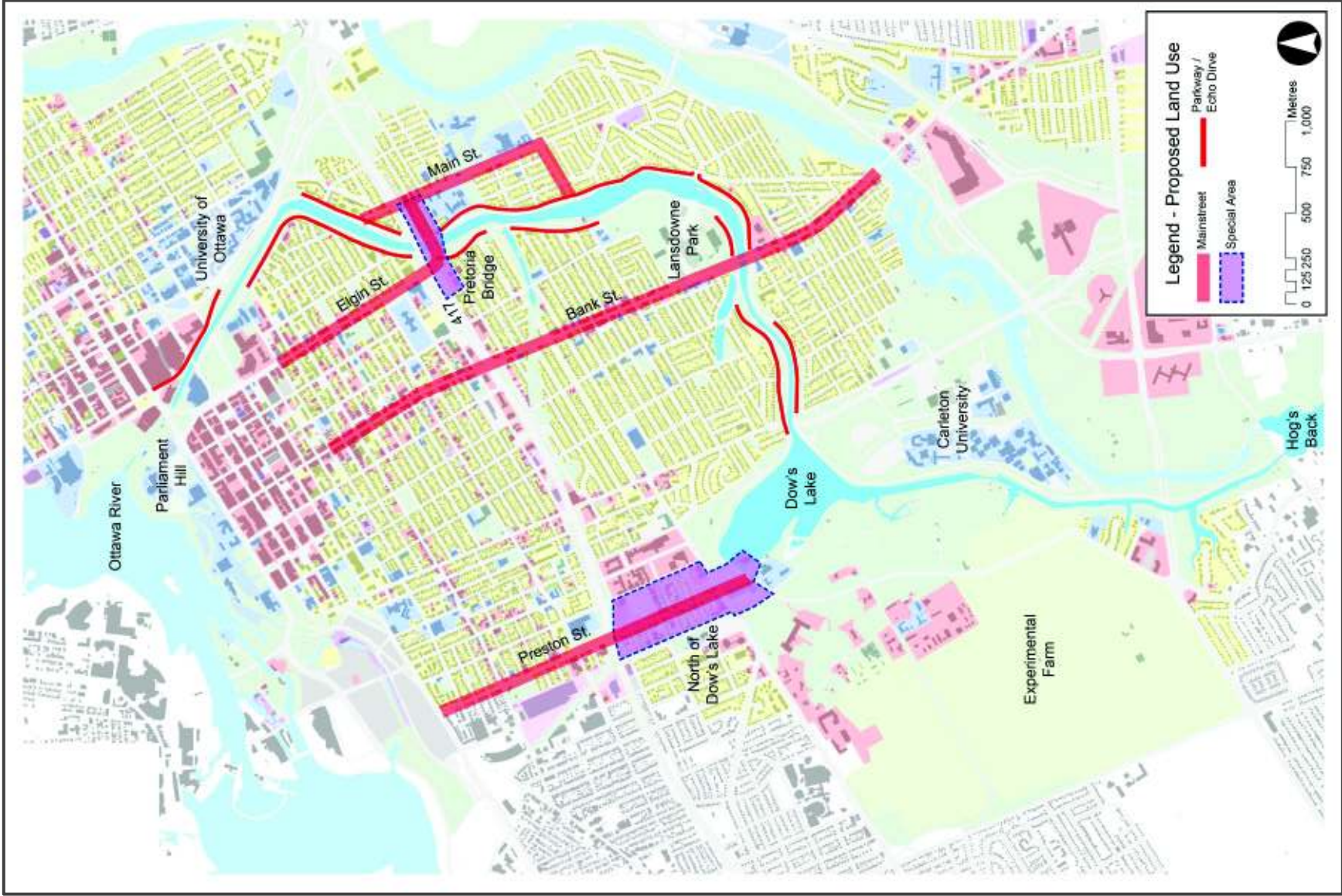
- Encourage Traditional Mainstreet principles along Hawthorne to connect Main Street to Elgin and Isabella Streets and create a hub of activity.
- Allow for the development of a continuous street wall along Hawthorne to encourage street level commercial activity.
- Encourage a continuous building frontage west of Pretoria Bridge.
- Create a built form that sustains increased transit service to promote the neighbourhood as a destination along the Canal.

- Develop a recreational facility for kayakers, cyclists and pedestrians near Elgin and Isabella that capitalizes on highway accessibility and proximity to the Canal.
- Utilize the policies in the Connectivity chapter to improve pedestrian linkages to the Canal.
- Create a partnership with Immaculata High School to accommodate the area's parking demand during peak Canal usage.



Image 67. Civic space at The Forks, Winnipeg, MB

Improved civic space including expanded recreational and cultural facilities could drive social activity at the Pretoria Bridge



Map 10. Proposed areas of special interest and key features on the landscape around the Rideau Canal

9

Recommendations

This project strategy consists of three categories of tools; public policy, partnerships and projects. Public policy tools define the framework and opportunities. Partnerships are a key tool for the implementation recommendations because of the multi-jurisdictional nature of the Canal Corridor. Partnerships will be utilized to facilitate coordination between key stakeholders. Projects are tools to implement certain recommendations as site-specific interventions along the Canal Corridor.

To facilitate implementation, the recommendations of this report were sorted into three categories based on short, medium and long term timeframes. Each of the recommendations were placed in the three categories based on cost, scale, organization, and public involvement.

Short-Term

Recommendation within the short-term timeframe are predominantly characterized as small-scale interventions that can be achieved with minimal resources, marginal amendments to existing regulations, and in a relatively short timeframe. The short-term recommendations can be found in Table 5. Most recommendations focus upon enhancing currently underutilized spaces along the Canal, including national spaces, transitional spaces, and spaces next to the Canal.

Short-term recommendations can be implemented through pilot projects or tactical urbanism initiatives, with a mix of funding coming from key governing agencies. The delivery of the pilot projects and tactical urbanism initiatives will be an important planning tool. Inter-jurisdictional steering

committees should consist of members from the City of Ottawa, the National Capital Commission, Parks Canada, major institutions, and community groups. Furthermore, the success of these committees will heavily depend on the establishment of strong working relations between organizations that hold a collective interest regarding the future of the Canal and its relationship to the City.

Community engagement through public participation will be a critical tool, not only for defining the scope of recommendations, but it will also allow agencies to gather insight in regards to the success of a particular project. Through actively engaging the public, the agencies responsible for policy implementation will develop a comprehensive understanding of public opinion, which will help inform future interventions along the Canal Corridor.

In terms of public policy, the short-term recommendations do not require any substantial amendments to existing regulatory policies on the Canal. Some of the projects will be directed by existing NCC and Parks Canada policy documents. Based on the scale and temporary nature of these interventions and short-term recommendations, there should not be any conflicts with current public policies.

Medium-Term

Medium-term recommendations support interventions that upgrade existing infrastructure within and adjacent to the Rideau Canal Corridor and can be found in Table 6. Costs associated with medium-term recommendations are higher than short-term recommendations, and a more detailed level of planning is required. The recommendations within the medium-term category are focused on increasing accessibility both to and along the Canal, enhancing underutilized spaces

under bridges, and installing new amenities, facilities, and programming within priority public spaces.

Pilot projects and tactical urbanism initiatives, though not as useful a tool for the recommendations in the medium-term category, will still be critical for enhancing and animating neighbourhood spaces and under bridges. These spaces are excellent locations in which a variety of temporary interventions can be implemented at different times of the day and throughout different seasons.

A key tool for implementing medium-term recommendations will be the coordination of inter-jurisdictional funding, especially from the City of Ottawa and the National Capital Commission. Recommendations focused on improving existing pathways and crossing infrastructure on parkways and priority mainstreets will need to be integrated into ongoing capital works projects of both the City of Ottawa and the NCC. Funding to enhance neighbourhood public spaces and spaces under bridges could be allocated from both recreational and arts and culture funding programs.

The City of Ottawa and the NCC will have a significant impact on a number of the recommendations. City plans, including the Transportation Master Plan, Cycling Plan, and Pedestrian Plan, will be critical for guiding recommendations focused on enhancing pedestrian, cycling, and crossing infrastructure on priority mainstreets. The NCC's Capital Urban Lands Master Plan and Parks and Pathways Plan will be valuable tools for directing recommendations aimed at upgrading the existing capital pathway network.

Long-Term

Recommendations identified within the long-term category are characterized by their large budgetary requirements, extended planning and construction phases, and potential need for amendment of existing policies and regulations. The long-term recommendations can be found in Table 7. Long-term interventions tend to be focused around the enhancement and development of buildings in neighbourhoods adjacent to the Canal. Tools that guide changes in built form focus primarily on building partnerships between different stakeholders over time.

Several long-term recommendations aim to introduce new land uses on property adjacent to the Rideau Canal. Tactical urbanism can be used so that popular seasonal uses can become part of the environment on the Canal without interfering with the built form. The City of Ottawa Zoning By-law and Site Plan Control process can enable municipal staff to ensure that new development incorporates new land uses.

Controlling the scale of infill and renovation projects helps to respect the character of adjacent neighbourhoods and their relationship to the Canal. Additionally, creating business improvement areas and opportunities for public involvement, the scale of new developments can be discussed in an open and transparent environment where the interests of communities and the character of the Canal are prioritized. Public-private partnerships can be viewed as opportunities to coordinate mid to large size developments so that buildings will be in scale with their neighbourhood and respect the character of the Canal. Ottawa's Zoning By-law and Site Plan Control process can also play a role in reviewing the scale of proposed developments.

There are also recommendations that relate to ensuring that new and infill development enhances the Rideau Canal. Designating business improvement areas and forming public-private partnerships are preferred methods for the City to balance the public interests of new development enhancing the Canal, and enabling new land uses. Section 37 of the Planning Act can be used to ensure that new developments set aside adequate land for public recreation. As well, section 42 of the Planning Act can be used to help achieve higher density development patterns while at the same time provide additional public services.

	Projects			Partnerships								Policy									
<i>Short Term Recommendations</i>	Pilot Project	Tactical Urbanism	Inter-Jurisdictional Steering Committee	Public Consultation	Business Improvement Area	Section 37	Section 42	Funds allocated from City	Funds allocated from Parks Canada	Funds allocated from NCC	Public Private Partnership	Zoning By-Law	Site Plan Control	NCC: Capital Urban Lands Master Plan	NCC: Parks and Pathways	Arts and Heritage Plan	Transportation Master Plan	Cycling Plan	Pedestrian Plan	Canal Regulations (C.R.C. c. 1564)	Rideau Canal Management Plan
Promote temporary land uses along key destinations of activity along the Rideau Canal.																					
Enhance the interface of the Canal and surrounding neighbourhoods by introducing complementary uses that transform these empty spaces into active places																					
Strengthen the visibility and visitor experience of Arboretum and Experimental Farm in order to promote existing mandate and programs.																					
Create more water-orientated spaces and adding uses that encourage greater interaction and enjoyment of the Canal Waterway.																					
Enhance use of Neighbourhood spaces through installing new amenities, facilities, and programing.																					
Ensure national spaces reflect the image and identity of the Nation’s Capital by providing a series of inviting, unified and vibrant spaces that emphasizes surrounding monumental buildings																					

Table 5. Short-Term recommendations

	Projects			Partnerships								Policy									
Medium-Term Recommendations	Pilot Project	Tactical Urbanism	Inter-Jurisdictional Steering Committee	Public Consultation	Business Improvement Area	Section 37	Section 42	Funds allocated from City	Funds allocated from Parks Canada	Funds allocated from NCC	Public Private Partnership	Zoning By-Law	Site plan control	NCC: Capital Urban Lands Master Plan	NCC: Parks and Pathways	Arts and Heritage Plan	Transportation Master Plan	Cycling Plan	Pedestrian Plan	Canal Regulations (C.R.C. c. 1564)	Rideau Canal Management Plan
Increasing permeability of pedestrians and active transportation users across Parkways																					
Rejoining the Canal Corridor with surrounding street network																					
Enhancement of existing cycling and pedestrian pathways along the Canal																					
Transform dead spaces under bridges into more vibrant, engaging, and welcoming places.																					
Enhance City Hall's relationship with the Canal and enhance Lansdowne and Dow's Lake																					
Improve crossing infrastructure at intersections along the Canal Corridor																					
Enhance use of Neighbourhood spaces through installing new amenities, facilities, and programing.																					

Table 6. Medium-Term recommendations

	Projects			Partnerships								Policy									
<i>Long-Term Recommendations</i>	Pilot Project	Tactical Urbanism	Inter-Jurisdictional Steering Committee	Public Consultation	Business Improvement Area	Section 37	Section 42	Funds allocated from City	Funds allocated from Parks Canada	Funds allocated from NCC	Public Private Partnership	Zoning By-Law	Site Plan Control	NCC: Capital Urban Lands Master Plan	NCC: Parks and Pathways	Arts and Heritage Plan	Transportation Master Plan	Cycling Plan	Pedestrian Plan	Canal Regulations (C.R.C. c. 1564)	Rideau Canal Management Plan
Integrate mainstreets to provide a wide range of land uses for the Canal corridor.																					
Offer a variety of land uses that enhance areas surrounding the Canal area																					
Buildings adjacent to the Canal should provide height that is appropriate to the neighbourhood character and context.																					
Infill projects should be a tool to improve, rather than capitalize on the Canal's value.																					
Ensure a cohesive relationship between Lansdowne Park redevelopment, the Glebe and the Canal																					
Create interesting and unique building designs that contribute to the visual integrity of the Canal.																					
Enhance streets parallel to parkways, with direct Canal frontage, to include uses and building forms similar to Traditional Mainstreets.																					
Special area intervention: North of Dow's Lake																					
Special area intervention: Pretoria Bridge																					

Table 7. Long-Term recommendations

10

Conclusion

The Rideau Canal Corridor is at a crossroads in its evolving history with the City of Ottawa. Individual agencies and jurisdictions, including the City of Ottawa, can continue to plan and develop policies in isolation, allowing the status quo of fragmented neighbourhood connections, congested parkways and a lack of animation along the Corridor to continue. Alternatively, the City, the NCC and Parks Canada can break the impasse and begin to move towards a future identity for the Canal based on unprecedented coordination and collaboration. While the Canal, since its establishment in 1832, has been characterized by dominant uses, including military, industry, rail, local transportation and recreation that have enabled it to become an edge, it is vital that the Corridor shift towards becoming a centrepiece for urban living and experience in the City of Ottawa. This report advocates the City and its partnering jurisdictions take into consideration the following three central recommendations in their own discussions about the future identity of the Canal. Map 11

illustrates places along the Canal for implementing priorities, partnerships and place-making.

10.1 Priority

There is an immediate need to make the Canal a priority in its neighbours. This entails ensuring that the policies of the City of Ottawa recognize and integrate the Canal as dynamic spine. Based on stakeholder input, the Canal is something much more than an edge to existing neighbourhoods and districts. Until policies turn towards the Canal, not away, then it may not reflect a fully integrated and vibrant City asset. Additionally, it is recommended that Parks Canada and the NCC expand their user base to include more kayakers, canoeists and community groups.

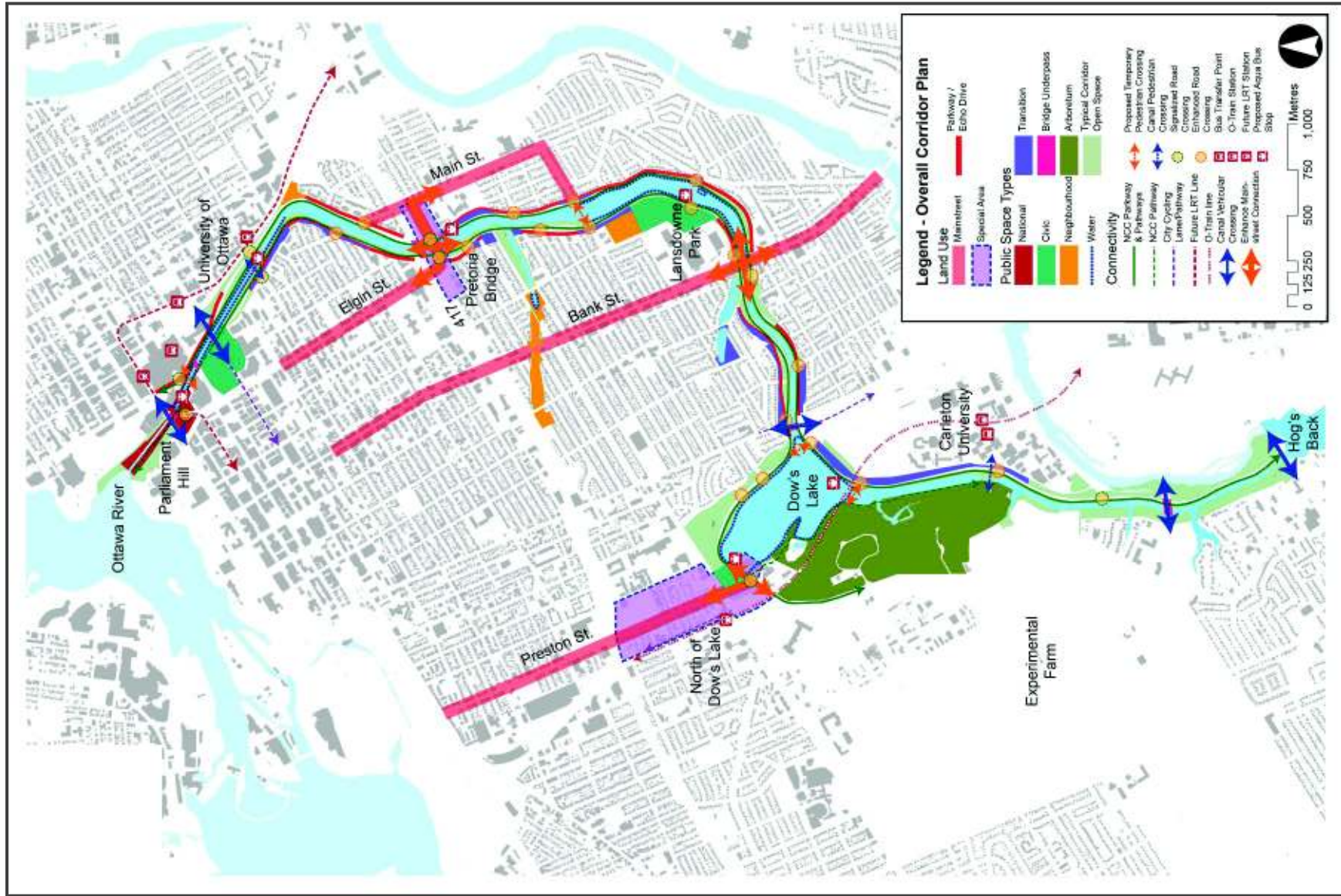
10.2 Partnerships

It is recommended that all jurisdictions explore new opportunities for partnerships. It is no longer adequate to plan and implement strategies separately. Successful long-term animation and enhancement of the Canal requires a comprehensive approach. With cross-jurisdictional issues, it is important to recognize each other's strengths and work together with the spirit of collaboration. Additionally, based on this report, it is worth noting that the most innovative precedents were not implemented by one entity, they were implemented by a partnership, including local community members.

10.3 Place-Making

There is a need to emphasize place-making to ensure the image of the Canal evolves from a linear corridor to a permeable and dynamic element with a series of unique public spaces. It is already a corridor for vehicles and cyclists, but through new place-making initiatives, including citizen-led tactical urbanism interventions, it can become a set of destinations for the greater community. By emphasizing place-making with its partners, the City of Ottawa can reshape how citizens engage with and understand the waterway.

Acting in isolation will continue a history of untapped potential. Ultimately, by making the Canal a priority, developing partnerships and emphasizing place-making, the City of Ottawa and its partnering jurisdictions can begin to rework the way they understand, interact and animate the Rideau Canal Corridor.



Map 11. Overall Rideau Canal Corridor plan

Epilogue

On December 6, 2013, the project team travelled to the City of Ottawa to give a presentation on Animating the Rideau Canal. The presentation was held at Ottawa's City Hall and was attended by City staff, councillor representatives, professional planners, stakeholders, residents and planning students. The presentation was given by Arthur Grabowski, Jeff Nadeau and Jacob Bolduc. It was approximately 30 minutes in duration with additional time allocated for addressing questions and concerns. The following section summarizes the project team's experience and feedback from the presentation.

Multiple Jurisdictions

Several comments were aimed towards the multi-jurisdictional nature of improving urban life along the Rideau Canal. Stakeholders were interested whether our group came across policies from different jurisdictions that were in direct conflict with one another. The group responded by providing examples of NCC and municipal designations and elaborated on how precedents utilized partnerships to implement projects.



Image 68. Jeff Nadeau presenting Animating the Rideau Canal

Municipal zoning was exemplified as a way in which the Canal regulations impose limited control around the Canal. An audience member identified Preston and Carling's zoning designation for high-rise development to demonstrate how regulation could create further barriers to the Canal. The project team responded by demonstrating the value of acting now to address how regulations can be made to benefit, rather than capitalize on the Canal's value. Overall, audience members were impressed by the group's detail at addressing the Canal at both the macro and micro scale.

Pilot Projects

Several questions were directed at the types of pilot projects and interventions that are considered appropriate along the Canal. One question identified a previous report done by the NCC about reanimation of the Canal. The individual wanted to know if our report expanded on this study. Another City official responded to this comment by referencing NCC's current interventions that are being tested and implemented.

A theme that arose from this discussion was the complexity of implementing and experimenting with the so-called tactical urbanism projects. Despite the small-scale nature of these projects, they are subject to a variety of logistical complexities such as garbage removal and local business interests. Audience members were impressed with the precedents and how the group integrated them in the context of the Canal. Attendees generally agreed with the need for a greater variety of interventions along the Canal.



Image 69. Jacob Bolduc presenting Animating the Rideau Canal

Environment

Stakeholders were interested in the Canal from an ecological standpoint as well. One question pertained to the treatment of the Canal as a park and open space amenity for the citizens of Ottawa. The group responded by stressing the importance of the Canal as an important resource. We reiterated the notion of separating the types of spaces according to their use and value to the surrounding neighbourhood. This made reference to our public space plan, which acknowledges spaces that have ecological and archaeological awareness. A theme that arose from this discussion is the role of the 21st century Canal. It was suggested that the Rideau Canal might be better suited to an urban context, while the Rideau River might be more appropriate as a natural environment.

Overall Presentation

Audience members were impressed with the slideshow and the brevity of the text on the slides. Further comments were made regarding the high quality of the images. Attendees were particularly receptive to the before and after graphics and their use as examples for animating the Canal. Concerns were raised regarding the recommendations section of the presentation. Attendees felt that there was not enough detail on implementation. To address this, it was advised that our analysis section be condensed to make the presentation more concise.



Image 70. Arthur Grabowski presenting Animating the Rideau Canal

Conclusions

The Animating the Rideau Canal project presented numerous challenges. The biggest challenge was working with the size of the study area. The Canal's strict regulations provided a challenge, yet an opportunity to explore creative alternatives such as a tactical urbanism as a means to address the Canal. At over eight kilometres in length, many group members and the presentation audience felt that the study area was too large, given the limited time period of the project course. It was difficult to provide detailed recommendations for a large corridor that varies radically in character both in and around the Canal. Another challenge was striking a balance between recommending unique interventions, yet respecting the rich character of the Canal itself. It became clear that the best approach was to address the Canal holistically from a citywide perspective. The project's comprehensive approach allowed the team to provide overarching policies and strategies to address the Canal. While our project took a high level approach, further research can be done to address key sites and create demonstration plans.

Appendix 1

Rideau Canal History



1826 Surveying the Canal



1854 Railway comes to Bytown (photo 1861)



1899 Creation of the Rideau Canal Driveway (photo 1914)



1925 The Rideau Canal is made a National Historic Site



1970 The Rideau Skateway opens
1972 Parks Canada assumes management of the Canal

1832 Canal Opens



1873 Tramway Bridge over the Canal improves urban connectivity



1903 Frederick Todd report to the OIC recommends several beautification projects along the canal (photo 1909)



1950 The Gréber Plan for Ottawa is published shaping the city for decades (photo one of the last trains along the canal 1963)



The Rideau Canal has shaped the form of Ottawa since the British army decided to create it in the early nineteenth century. This significant history shapes our understanding of the city and informs future animation of the Canal.

The Ottawa Valley has been home to Algonquin First Nations for centuries. Europeans first visited the area in the 17th century and began settling the area around the turn of the 19th century.

The War of 1812, forced the British Military to develop plans to ensure supplies and people could securely travel to Upper Canada without traversing the St. Lawrence River, which could be easily cut off by American forces (Parks Canada, 2012). Following the war, military officials surveyed routes extending from the Ottawa River to the Rideau River and down through a series of lakes to the Cataraqui River and Lake Ontario.

In 1826 Lieutenant-Colonel John By of the Royal Engineers was sent to Canada to begin work on the new canal (Parks Canada, 2012). The military set up headquarters at the Ottawa and Rideau Rivers and a community that would become Ottawa, formerly known as Bytown, was formed. The military used several private contractors and civilian labour to build the Canal, including general labourers and artisans of French Canadian, Scottish, Irish and English descent. The Ottawa section of the Canal was constructed with mostly French Canadian labourers (William, 1983, p 12).



Image 71. Col. By surveying the Canal in 1826

In 1832 the Canal was finished and officially opened. At this time, the population of Bytown had reached approximately 1000 people (Bytown Museum, 2013). From that point, the Canal was instrumental in the development of Bytown. The Rideau Canal and Ottawa River navigation route was designed to carry the new steamships that were revolutionizing shipping and was the easiest way to transport bulk goods to and from Upper Canada. The canal was a vital commercial link until 1849 when new locks along the St. Lawrence River allowed commercial traffic to take a more direct route to the Great Lakes.



Image 72. Hartwell Locks 1835 by John Burrows

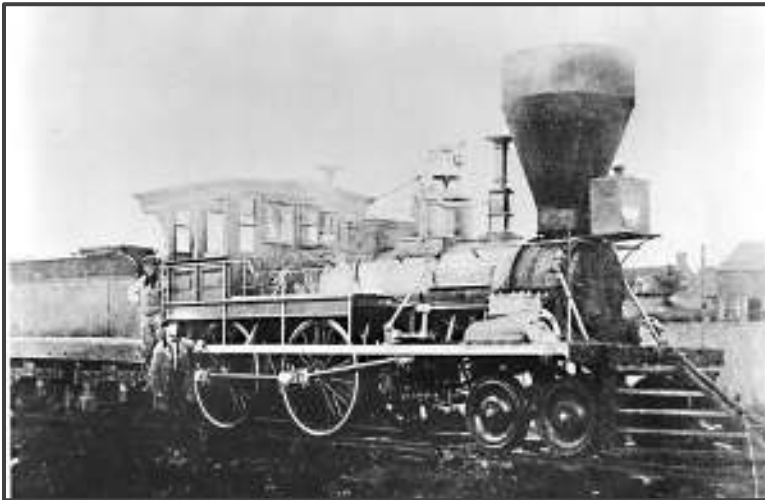


Image 73. One of the earliest trains in Bytown c. 1861

In 1854, the railway came to Bytown further reducing the importance of the Canal as a national transportation corridor. The function of the Canal began to change to the transportation of local goods and the banks of the Canal became home to many of the area's industrial sites (Parks Canada, 2012). In 1855, Bytown was incorporated as a city, taking the new name of Ottawa (Bytown Museum, 2013). The following year, the University of Ottawa moved to its present location adjacent the Canal (University of Ottawa, 2013) and the Rideau Canal was transferred from British military control to the government of the Province of Upper Canada (Watson, 2012). The Canal was increasingly becoming a place for leisure travel and recreational pursuits.



Image 74. Constructing the Tramway Bridge over the Canal

In 1857 Queen Victoria named Ottawa the capital of the Province of Canada and in 1867, when the British North America Act was ratified, Ottawa became the capital of the Dominion of Canada. Beyond a secure geographical location, a major reason Bytown was chosen because the Canal ran through the City (City of Ottawa, 2013). With this new status, the population grew and a new diversity of buildings, industry, commerce and employment emerged. The edges of the Rideau Canal were an important area for industrial development with the establishment of rail lines, coal sheds and lumberyards. In 1882, the Canada Atlantic Railway opened, bringing increased rail infrastructure to the city centre along the Canal (Churcher, 2013).

Land for the Central Experimental Farm was purchased in 1886 and first trees were planted in the Arboretum in 1899 (Friends of the Central Experimental Farm, 2013).

By the end of the 19th century, Ottawa had changed from a lumber town to manufacturing city to a National Capital. The edge of the Canal did not reflect this; and in 1899, the Ottawa Improvement Commission (OIC) was established to improve the city. One important task was to beautify the banks of the Rideau Canal (National Capital Commission, 2013). By the 20th century, the shape of the city and Canal began to be shaped by formal plans.

In 1903, the Ottawa Improvement Commission engaged landscape architect, Frederick Todd, to create a plan for Ottawa improvements (Gordon, 2002). For the areas around the Rideau Canal, Todd supported the development of the Rideau Canal Parkway, recommended a boulevard across the Canal connecting Rideau Hall and the Parliament Buildings and reserving land on either side of Patterson

Creek as a park. He also suggested that the Rideau Canal Parkway should consider plantings and grading, to enhance the natural beauty and views (Todd, 1903).



Image 75. *Rideau Queen* (ship) on the Canal early 1900's



Image 76. The Rideau Canoe Club 1906

Much of Todd's plan for Ottawa focused on enhancing the natural beauty of the area by enhancing views, including native species and creating natural gardens. The development of a park setting along the Rideau Canal was influential in subsequent canal area improvements within the city.

As Ottawa continued to grow, significant buildings were constructed along the canal, including the Chateau Laurier in 1912 (Canada's Historic Places, 2012a).

Edward Bennett's did a report on a general plan for the cities of Ottawa and Hull in 1915 to the Federal Plan Commission. This plan recommended moving industry along the Canal out of the city core and restricting rail traffic to a few rail lines. The Rideau Canal was seen as a valuable historic and recreational asset. Other recommendations for the Canal included creating a new plaza along the canal in the business district, changing the navigation rules for the waterway, lowering the height requirements on bridges, and adding passenger docks on Dow's Lake (Bennett, 1915). Many but not all ideas from this plan were adopted in later Ottawa plans (Gordon, 1998).



Image 77. The Rideau Driveway 1914

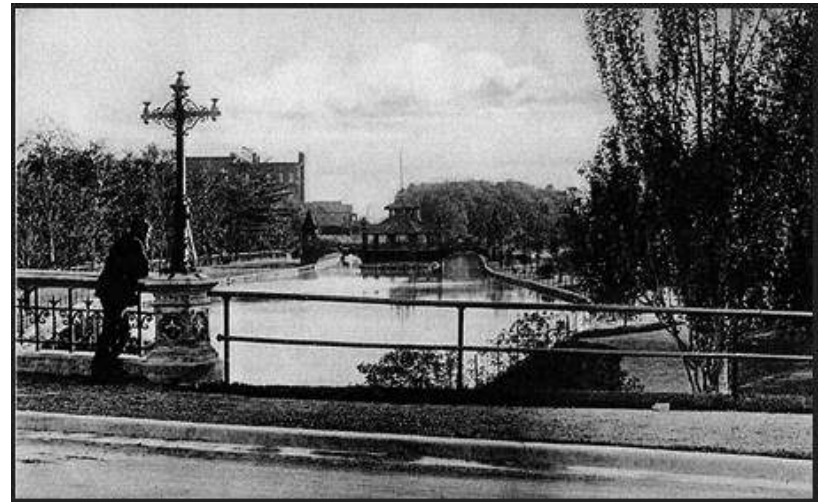


Image 78. Patterson Creek 1911



Image 79. Ottawa Locks, Chateau Laurier and a train c. 1920

There were improvements to the parks along the Canal in the 1920s including the creation of the Patterson Creek Pavilion in 1923 and the designation of the Rideau Canal as a National Historic Site in 1925. Confederation Square was appropriated by the federal government and became home to Canada's National War Memorial in 1939 (Canada's Historic Places, 2012b).

In 1950 Jacques Gréber's Plan for the National Capital was released. The Gréber Plan implemented several ideas from earlier plans, recommending the removal of the rail lines along the Canal and building a parkway on the East side. The rail lines were removed and Colonel By Drive was built in the mid 1960's. The plan recommended that industry around the Canal be moved to external sites to free up land for other purposes (Gréber, 1950). Due to these past uses, the former rail and industrial lands along the Canal remain in various states of contamination.



Image 80. Winter festival on the Canal 1931



Image 81. Lansdowne Park c. 1950



Image 82. Rail line along the Canal 1963



Image 83. Colonel By Drive in the 1960's

The latter half of the 20th century saw several changes that impacted the Canal. In 1959, Carleton University moved to its present location (The Historica Dominion Institute, 2012) and the National Capital Commission was created. In 1967, Canada's Centennial brought many aesthetic improvements to areas near the Canal.

The National Arts Centre was built in 1969. The Rideau Canal Skateway opened in 1970-71. Parks Canada assumed control of the Canal in 1972. In 2000, the Rideau River including the Canal was designated a Canadian Heritage River and seven years later was inscribed on the World Heritage Site list. Overall, the Rideau Canal has been instrumental in determining the shape of Ottawa since 1826. The Canal has shaped the City while urban growth and evolving technologies have conversely impacted the Canal and values associated with it.



Image 84. Douglas Fullerton skating on the Canal c. 1974



Image 85. The Rideau Canal Skateway in the early 1970's

Appendix 2

Policy Analysis

International Policies

ICOMOS and UNESCO

Key Details:

The Rideau Canal was inscribed on the list of World Heritage Sites in 2007. It was chosen because the Rideau Canal is the best preserved example of a slackwater Canal in North America and is operational along its original line with most of its original structures intact. Additionally, the Rideau Canal is considered significant for its role in the defence of Canada during the fight for North America and is thereby linked to a significant stage in human history.

The nominated property includes all the main elements of the original Canal and relevant later changes in the shape of watercourses, dams, bridges, fortifications, lock stations, earthworks and related archaeological resources.

UNESCO and ICOMOS are concerned that while the Canal and a 30 metre buffer on either side are well protected, the cultural landscape, setting and visual values of the Canal that extend visually beyond this buffer zone need better definition and protection. ICOMOS fears that incremental development could adversely affect the visual setting of the Canal.

Implications:

ICOMOS would like to see municipal controls in place that protect the broader visual setting of the Canal. Architectural style, massing and scale around the Canal and lock stations should be sensitive or complementary to the heritage values of the setting. Significant views of the Canal and from the Canal to other 19th century settings should be preserved. The City of Ottawa can use a design review process and design guidelines to minimize the effect of development on the visual setting of the Canal. The Parks Canada Rideau Corridor Landscape Strategy will be a valuable tool in protecting the cultural landscape of the Canal.

Link: http://whc.unesco.org/archive/advisory_body_evaluation/1221.pdf

Federal Policies***Department of Transport******Canal Regulations (C.R.C., c. 1564)*****Key Details:**

The Canal Regulations as a set of federal policies, which guide how Parks Canada acts in relation to Canal waterways, holds a high degree of significance in regards to any plans for future interventions along the Rideau Canal. Part II outlines specific regulations for the Rideau Canal. For example, section 70(1) specifically states that “no skiff or canoe shall be locked on the Canal between the hours of sunset and sunrise.”

Implications:

These regulations are integral to any discussion of future plans, particularly around increased canoe and kayak traffic. It sets the parameters for any activity or programming along the Rideau Canal. Furthermore, it discusses Dow's Lake and identifies how priority along this section of the Canal is given to sight-seeing boats and pleasure crafts. These types of policies enable the Canal to be a single-use waterway and prevent certain types of animations on the water from occurring.

Link: http://laws-lois.justice.gc.ca/PDF/C.R.C.,_c._1564.pdf

Historic Canals Regulations (SOR/93-220)

Key Details:

The Historic Canals Regulations under the Department of Transport Act are meant to ensure the proper management, maintenance, use and protection of Canada's historic canals. Accordingly, all activities and projects along the Rideau Canal corridor through the City of Ottawa are subject to this set of regulations. Part II Controlled Activities and Areas is integral to future discussions of potential reanimations on and along the Rideau Canal's shoreline because it outlines prohibited conduct as well as restricted activities, such section 10.(b), states that diving, jumping, scuba-diving, swimming or bathing is prohibited in a navigation channel or within 40 m of a lock gate or a dam in a historical Canal. This set of regulations has implications for organized events (section 16.(1)), camping (section 18) and mooring of vessels (section 40) along a historic Canal. Any implemented strategy should take into account this regulatory framework and ensure that the new activities, uses or temporary structures along the Canal do not impede the navigation channel or boaters' safety.

Implications:

The Historic Canal Regulations is highly noteworthy to any discussion of the animating the Rideau Canal because it identifies what can and cannot occur along this historic waterway. This set of regulations limits existing animation on the Canal by giving priority to pleasure craft and sightseeing boats. Accordingly, developing partnerships and initiatives with the City of Ottawa and Parks Canada should occur to overcome the barriers set out by this regulatory document.

Link: <http://laws-lois.justice.gc.ca/PDF/SOR-93-220.pdf>

Parks Canada Policies

Parks Canada, an agency of the Government of Canada, protects and preserves nationally significant examples of Canada's natural and cultural heritage and enables public knowledge, experience, and enjoyment of these national resources. Parks Canada has ownership and jurisdiction over the bed of the Rideau Canal and is in charge of issuing permits for all shoreline works near or over the bed of the Canal. Any future plans and interventions along the Ottawa section of the Rideau Canal must take into consideration the perspectives of Parks Canada, and the key federal policies and regulations described below. The overarching goal of Parks Canada in relation to the Rideau Canal is to preserve the cultural and natural values of the Canal and its setting while allowing for sustainable development on lands bordering the Canal and recreational use of the Canal itself.

Rideau Canal Management Plan (2005)

Key Details:

The Rideau Canal Management Plan provides a long-term strategic direction for the management of the Rideau Canal based on the objectives identified in the Commemorative Integrity Statement (CIS). A CIS is an analysis created to provide a baseline of information on a national historic site, from which planning, monitoring, and programming initiatives can be formulated.

The Rideau Management Plan focuses on nine key aspects of the Rideau Canal Corridor as identified in the CIS, which include: heritage conservation, ecosystem management, waterfront land use and development, heritage presentation, visitor facilities and services, heritage tourism and recreation, administration and operations, water management, and ongoing partnerships and public involvement. For each of the nine highlighted fields the plan provides an overview of current management activities, existing challenges, strategic goal, and key actions for addressing challenges.

Implications:

The Rideau Canal Management Plan outlines the direction that Parks Canada is heading regarding management of the Rideau Canal Corridor. The management plan identifies both specific areas and existing Parks Canada programs along the Canal that can be enhanced through intervention. The management plan also includes a number of policies outlining features of the Canal that need to be protected in order to maintain the cultural heritage of the corridor. Based on the information presented in the plan it is apparent that Parks Canada is focused on ensuring that any intervention on or adjacent to the Canal respects and enhances the cultural and natural heritage of the site.

Link: <http://www.pc.gc.ca/docs/r/on/rideau/pd-mp/page.aspx>

Rideau Canal World Heritage Site Management Plan (2005)

Key Details:

As a high-level, management plan, this document not only represents a formal commitment of the Government of Canada and the Parks Canada Agency to protect and preserve this World Heritage Site for future generations, but it specifies how different heritage values will be protected. Meeting the requirements of paragraph 108 of the *Operational Guidelines for the Implementation of the World Heritage Convention*, the document outlines the statement of outstanding universal values for the Rideau Canal, provides the specific benchmarks for its inclusion on the World Heritage List and outlines an overarching framework to cohesively protect and conserve the entire Rideau Canal.

Implications:

In terms of implications for the City of Ottawa, the Rideau Canal World Heritage Site Management Plan is highly noteworthy because it outlines key heritage resources along the corridor and the baseline condition of each cultural resource. Additionally, section 9.0- Presentation of the World Heritage Site may be of interest to any interventions related to way finding along the Rideau Canal corridor as the City of Ottawa may be able to partner with Parks Canada to improve interactive signage along the corridor to improve knowledge of the Canal's world heritage values and the UNESCO designation. This section among others points to the great opportunity of build stronger partnerships and projects between the City of Ottawa and Parks Canada in order to increase visibility and understanding of the corridor's integral heritage.

Link: <http://www.pc.gc.ca/lhn-nhs/on/rideau/plan.aspx>

Rideau Corridor Landscape Strategy: Landscape Character Assessment & Planning and Management Recommendations (2013)

Key Details:

The Rideau Corridor Landscape Committee commissioned the Landscape Character Assessment of the Rideau Canal Corridor to identify key features and values along the waterway. This supports more effective planning and management of the landscape. Impetus of the project is based on recommendations made by the World Heritage Committee. The recommendations were designed to ensure the visual values of the Rideau Canal are maintained, and that consideration should be given to protecting the complementary physical and aesthetic assets outside of the 30-metre buffer zone.

The central purpose of the landscape character assessment is to ensure important landscape features along the Canal are identified and recorded in a manner that enables more thoughtful strategies for conservation and management.

A key component of the report is the delineation of the landscape character areas and identification of key values within each sector. For our study area, identified as Section 1: Rideau Canal - Ottawa Locks to Hog's Back Locks, the Landscape Character Assessment identified several key features which are recognized as being quintessential to the Rideau Canal experience:

- The excavated channel and Canal within an urban, historic context to Hartwell's Locks (Locks 9- 10)
- The flight of Ottawa Locks and associated heritage buildings, views to the Parliament Buildings and Chateau Laurier
- The Rideau Canal Pathway, Colonel By Drive, and associated greenspace (Carleton University, the Experimental Farm and Arboretum, Dow's Lake)
- The bridges and views to the Canal from them
- The Rideau Skateway and Winterlude

- Hartwell's Lockstation and turning basin
- NCC greenbelt lands and Rideau Canal Pathway
- Hog's Back Falls and limestone formations along the Rideau River
- Hog's Back Lockstation, earthen dam
- The Hog's Back Road swing bridge

Implications:

The Rideau Corridor Landscape Strategy sets out a variety of recommendations that will influence the interventions developed for our current project. The guidelines of the document will specifically impact how our project works to develop interventions that maintain and enhance the quintessential elements that have been identified in our study site (Ottawa Locks to Hog's Back Locks). The document should be utilized as a key tool for ensuring that the physical and aesthetic character of any intervention or recommendation will respect the existing cultural and environmental characteristics of the corridor that have been identified as essential assets of the Canal.

Link: <http://www.pc.gc.ca/lhn-nhs/on/rideau/plan/sacr-rcls.aspx>

Standards & Guidelines for the Conservation of Historic Places in Canada (2010)

Key Details:

The Standards and Guidelines for the Conservation of Historic Places in Canada (2010) establishes a Canada-wide set of conservation principles, which provide detailed guidance for the preservation, rehabilitation, and alteration of historic sites throughout Canada.

Specific sections of the document that pertain directly to the Rideau Canal include: *The Guidelines for Engineering Works, including Civil, Industrial, and Military Works*. These guidelines outline the manner in which both constructed and functional elements of engineered works should be preserved, rehabilitated and restored.

In addition to this, the Guidelines for Cultural Landscapes is noteworthy. Within this section, specific guidelines are presented to ensure that defining historical and cultural assets are preserved. Within the section, 11 subsections are discussed including: evidence of land use, evidence of traditional practices, land patterns, spatial organization, visual relationships, circulation, ecological features, vegetation, land- forms, water features, and built features.

Implications:

The Standards and Guidelines for the Conservation of Historic Places in Canada (2010) has direct implications for any interventions proposed both on and directly adjacent to the Rideau Canal. As we are proposing a number of interventions along the Canal corridor this document will be crucial for directing the scale, setting, location, and visual aesthetic of any interventions.

Link: <http://www.historicplaces.ca/media/18072/81468-parks-s+g-eng-web2.pdf>

National Capital Commission Policies

The National Capital Commission (NCC) is a crown corporation responsible for planning, development, conservation and improvement of all federally owned land in the National Capital Region. They are the primary owner of land immediately adjacent to the Rideau Canal in Ottawa's urban core and have several plans and policies that relate to the Canal's future development.

Horizon 2067: The 50-Year Plan for Canada's Capital (2013)**Key Details:**

The new Horizon 2067 Plan sets out the federal government's main vision and policies for guiding the development of the Canada's Capital. The plan identifies several over-arching goals for the future of the capital; to be the major symbol of Canada, to represent Canadian values, to contribute to a vibrant urban life and to pursue sustainable development. The plan describes the Canal as a parkway and pathway network that serves to link significant destinations while contributing to the green image of the Capital Region.

Implications:

Although the goals are very broad, the Horizon 2067 Plan provides several guidelines that support the ongoing development of the Canal Corridor. These guidelines include giving priority to cyclists and pedestrians, creating animated places for people, as well as enhancing coordination and collaboration with stakeholders.

Link: <http://www.ncc-ccn.gc.ca/planning/horizon2067>

Capital Core Area Sector Plan (2005)

Key Details:

This plan focuses on the downtown area of Ottawa and Gatineau, envisioning it as a place to live, work and come together to celebrate Canada.

Implications:

The plan specifically aims to enhance the Canal as one of the key defining elements of the City by redefining it as an urban waterfront park and improving the pedestrian linkages to the surrounding neighbourhoods. It also specifies providing additional services and amenities at the base of the NAC, the Conference Centre and under the Plaza Bridge.

Link: <http://www.ncc-ccn.gc.ca/planning/master-plans/canadas-capital-core-area-sector-plan>

Capital Urban Lands Master Plan (In Development)

Key Details:

Currently under development, this plan aims to define a vision, strategic directions, guidelines and development proposals that enhance the experience and unique living environment of Canada's Capital. The plan specifies policies and authorized uses for different land designations. The majority of NCC land in the study area is designated Capital Urban Greenspace for which the primary use is low intensity recreation. However, some attractive secondary uses include visitor services, restaurants and non-motorized boat ramps. Prohibited uses include those that conflict with the capital image, exceed a site's carrying capacity or would irremediably alter the landscape character.

Implications:

These policies provide a high degree of flexibility for introducing new uses on NCC lands immediately adjacent the Canal. The policies also stipulate that Urban Greenspace should showcase the National Capital experience, allow a wide-range of events, support "discovery circuits" and develop sites to their full potential in a compatible manner while preserving their multi-purpose nature.

Link: <http://www.ncc-ccn.gc.ca/planning/master-plans/preparing-capital-urban-lands-master-plan>

Parkways and Pathways (1984)

Key Details:

The 1984 Parkways Policy aims to create a scenic and ceremonial drive into the Capital while promoting recreational and cultural activities. The parkways are considered cultural landscapes as they represent an example of parkway design as an element of urban planning in the mid-1900s. The NCC also recognizes the significant environmental, recreational and touristic value of the pathway networks that form part of the parkways.

Implications:

Therefore, the NCC is supportive of expanding the function of the parkways to support more active transportation by connecting pathways with the broader pedestrian and cycling network of the City. An update to the Parkways Policy will continue to limit the number of vehicular access points, but is looking at ways to enhance public permeability and accessibility for active transportation. It also recommends that the pathway network form a continuous link between the main sites of interest in the Capital and be connected to municipal pathway networks.

Link: <http://www.ncc-ccn.gc.ca/sites/default/files/pubs/e05.0-2013-p43e-parkways-policy-review.pdf>

Rideau Canal Pop Up Projects (2013)

Key Details:

In 2013 the NCC initiated five creative projects aimed at animating the Rideau Canal shorelines and enhancing the capital experience. Each pilot project will operate for a maximum of three years during which evaluation and feedback of these uses can be gathered. Four projects were implemented in 2013, including the Capital Reading Garden, Pop Up Patios, Rideau Beach and 8 Locks Flat. The projects have received positive feedback from citizens and NCC staff after one year of operation.

Implications:

While the pilot projects are not an explicit NCC policy or plan, it demonstrates an organizational commitment and flexibility to exploring new ways to animate the Canal. Furthermore, these pilot projects are a great opportunity to recommend and test additional new uses in a temporary and low impact manner.

Central Experimental Farm Policies

Central Experimental Farm National Historic Site Management Plan (2013)

Key Details:

The *Central Experimental Farm National Historic Site Management Plan* is a long-term framework for guiding the conservation and enhancement of the Central Experimental Farm (CEF) as both a National Historic Site and active research landscape. The overarching vision of the management plan is to sustain a cultural landscape of national historic significance through a reinvigorated and ongoing agricultural research program. The document lays out a management plan that works to:

- Strengthen the research identity of the farm, as the most important path of continuity between its past, present and future
- Provide clear rules of engagement for other agencies and partners
- Ensure the commemorative and ecological integrity of the cultural landscape and its cultural and natural resources
- Interpret and present the site to the public, as a scientific landscape of national significance
- Develop appropriate patterns of access, circulation, and open space
- Establish clear and sustainable relationships with the adjacent urban context.

Implications:

Of specific relevance to our project is the arboretum area of the CEF. As a result of its close proximity to the Rideau Canal, its open space character, its picturesque setting, and its history of research initiatives, the Arboretum holds potential to be a key public space in the City of Ottawa where residents can enjoy a mix of both leisure and educational activities.

Any interventions proposed adjacent to the Arboretum will need to respect the cultural resources that have been articulated in the Central Experimental Farm National Historic Site Management Plan and the Commemorative Integrity Statement (CIS) that informs the plan. Key features of the Arboretum as identified in the CIS and Management Plan which must be respected include: a variety of flora specimens, ornamental beds, and landscape treatments, an assortment of science, administrative, and farming buildings, pedestrian pathways and ring road, and a multitude of viewsapes. The plan promotes the idea that the Arboretum be utilized as a key public space for the City of Ottawa and as a forum for public education and interpretation of the rich history of the site.

Link: <http://www.agr.gc.ca/eng/about-us/offices-and-locations/central-experimental-farm/about-the-farm/central-experimental-farm-national-historic-site-management-plan-1-of-20/?id=1170695386778>

Federal Heritage Building Review Office (FHBRO) Policies***FHBRO Heritage Character Statements*****Key Details:**

The Federal Heritage Building Review Office is tasked with assisting federal government departments with the conservation of their heritage buildings. A key aspect of FHBRO's role is the identification and cataloging of federally owned heritage buildings across Canada. Within the area of the Rideau Canal from the Ottawa River to the Hog's back Lockstation there are six heritage buildings FHBRO has identified and described in individual Heritage Character Statements. The buildings include: the Defensible Lockmasters House and Storehouse at the Hartwell's Lockstation, the Commissariat Building and Lock Office at the Ottawa Lockstation, the Refreshment Stand at Hog's Back Park and the Patterson Creek Pavilion.

Within the Heritage Character Statements for each of the buildings the reason for their designation is described, this includes a breakdown of the assets historical, architectural, and environmental value. The character-defining elements of the buildings are also detailed for the purposes of identifying the specific features of the buildings that should to be protected.

Implications:

The Heritage Character Statements are key tools used to help inform and guide any interventions or stewardship activities that have the potential to impact a federal heritage building. In regards to our current project we are not recommending or proposing any interventions that alter or impact any of the buildings identified in the above-mentioned Heritage Character Statements. The Heritage Character Statements can be regarded as an extension of the Standards & Guidelines for the Conservation of Historic Places in Canada, which will be a key document for helping ensuring that any interventions developed for our current project respect the heritage landscape of the Canal.

Link: [http://www.historicplaces.ca/media/15302/1991-133\(e\)storehouse.pdf](http://www.historicplaces.ca/media/15302/1991-133(e)storehouse.pdf)

Provincial Policies

Provincial Policy Statement (2005)

Key Details:

The Provincial Policy Statement (PPS) provides policy direction on land use and development issues for the Province of Ontario. It protects resources of provincial interest such as public health, safety and the quality of natural environment. The PPS provides specific policy direction for the management of natural and cultural resources to ensure prosperity, environmental health and social well-being. It is issued under the authority of Section 3 of the Planning Act. The PPS mandates the wise use and management of the Province's natural and cultural heritage resources. The Rideau Canal Corridor falls into the category of cultural heritage resource and the significant cultural heritage attributes of this resource must be protected and be subject to wise use and management.

Implications:

The PPS is complemented by provincial and locally generated policies regarding municipal interest. The City of Ottawa must adhere to Section 3 of the Planning Act, which requires that planning matters "shall be consistent with" the PPS. Thus, development in and around the Rideau Canal should coincide with the broad goals of the PPS. This involves providing sufficient land for intensification, creating good urban form, mix of uses appropriate areas for recreation and conservation of significant built heritage resources and cultural heritage landscapes.

Link: <http://www.mah.gov.on.ca/Asset1421.aspx>

City of Ottawa Policies

Growth Management Plans

Official Plan

Key Details:

The Official Plan provides a vision of the future growth and the policy framework from which to guide development of the City until 2031. The Official Plan is a component of the Ottawa 20/20 initiative, that is, a series of plans to manage the growth of the City. It provides a set of principles that guide intensification, development, sustainability, and designations for activities. Thus, the Official Plan plays a crucial role in regulating activities and development in and around the Rideau Canal.

Greenspace Network (2.4.5)

The City of Ottawa seeks to maintain the environmental integrity of the City through its greenspace network. The Rideau Canal is designated as a greenspace corridor within this network. Greenspace improve the quality of air and water, while providing shelter and recreation opportunities for surrounding users. The city regulates these spaces in partnership with the Conservation Authorities and neighbouring municipalities. As stated in Policy 5, the Rideau Canal helps the city achieve its target of 4.0 hectares of greenspace per 1000 population, or approximate 16-20% of the gross land area. Under this framework, the Canal plays two roles: to enhance the natural environment, and to provide a sense of place and outdoor recreation. As a result, Greenspace corridors such as the Rideau Canal will play an increasing role in achieving the city's projected growth targets by 2021.

Open Space (3.3)

Major open spaces are large parks or corridors that serve to provide areas for public enjoyment. Most major open spaces are in public ownership. Major open spaces are a key component of the greenspace network and serve to increase the quality of life in neighbouring communities. The Rideau Canal is a natural historic site that is designated as a major open space. As such, any development of lands in or around the Rideau Canal requires further approval from Parks Canada.

The designation also ensures that the types of recreational activities, facilities and uses on a major open space do not detract from the natural environment. Policy 4 pays particular attention to waterfront locations and requires that an archaeological resource and cultural assessment be undertaken before development or public works are approved. Policy 5 lists that existing dwellings are recognized as conforming uses. However, infill on vacant, or developable lands is not permitted.

Central Experimental Farm (3.4)

The Central Experimental Farm on Dow's Lake is a significant cultural and historic feature along the Rideau Canal. It is a fully functional agricultural research station that is owned and operated by the federal government. As such, adjacent development must prepare a cultural heritage impact statement and reference to the Commemorative Integrity Statement prepared by Parks Canada. Any development must respect and minimize fragmentation of historic landscape features.

Mainstreets (3.6.3)

Mainstreet designations are explained within the Urban Designations section of Ottawa's Official Plan. Their purpose is to identify specific streets within the city with the greatest potential for intensification of the built environment. To achieve intensification, mainstreet designations are designed to accomplish three specific goals: to create more compact urban forms,

encourage a mix of different uses, and to create pedestrian oriented development. The Official Plan identifies two types of mainstreets: traditional and arterial.

Traditional Mainstreets already exhibit many of the goals of mainstreet designations and were typically built before 1945. They are primarily aimed to maintain and enhance existing development typologies present along the street. **Arterial Mainstreets** are characterized by large lots, deep setbacks, single-use commercial buildings, and were typically built after 1945. These streets will transform overtime through the careful control of new development applications to reflect the goals of mainstreet designations. Urban design guidelines for both types of mainstreets have been developed by the City of Ottawa to detail how new development can be designed to conform to mainstreet policies. Mainstreets in general are identified as functioning as mixed-use corridors that offer a variety of goods and services for nearby communities.

There are a number of streets that are designated as mainstreets within the study area of the Rideau Canal. Elgin and Main Street are two traditional mainstreets that run close to the Canal near the Queen's Way. Bank Street is classified as a traditional mainstreet when it crosses the Canal just south of Lansdowne Park. To the north of Dow's Lake, Preston Street is also a traditional mainstreet. Finally, Carling Avenue is designated as an arterial mainstreet.

Central Area (3.6.6)

The city's central area designation encompasses the Rideau Canal from the Ottawa River to Lisgar Street. The central area is the economic and cultural heart of the city with numerous employment, retail, residential and cultural activities adjacent to the study area. It is the main tourist area in the National Capital Region with millions of annual visitors. The Rideau Canal helps the central area fulfill its role through its natural and cultural value. As stated in Section 3b, the city seeks to enhance the downtown experience through improved access the Canal and an illumination plan. Furthermore, any new development will respect the cultural identity of the area and maintain a sense of human scale.

Major Urban Facilities (3.6.7)

Several Major Urban Facilities are adjacent or within close proximity to the Rideau Canal. These facilities typically occupy large parcels of land and have significant community importance. Indeed, Ottawa and Carleton University, Lansdowne Park and the various museums fall under this classification. It is crucial that the Rideau Canal both acknowledge and create stronger links with these important facilities.

River and Canal Corridors (4.6.3)

The River and Canal Corridors designation provides a framework for recognizing the cultural and historical importance of the Rideau Canal. The city strives to maintain accessibility to the Rideau Canal through measures such as public acquisition in adjacent areas. Furthermore, any adjacent development is reviewed with the Canal's cultural heritage statement in conjunction with Parks Canada and the NCC. The City also uses policy 3 to ensure that adjacent development must not interfere or alter the Canal in any way. In addition, the City recognizes the cultural and historical importance of the Canal to Algonquin First Nations. The city will consult First Nations, Provincial and Federal government on matters related to lands adjacent to the Rideau Canal.

Scenic – Entry Routes (4.6.4)

Scenic Routes form a network that link major tourist, recreation, heritage and natural environment destinations in and beyond Ottawa. The Rideau Canal includes scenic routes for a variety of transportation types including parkways, bike and pedestrian paths. The city regulates development along these routes to create a favourable impression for users. These routes also serve as strategic wayfinding corridors and are well marked with signage. The scenic entry routes are designated on Schedules I and J.

Urban Design and Compatibility (4.11)

The City regulates urban design to ensure that land uses do not generate negative impacts to surrounding areas. As the City grows in and around the Rideau Canal, issues such as noise, light pollution, parking, shadowing and microclimatic conditions will become more prominent. Policy 2 outlines the evaluation criteria for context appropriate development. As areas surrounding the Canal become more urban, these design policies will be crucial to ensuring the accessibility and preservation along the Canal. In general, the zoning in areas adjacent to major roads and near transit stations allow for more intensive development. Indeed, several adjacent O-Train and new Confederation line LRT stations will play a significant role in intensifying key areas near the Canal.

There are several tools that should be noted when considering development in and around the Rideau Canal. All new development must outline its "Design Objectives and Principles". Furthermore, the Design Considerations (Annex 3) offer ways in which these objectives and principles will be realized. This helps new buildings create or integrate to existing urban fabric. It is critical that new development preserve cultural corridors such as the Rideau Canal. With this consideration, policy 6 sets out that the city will set an example for the community through public art in municipal facilities and will encourage other private sector owners and developers to include art as a component of new developments. The Ottawa Urban Design Review Panel participates in an enhanced review of development applications within Design Priority Areas.

Cost Sharing Agreements (5.3)

The city uses tools such as public-private partnerships as a cost-sharing tool to provide infrastructure identified in plans. The new Lansdowne Park provides an example of this adjacent to the Rideau Canal. These agreements provide the fair sharing costs among the benefiting parties to compliment or replace provisions of a Development Charges Bylaw. These agreements have been increasingly important in the context of city building.

Implications:

The Official Plan provides a vision of the future growth and the policy framework from which to guide development of the city until 2031. The Official Plan is a component of the Ottawa 20/20 initiative, that is, a series of plans to manage the growth of the city. It provides a set of principles that guide intensification, development, sustainability, and designations in Ottawa. The Official Plan provides policies that work in conjunction with the NCC and Parks Canada to regulate activity in and around the Rideau Canal. Any proposals around the Rideau Canal should be consistent with the various components of the Official Plan.

Additionally, mainstreet designations are a powerful tool for municipal planners to encourage compact, mixed-use, and pedestrian oriented development near the Canal. They represent opportunities for the city to encourage new land uses, which can turn the Canal into a destination for people a varying time of the day and year. Opportunities should be explored for classify additional streets near the Canal as mainstreets. Future development patterns based on mainstreet typologies could help integrate the Rideau Canal further into the City's urban fabric. Bronson Avenue south of Carling is an excellent example where an existing road could be classified as an arterial mainstreet.

Link: <http://ottawa.ca/en/official-plan-0>

Arts and Heritage Plan

Key Details:

Ottawa City Council approved the *Ottawa 20/20 Arts and Heritage Plan* in 2003, in 2010 a five year review report was published and in 2012 *A Renewed Action Plan for Arts, Heritage and Culture in Ottawa (2013-2018)* was released. These documents lay out the City of Ottawa's commitment to the arts, heritage and culture. These cultural plans have five broad goals, including:

1. Broaden Public Access to the Local Arts
2. Keep Ottawa's Artists Here [in Ottawa]
3. Build Creative Capacity
4. Revitalize Public Places and Natural Spaces through the Arts

5. Realize the Economic Potential of the Local Cultural Sector.

In particular, goal 4 has the most implications for animating the Rideau Canal, although a Canal that is more fully integrated into the fabric of city life could enrich all five goals.

Recently, the City of Ottawa has done a significant amount of work to build capacity and to support the local arts, heritage and cultural sectors. The next step in the cultural plan process is to work on the four strategies for 2013-2018. First, celebrate Ottawa's unique cultural identity and provide access to culture for all, second, to preserve and develop cultural and creative places and spaces, third, to get the word out about Ottawa's vibrant local culture and unique identity and fourth, to invest in local culture and build cultural leadership. Strategies one and two have the most implications for the Rideau Canal. The actions in celebrating the cities unique identity include partnering with the NCC, Parks Canada and Agriculture Canada on the Rideau Canal Promenade interpretive initiative and developing a municipal commemoration and naming policy. The City's actions to preserve and develop cultural and creative places and spaces include: developing a joint plan for archaeological resources in Ottawa with the NCC, improve the preservation of Ottawa's built and natural heritage through by-laws, inventories and incentives for preservation, providing access to existing under-used and unused spaces for transformation into cultural spaces and nurturing quality architecture, urban design and public art.

Implications:

The Rideau Canal Corridor through Ottawa could be ideal for various expressions of arts, heritage and culture in public interpretation, urban design, public art, performance and preservation. Pathways leading up to the corridor could integrate into existing and planned events and interpretation of the arts, heritage and culture.

Link: http://www.creativecity.ca/database/files/library/ottawa_five_year_report.pdf

Secondary Plans

City of Ottawa Secondary Plans

Key Details:

Secondary plans are included as volume 2a of Ottawa's Official Plan. Secondary plans are detailed area policy documents that provide direction for specific sections of the City. They act as official plans for a specific community or area of the City. They build off of the policy within the other volumes of the Official Plan to create a coherent and comprehensive framework for all issues associated with planning.

Several of the secondary plans within Ottawa's Official Plan are relevant to the future development patterns of the urban area around the Rideau Canal. For example, the Old Ottawa East Secondary Plan examines the area directly east of the Rideau Canal just south of the Queen's Way. It supports the policies outlined in the community design plan for Old Ottawa East. The Bank Street Secondary Plan examines Bank Street as a development corridor. This secondary plan looks specifically at Bank Street just south of the Rideau River. It suggests specific policy directions for nodes identified in the Bank Street Community Design Plan.

Nine different plans are grouped into one section of volume 2a of the Official Plan labeled 'Former Ottawa'. Each section of this document represents a different plan addressing a different area of the City. Each section creates a unique plan to guide future development within the communities they specifically address. Most of the sections within the Former Ottawa Secondary Plan are relevant to the Rideau Canal. The relevant plans within the Former Ottawa section include the Central Area, Carleton Heights, Centretown, Sandy Hill, Preston-Champagne, and Confederation Heights. The Central Area relates to the northern end of the Canal north of Ottawa University and including City Hall. Carleton Heights examines the area west of the Rideau River and includes Hog's Back. The plan on Centretown looks at the community west of Ottawa University. The section on Sandy Hill relates to the community east of Ottawa University. Preston-Champagne covers Little Italy just north of Dow's Lake. The Confederation Heights section outlines development policies for the employment lands south of Carleton University and east of Hog's Back.

Implications:

Most of the communities around the Canal have secondary plans to guide future development which outline policies on specific planning issues based on general policies outlined by other sections of the Official Plan. This suggests that specific frameworks are needed to apply the general planning policies on a local scale. Highly urban areas, communities, and employment lands have been the focus of secondary plans created by the City of Ottawa. Given the current context of development around the Rideau Canal, a secondary plan could be created to integrate current planning policies to municipal lands around the Canal where specific development or programming opportunities are present.

Link: <http://ottawa.ca/en/official-plan-0/volume-2a-secondary-plans>

Community Plans***Community Design Plans*****Key Details:**

The City identifies priority areas for the completion of community design plans that must conform to the Official Plan. The Centretown and Old Ottawa East Community Design Plans (CDPs) have been completed for neighbourhoods near the Rideau Canal. Proposals to the Rideau Canal should be integrated with these design guidelines and integrated into the neighbourhood character of these significant areas.

Old Ottawa East Implications:

The CDP is bound between the Rideau Canal and the Rideau River. The CDP outlines the need for Community Gateway Markers such as public art at the Rideau Canal. Furthermore, it strives for Capital Improvement Projects such as community gateway markers such as public art, the proposed Fifth Avenue Pedestrian Bridge and improvements to nearby parks such as Ballantyne Park.

Centretown Implications:

The CDP encompasses the Rideau Canal from Lisgar Street to the Queensway. The CDP is used to regulate the character of key areas near the Canal such as the Elgin Street Corridor and the Golden Triangle. While the CDP offers insight to transportation, open space and built form in the area, it does not provide recommendations to treatment of the Rideau Canal. Thus, the Rideau Canal provides a vital opportunity to improve linkages to a significant district in Ottawa's downtown.

Downtown Urban Design Strategy Implications:

This document builds on the City's initiatives to improve the urban experience of the Downtown in the public realm. The public realm includes areas such as parks, open spaces, waterways and areas of special character. It provides a shared vision of the downtown between the NCC, City of Ottawa, adjacent neighbourhoods and business communities. The strategy provides priority actions such as a new Central Park, mainstreet beautifications public realm Investments. The designs for these initiatives will have an impact on the Rideau Canal and its recreational use.

Link: <http://ottawa.ca/en/city-hall/planning-and-development/community-plans-and-studies>

Master Plans***Greenspace Master Plan*****Key Details:**

The management of greenspace within Ottawa's city limits is directed by the Greenspace Master Plan, initiated in 2001 and completed in 2006. The plan has clear goals, including the definition of greenspace and the appropriate designation or omission of areas within the city. Furthermore, the plan seeks to establish targets for greenspace and strategies to develop and manage these spaces for the public. The Greenspace Master Plan works in conjunction with other plans of Ottawa 20/20, the city's Growth Management Strategy. The plan gives council tools such as the 'Greenspace Also' approach, where greenspace objectives are considered alongside the other major growth and development goals of the City. This ensures infrastructure and other devices of growth management are developed in tandem with a network of greenspaces throughout Ottawa.

Implications:

The Greenspace Master Plan contains strategies to acquire and protect greenspaces along the Rideau River and Rideau Canal. This will ensure that the public always has access to the city's waterways and by extension, the larger Urban Greenspace Network.

Link: <http://ottawa.ca/sites/ottawa.ca/files/migrated/files/con022221.pdf>

Parks and Recreation Master Plan**Key Details:**

The Parks and Recreation Master Plan is currently in Phase 3 of the project that is the development of various policy reports that address the operating principles and strategic recommendations presented in the Phase 1 report. The goal of the plan is to provide recreational services to the people of Ottawa in a manner that best utilizes the facilities available. Seasonal use facilities, such as arenas, and the changing demographics of users are just two of the challenges to be addressed in the near future by the City of Ottawa. Furthermore, the plan outlines upcoming studies, including the Social Recreation Strategy and Financial Framework Report.

Implications:

When the final Parks and Recreation Master Plan is complete, it should provide recommendations for the balanced use of the city's facilities, including outdoor spaces such as the Rideau Canal. Part of the plan will also focus on climate, addressing the seasonal issues of park spaces adjacent to the Canal.

Link: <http://ottawa.ca/en/city-hall/official-and-master-plans/parks-and-recreation-master-plan/parks-and-recreation-master>

Transportation Master Plan**Key Details:**

The Transportation Master Plan (TMP) sets the direction for the City of Ottawa's day-to-day transportation programs, and provides transportation implementation strategies consistent with the City's Official Plan and growth management policies. The strategic direction of the plan is to create a transportation system that will enhance quality of life by supporting social, environmental and economic sustainability. The plan identifies the facilities, services, and policies needed to serve the City's projected population of 1.14 million in 2031. As of fall 2013, Ottawa's Transportation Master Plan is currently undergoing an update. Although specific policies regarding the Rideau Canal are unknown at the present time, the City has views the Canal as a key transportation corridor. Citywide transportation initiatives, such as the Ottawa LRT project may have a significant impact on the Canal at stations such as Rideau, the University of Ottawa Campus and Carling Avenue at Preston Street.

Implications:

This plan is of key significance to the study as it outlines the priorities for the City's transportation projects including, active transportation initiatives and rail system expansion. Many of these projects will have significant impacts on surrounding neighbourhoods adjacent to the study area. Projects from the 2008 TMP affecting the Rideau Canal corridor, including creating greater connectivity for pedestrians and cyclists between multi-use pathways and Nicholas Street and Colonel By Drive. Furthermore, there is also a focus on connecting the Rideau Canal Pathways to the Rideau River, which may additionally enhance the connectivity of the study area.

Link: <http://ottawa.ca/en/city-hall/planning-and-development/official-and-master-plans/transportation-master-plan>

Ottawa Cycling Plan

Key Details:

The Ottawa Cycling Plan (OCP) is a 20 year plan, designed to complement the City of Ottawa Transportation Master Plan and the City's Official Plan. While only 1% of trips are made by bicycling in the City of Ottawa, the City strongly believes that cycling is and should continue to be an integral part of the greater transportation network. The plan consists of a short term implementation of network infrastructure and programming initiatives, as well as long term strategic goal setting.

Implications:

The OCP has a goal to triple the number of trips made by bicycle from 4,500 in 2011 to 12,000 in 2021, while also making the routes safer and more accessible. A key part of both the implementation approach and the long term goal setting is linking the current networks, while also expanding to connect a greater number of neighbourhoods. The Rideau Canal Corridor could play a vital role in achieving these goals, as extensive cycling infrastructure already exists in the corridor and could be expanded upon to enhance safety and connectivity into adjacent cycling pathways and routes.

Link: <http://ottawa.ca/en/residents/transportation-and-parking/cycling/ottawa-cycling-plan>

Ottawa Pedestrian Plan

Key Details:

The Ottawa Pedestrian Plan is a 20 year plan, designed to improve pedestrian culture and walkability in the City of Ottawa and is informed by the City's Strategic Plan and Transportation Master Plan. The plan outlines the benefits and importance of walking in the City, and provides clear strategies for the implementation of infrastructure, policies and programs. Safe pedestrian street crossings are considered essential for the establishment of a 'culture of walking'. Strategies for implementing safe pedestrian crossings, such as crosswalks, grade separated crossings, and pedestrian refuge islands, are discussed in detail.

Implications:

The Plan views the Rideau Canal as both an attraction for pedestrians as well as a barrier- as pedestrian crossings are limited. Improving pedestrian connections across the Canal and making connections to the City's greater pathway infrastructure are key considerations. Additionally, based on site visits and stakeholder interviews, safety is a strong concern for pedestrians along the Rideau Canal due to the high speeds and volume of vehicular traffic along Queen Elizabeth Driveway and Colonel By Drive and the high speeds of commuting cyclists along the shared Canal Pathways.

Link: <http://ottawa.ca/en/ottawa-pedestrian-plan>

Zoning By-Laws

City of Ottawa Zoning By-Laws

Key Details:

The Rideau Canal acts as a parkway corridor into the downtown area and passes through many different areas with zoning by-laws.

Parks and Open Space

The O1 designations along the Canal are designed to allow parks, open space and permitted compatible uses in specific areas of the City. This designation specifically applies to major recreational pathway areas and river corridors. This designation also is intended to ensure that land uses remains low-scale, and that there is low-space intensity in open spaces. The only permitted uses under the by-law include community gardens, environmental reserve and educational area, or parks. There are a number of designations that can be added onto an O1 property. A large portion of Lansdowne Park is designated O1S, where seven different provisions are added onto the O1 designation to permit specific elements of the Lansdowne park redevelopment.

Leisure Zones

There are areas around the Canal that are designated leisure zones. They are either classified as L1 Community Leisure Facility Zone or L2 Major Leisure Facility Zone. L1 is more restrictive than L2 for land uses permitted. L1 zones permit recreational uses that are appropriate in scale and density for the surrounding communities and residential uses. L2 zones accommodate leisure and cultural facilities that are regional in scale, and can vary in intensity, and allow moderate density. Land uses that are approved for this zone are restrictive and primarily allow public or community buildings. The National Arts Centre, portions of Lansdowne Park, Confederation Park and the old train station are all designated with provisions as L2 (Major Leisure Facility) zones.

Institutional Zones

Both the University of Ottawa and Carleton University are zoned as I2 Major Institutional Zones. I2 zones are designated to ensure that major institutions are appropriately located within the City. These zones include large parcels of land with arterial road and transit access. They ensure development is compatible with adjacent uses, and also allow minor institutional and ancillary uses. A wide range of land uses are permitted in I2 zones which notably allows residential, offices, banks, and restaurants.

Mixed-Use Downtown Zones

The Rideau Centre, the Conference Centre, Department of National Defence, and City Hall are all located within the Mixed-Use Downtown (MD) Zones. These zones are designated to support and protect the character of the Central Area of the City. They are to facilitate intensification in a compatible manner and encourage a pedestrian-oriented environment. Development must also protect the integrity of the Parliament Buildings and respect in terms of scale other heritage buildings. There is an extensive list of permitted land uses associated with MD zones.

Implications:

The effect of the existing zoning designations restricts new land uses from being introduced around the Canal. The existing O1 designations prevent any new development unrelated to parks or gardens. Leisure zones near the Canal will only permit one specific type of land use. The existing municipal zoning by-laws serve to perpetuate the existing conditions around the Canal, preserving a parkway landscape. They act as a barrier to new development. As long as the majority of land around the Canal is designated as open space or for leisure activities, no new land uses can be introduced near the Canal.

There are opportunities for the City of Ottawa to work with other institutions to get new land uses near the Canal. The city's institutional zoning by-laws are currently designed to enable the institutions to build almost any type of structure. As well, these areas are located on large parcels simplifying the difficulty of a coordinated planning strategy. Similarly, the mixed-use downtown zone designations enable most types of land uses. However, for the city to take full advantage of these opportunities within the existing zoning by-laws, the city will have to take the initiative to actively work with other stakeholders.

Link: <http://ottawa.ca/en/residents/laws-licenses-and-permits/laws/city-ottawa-zoning-law>

University Policies

Carleton University Campus Master Plan (2010)

Key Details:

The Carleton University Campus Master Plan 2010 sets the planning strategies that the university will employ to guide their physical development in the future. Land owned by the institution is separated into different campuses, and then a growth strategy for each campus is outlined. The Rideau Canal is sparsely mentioned in the document, and most of the proposed developments do not address the Canal.

The Carleton University Campus Master Plan identifies the open space south of Dow's Lake as 'North Campus'. Both mid and long-term development strategies for this area are included in the plan. In the mid-term, a large surface parking lot will be constructed, taking up most of the open space. Parkland will separate the parking lot from Bronson Avenue, Colonel By drive, and other parts of Carleton University's campus. The long term plan for North Campus projects mid-rise buildings lining an internal road network located on the eastern half of north campus. This will be accomplished through the redevelopment of half of the parking lot.

Specifically, one section in the document looks at connecting the campus to Colonel By Drive. The plan states that the university will work with the NCC and Parks Canada to gain greater pedestrian and physical access to the road. The plan also identifies a site where a future extension of Campus Drive is proposed to connect to Colonel By drive south of Dow's Lake. Finally, in a section titled 'Compact Academic and Research Campus', the plan indicates that a long term goal of the university may be to expand the campus across the Canal through the purchase of federal land.

Implications:

The direction indicated by Carleton University's Campus Master Plan indicates a continuation of the trend of disregarding the Canal when proposing future development projects. The open space south of Dow's Lake represents an opportunity to integrate the campus with the southern portion of the Rideau Canal. Instead, both the mid and long-term development proposals ignore the potential to create a built environment that addresses the Canal, instead choosing to focus on Bronson Avenue. The proposed extension of Campus Drive will provide better connectivity to the Canal. However, without any proposed building oriented towards the Canal on north campus, these connections are inefficient for pedestrians. As well, while the plan expresses the desire to work with the NCC and Parks Canada to acquire federal land on the northern portion of the Canal, this goal seems unlikely to be achieved by the University in the near future. Based on this preliminary analysis, it is highly recommended that any future plan should emphasize a desire to work with all levels of government to integrate the Canal into Carleton University's campus.

Link: <http://www2.carleton.ca/campusplan/documentation/>

University of Ottawa: Planning, Urban Design, and Architecture Principles and Directions (2006)

Key Details:

A 2006 report by Urban Strategies, provides the University of Ottawa with a set of guiding principles, and recommendations for its planning urban design and architecture. The University of Ottawa hopes to demonstrate leadership in their land stewardship, to develop a high quality, sustainable and positive campus environment.

Implications:

The plan identifies mobility as a key concern, being located in a dynamic urban environment. Specifically, it aims for a balanced and sustainable approach to transportation, including increased transit and cycling accessibility. Although the plan does not mention the Rideau Canal directly, the campus does have a tunnel which leads to a section of greenspace along the Canal. This Canal frontage is home to the NCC pilot project, 8 Locks' Flat Canal Bistro, and might be a suitable location for other project. The plan also suggests adaptive re-use of existing facilities, which might include buildings nearby the Canal, which could be further connected directly to the waterway. With the proposed LRT, there is a new opportunity to create a partnership between the University, the City and the NCC to increase students' connection and understanding of the Rideau Canal.

Link: http://www.uottawa.ca/services/immeub/assets/pdf_files/Arch%20and%20Design%20Policy%20Final%20June%206.PD

Appendix 3

Waterway Precedents

In order to present a series of distinct waterways and interventions, with special attention capital and winter cities, this section is divided into three main categories- established waterways, large-scale waterway interventions and site-specific waterway interventions. Note: Capital cities (national, provincial or state) are marked with a *

1.1 Established Waterways

- 1 Chesapeake and Ohio Canal- Cumberland, MD to Washington, D.C.
- 2 Lechmere Canal Park- Cambridge, MA
- 3 Liverpool Maritime Mercantile City- Liverpool, England
- 4 River Walk- San Antonio, TX
- 5 Venice Beach Historic District- Los Angeles, CA
- 6 Zayandeh River- Isfahan, Iran

1.2 Large-Scale Waterway Interventions

- 7 Canalside- Buffalo, NY
- 8 Chicago Riverwalk- Chicago, IL
- 9 City Centre Waterfront Program- Fort McMurray, AB
- 10 Onondaga Creekwalk - Syracuse, NY
- 11 Glasgow Canal Regeneration Project - Glasgow, Scotland
- 12 The High Line - New York, NY
- 13 Lachine Canal National Historic Site - Montréal, QC
- 14 Liffey Boardwalk - Dublin, Ireland*
- 15 Ohio Canal Towpath - Cleveland, OH
- 16 The Revamp of the Ljubljana Banks and Bridges- Ljubljana, SI*
- 17 RiverWalk - Calgary, AB
- 18 Rochdale Canal - Manchester, England

1.3 Site-Specific Waterway Interventions

- 19 Badeschiff Spreebrücke - Berlin, Germany*
- 20 Clock Tower Beach - Montréal, QC
- 21 Folly for a Flyover - London, England*
- 22 Havnebadet - Copenhagen, Denmark*
- 23 H₂O Park - Toronto, ON*
- 24 Paris Plages - Paris, France*
- 25 Rotterdam City of Arcitecture@night - Rotterdam, Netherlands
- 26 The Trail River - Winnipeg, MB*
- 27 Tussen-ruimte - Amsterdam, Netherlands*
- 28 WaterFire - Providence, RI*

Established Waterways

Chesapeake and Ohio Canal

City: Runs from Cumberland, MD to Washington D.C.

Country: United States



Year Implemented: Construction of the canal began in 1828 and it was completed in 1850. The canal was utilized as a transportation corridor for moving goods such as coal, grain and flour, which were produced in Maryland to port in Georgetown. (Encyclopaedia Britannica Inc., 2013).

Implementation Agency: The Federal government was responsible for the transformation of the canal from an industrial/transportation corridor to a pedestrian/open space corridor. The National Parks Service currently manages the historic canal park corridor.

Specific Reason for Intervention: Due to competition from railroads and flooding issues the canal was closed in 1934 and in the 1950's the Federal government had plans to drain and pave the waterway to create a parkway. The plans for the parkway were not passed and in 1971 the canal was designated as a national historic park (Encyclopaedia Britannica Inc., 2013).

Key Details: The towpath, which runs along the length of the canal, provides a unique active transportation pathway for both tourists and residents. The Canal also provides a number of engaging recreation and leisure activities for visitors including fishing, paddle boating, and mule drawn canal boat rides (Rachel Cooper, 2013). During the winter when the canal freezes ice-skating is permitted along most of the canal by the National Park Service except in areas where the canal is too deep to freeze (The Georgetown Metropolitan, 2012). Another notable feature of the canal is the 2.5 km stretch of the waterway, which passes through Georgetown. The banks of the canal in this area are lined with historical residential buildings and commercial development within close proximity to the waterway. These developments along the canal directly address the waterway which creates an interesting dynamic between the built and natural environment.

Public Approval: The designation of the Chesapeake and Ohio Canal as a national park and the development of the canal as a pedestrian corridor has generally been regarded as success as the canal is now a feature which provides simultaneous access to the natural environment and the historical landscape of the area (TrailLink, 2012).

Implications for City of Ottawa: The Chesapeake and Ohio Canal bears a number of physical, historical, and cultural similarities with the Rideau Canal. Both canals have

undergone similar transformation in terms of use, beginning as transportation corridors and then being repurposed as an open space and pedestrian corridor. Additionally, both waterways also maintain a strong historical character, with both having a large number of original structures including locks, lock houses, and other canal engineering structures still maintained to this day.

The Chesapeake and Ohio Canal can be regarded as a useful precedent for the Rideau Canal because the waterway has been able to balance both the historic and modern aspects of the canal into a seamlessly integrated and interesting environment. The portion of the Chesapeake and Ohio Canal, which passes through Georgetown, is an especially useful example of how a canal can act as the centrepiece of residential and commercial development, creating a unique and tranquil space, which is welcoming to both residents and visitors.



Link: www.nps.gov/choh/planyourvisit/index.htm

Lechmere Canal Park, Charles River

City: Cambridge, MA

Country: United States



Year Implemented: 1978; ongoing

Implementation Agency: The City of Cambridge and a private firm CRJA were responsible for canal and landscape design, construction documents, and site supervision.

Specific Reason for Intervention: In 1973, the City of Boston created the Cambridge Waterfront Plan in an attempt to revitalize the area with a landscaped park that would attract commercial and residential development.

Key Details: The Lechmere Canal Park is a 7.5-acre public space surrounding a reclaimed industrial canal (American Society of Landscape Architects, 2013). The canal terminates at a circular basin that features a large water jet at its centre. A continuous promenade lines the circular basin stretching all

the way to the Charles River. The area also includes a secondary circulation network composed of a raised brick path, which provides direct access to the surrounding buildings. The low seawall at the basin offers direct access to the water as well as docking for light watercraft. The site also features a small stepped amphitheatre and open air pavilion which provide sheltered space for visitors to sit and relax. The pavilion also incorporates plexi-glass panels that interpret the industrial history of the canal. Wooden benches line the canal's pathways, while moveable tables and chairs provide seating in the retail areas (The Cultural Landscape Foundation, 2013).

In 1990 the Cambridge Side Galleria was constructed. The structure directly addresses the canal with its main entrance opening onto the water. The area also features a variety of mixed-use developments providing both residential and commercial opportunities (American Society of Landscape Architects, 2013).



Implications for City of Ottawa: The Lechmere Canal Park is an excellent example of a canal that successfully integrated a variety of uses including commercial, recreational, residential, and open space to revitalize and reanimate an underutilized urban waterway. The Lechmere Canal Park can be regarded

as a useful precedent for the Rideau Canal in the sense that development along the Lecehmere Canal is providing multiple activity centers for multiple ages and interests as well as direct access to the water's edge. The canal itself is the focal point of the area, with the surrounding development all focused and directed toward the canal. The Lechmere is also successful at providing direct access to the water along the entire promenade, which is a characteristic that the Rideau Canal is lacking.



Link: <http://www.asla.org/guide/site.aspx?id=40437>

Liverpool Maritime Merchantile City, Liverpool Harbor*

*UNESCO World Heritage Site

City: Liverpool

Country: England



Year Implemented: July 2004 (designated UNESCO)

Implementation Agency: UNESCO has designated six areas within Liverpool as world heritage sites. These designations were given based on three criteria that the city demonstrated. They include designation for the historic technological innovation of dock construction and port management, being an excellent example of historical mercantile culture, and for Liverpool as a port city at the beginning of the British Empire's global trading system. The UNESCO areas are managed at the municipal level by the Liverpool World Heritage Site Steering Group. (UNESCO, 2013).

Specific Reason for Implementation: In 2004, Liverpool Harbor was inscribed on the UNESCO World Heritage Site List. The reason for designation was primarily to preserve cultural heritage resources within the city related to its mercantile past. Increasingly, the heritage sites in the city are under pressure from ongoing development in the city, which could alter the cityscape and affect the authenticity of Liverpool's heritage as a maritime mercantile city. As a result, in 2012 UNESCO included Liverpool on a list of World Heritage Sites in danger of losing world heritage site status (UNESCO, 2013).

Key Details: Over 380 buildings were designated heritage buildings in 1990 by the city. Since UNESCO designation in 2004, the city has passed new legislation to address management issues of the properties. Specifically, the scale of the UNESCO heritage designations is increasingly a significant challenge as any tall modern development has the potential to change the heritage landscape, diminishing the authenticity of the built environment (Liverpool Echo, 2012).

Implications for City of Ottawa: This precedent is important to the Rideau Canal because both sites are designated as UNESCO World Heritage Sites. Legislation passed by Liverpool regarding the management of their heritage properties can help inform the City of Ottawa and Parks Canada on how to manage the canal to maintain their UNESCO heritage status. As well, this precedent illustrates that large scale redevelopment plans near location designated under UNESCO have the potential to compromise the heritage character values of the site and potentially result in the loss of the designation.

Link: <http://whc.unesco.org/en/list/1150>

River Walk, San Antonio River

City: San Antonio, TX

Country: United States



Year Implemented: Ongoing

Implementation Agency: Channelization of the river was first developed as a means for controlling flooding in the 1930s. The pedestrian esplanade was constructed between 1939 and 1941. The San Antonio Chamber of Commerce spearheaded redevelopment in 1960s and 1970s, with design plans created by the San Antonio Chapter of the American Institute of Architects (The Paseo del Rio Association, 2013).

The San Antonio River Improvements Project, a partnership that began in 1998 between the City of San Antonio, Bexar County, San Antonio River Authority, San Antonio River Foundation, U.S. Army Corps of Engineers and the San Antonio River Oversight Committee, was created to improve 13-miles of the river both north and south of downtown San Antonio.

Specific Reason for Intervention: During the 1950s, The River Walk, which was setup as a recreational open space, was seen as a dangerous and underutilized space, especially during the night. In attempt to bring a more continuous flow of visitors to the area the Tourist Attraction Committee of San Antonio began to focus efforts on promoting economic development in the area in order to increase the amount of commercial, cultural, and leisure activities.

The goal of the recent San Antonio River Improvements Project is to expand the original River Walk. The completed project will create a linear park through the heart of the city that is over 15 miles in length and is associated with over 2,000 acres of public parkland and a number of historical and institutional sites (San Antonio River Authority, 2013).

Key Details: Some of the most successful aspects of the River Walk have been its promotion of mixed-use development along the river. The shoreline of the river is lined with shops, bars, restaurants, and hotels all connected with a network of pedestrian pathways, which extend into the city centre and to other historical sites in the area including the Alamo. The River Walk has been successful at creating a diverse space, which draws in visitors throughout the day and into the night. The River Walk is also successful at utilizing the transportation potential of waterway itself. There is a high volume of boats traveling the waterway, ranging from gondolas and river taxis to dinner boats that provide visitors with the opportunity to experience the area from the water.

In 2009, the River Walk was doubled in length due to the creation of the Museum Reach – Urban Segment, which is a 1.3-mile stretch of new walkways, landscaping, parks and public art extending north of the original River Walk site. The newly restored and enhanced corridor links several downtown

historic, commercial and cultural institutions, including the San Antonio Museum of Art. The project was funded by the City of San Antonio and Baxter County and cost \$72 million dollars to implement, with smaller scale enhancements such as public art being funded by private donations raised by the San Antonio River Foundation (San Antonio River Authority, 2013).

Public Approval: The San Antonio River Walk is widely regarded as one of the most successful urban waterway projects in the United States. Forbes Magazine ranked the River Walk in 2008, as the 14th most popular tourist destination in the U.S. with approximately 5.1 million annual tourist visits (Freed, 2011).

Implications for City of Ottawa: The San Antonio River Walk is an excellent example highlighting the opportunities associated with using a waterway as the foundational feature for creating diverse and interesting public space within an urbanized setting. The varied landscapes and developments created around the channelized river include walking paths, look-out/viewing decks, local shops, restaurants, outdoor theatres, and boating tours. The promotion of such multifunctional developments and amenities has made the River Walk a prime example of how an urban waterway can be used as a catalyst to stimulating economic growth. By creating a space with such a diversity of uses the River Walk provides citizens and visitors with business, leisure, and cultural uses throughout the week and during both the day and night. The Rideau Canal currently lacks a variety of third places or informal meeting spaces where people can congregate and interact. Much of the Rideau Canal is open park space and pathways void of any facilities or venues where people can gather throughout the day and night and

take advantage of commercial amenities. The River Walk highlights the importance of having a varied landscape with a diversity of facilities to stimulate economic and social activity, especially at night.



Link: <http://www.thesanantonioriverwalk.com>

Venice Beach Historic District

City: Venice, Los Angeles, CA

Country: United States



Year Implemented: Built in 1904 and rebuilt in 1993

Implementation Agency: The City of Los Angeles and the Venice Canals Association (VCA).

Specific Reason for Intervention: In 1904, the canals were built as a resort town. By the 1920s, the canals were deteriorating and most were filled in. Several unsuccessful attempts at intervention were made by the city of Los Angeles. In 1982, the site was listed on the Register of National Historic Sites. In 1992, restoration of the canals began and gradually it has become a very desirable place to live.

Key Details: The Venice Beach canals are an estate canal system. The canals were begun in 1904 to recreate the

canals of Venice Italy in California. Successful restoration of the Canals began in 1992. The restoration began as a project of the City of Los Angeles but when not enough funding was available the VCA petitioned that the area be made an assessment district, where local property owners would be assessed and help to pay the cost of restoration. The banks of the canals were rebuilt using a state of the art system that would allow waterfowl and person access to the water and vegetation was planted along the edges of the canals to stabilize them and serve in lieu of a safety railing. The restoration also involved removing tons of contaminated sediment and past construction rubble. Pedestrian bridges were rebuilt and some were moved to better facilitate access to other parts of the city.

The VCA works to create signage to orient visitors and residents, improve the canal side, maintain canal side planting and grow environmentally appropriate plants for the Venice Beach environment. The canal side hedges are nurtured by and grown by local residents. The VCA cleans graffiti, supplies public trash cans and works with the city and other organizations to ensure docks and other infrastructure are appropriate for the local ecosystem.



Public Approval: Listed on the National Register of Historic Sites. The VCA, a local property owners association advocates for and actively works to maintain and improve the canals.

Implications for City of Ottawa: While these canals are largely private, the walking paths are public and the area is a National Historic Site. This precedent is worth noting because of its accessibility as a tourist attraction and resident semi-public water access. At regular and close intervals small docks extend out into the canals allowing access to the water. The VCA is active in growing coastal plants to maintain the canal side safety hedges and encourage other locally appropriate plants. Local neighbourhoods, schools, community organizations or social service agencies around the Rideau Canal or the Central Experimental Farm may be interested in actively fostering the growth of local species of plants for addition to the canal side gardens giving a sense of ownership to the canal gardens to the local Ottawa residents.



Link: <http://venicecanalsassociation.org/about/>

Zayandeh River

City: Isfahan (Provincial Capital)

Country: Iran



Year Implemented: 1995

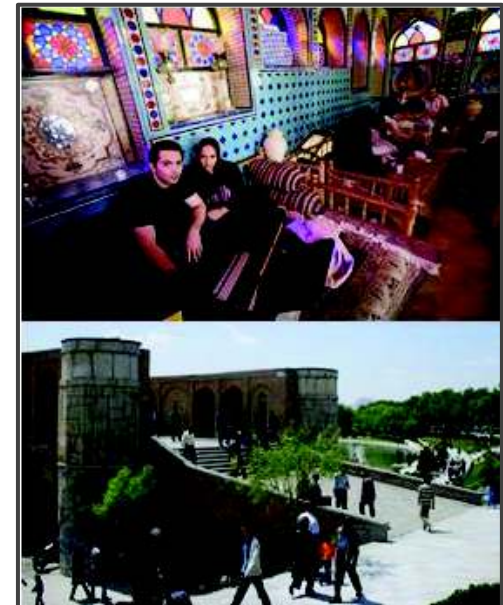
Implementation Agency: City of Isfahan

Specific Reason for Intervention: Adaptive use of heritage bridges, revitalization of the urban section of the river and enhancement of tourism in the region (Ramin, 2009).

Key Details: In the section of the Zayandeh River running through Isfahan- bridges, parks, paddle boats, traditional cafes and restaurants exist amongst the rest of Isfahan's rich cultural heritage. This is a major tourist attraction for Iranian as well as international visitors. There are several new and old bridges over the Zayandeh River. In order to attract individuals to the river's edge at night, the Khaju Bridge is innovatively illuminated at night. In addition to these lighting strategies, there are several indoor and outdoor tea houses on the bridge. Downstream from the bridge, is a series of steps built out the water's edge. Octagonal pavilions in the

center of the bridge house an art gallery and teahouses and providing additional vantage points. The lower level of the bridge is accessed by pedestrians and is a popular public space (Ramin, 2009).

Implications for City of Ottawa: As there is not enough open space for public use along the Rideau Canal, a light and simple multi-use pedestrian bridge as this international precedent illustrates can maximize people's engagement with the canal. Historical galleries can be displayed within spaces on or below the bridge, while indoor and outdoor small cafés on the bridge facing the water can provide a strong sense of space. The bridge itself can be more than a crossing and can become a space to stop and engage with the river and others. This precedent also demonstrates how innovative bridge lighting can enhance the intersection of the river and urban fabric, linking the two seamlessly.



Link: <http://historicaliran.blogspot.ca/2009/11/khaju-bridge.html>

Large-Scale Waterway Interventions

Canalside, Erie Canal

City: Buffalo, NY

Country: United States



Year Implemented: 2008, ongoing

Implementation Agency: Implemented by the Erie Canal Harbour Development Corporation, a subsidiary of Empire State Development and New York State's chief economic development agency.

Specific Reason for Intervention: Initially the site of parking lots, the Canal District was regarded by many as underutilized and neglected waterfront. In 2005, the Erie Canal Harbor Development Corporation (ECHDC) was created to redevelop and rethinking the area.

Key Details: Canalside is the heart of Buffalo's waterfront revitalization. The project involves a revitalized waterfront with new access to the waterfront, the creation of new development opportunities and public activities. This is the core part of a larger harbor and waterfront redevelopment plan. The Canal Side district is a 23 acre site between the inner harbor and Erie Canal. The new development will include mixed use retail, office and residential facilities. In order to catalyze development and sales, the ECHDC has been funding asbestos remediation in historic government-owned building and acquiring underused properties to prepare them for further investments. The Canalside project also includes re-animation of the district through the creation of new public programming and events, as well as improving direct pedestrian access to the water and public amenities. The City of Buffalo has scheduled work to restore historic cobblestone road surfaces. The ECHDC has been funding programming.

Public Approval: This project involved a secondary plan for the city of Buffalo with apparently extensive public consultation.

Implications for City of Ottawa: This precedent illustrates a comprehensive planning and municipal design approach in a historic district that combines planning the urban fabric with public programming and events to revitalize a canal-based waterfront. More specifically, this project shows a successful effort at branding the programming and redevelopment into one comprehensive package.

Link: <http://www.canalsidebuffalo.com/>

Chicago Riverwalk, Chicago River

City: Chicago, IL

Country: United States



Year Implemented: Chicago Riverwalk Framework Plan, 2009

Implementation Agency: City of Chicago, Chicago Department of transportation. Design Plan developed by Sasaki Associates + Ross Barney Architects.

Specific Reason for Intervention: The redevelopment of the Chicago River shoreline first began in 2002 with the creation of the Chicago River Master Plan, which laid out a comprehensive strategy for reanimating the area. The plan resulted in the creation of a number of successful initiatives along the river including the Riverwalk Café and Vietnam Veterans Memorial Plaza (River, Chicago, 2013). Building on the previous successes the Chicago Riverwalk Framework Plan developed in 2009 has been undertaken to increase the number of commercial amenities, recreational facilities, and

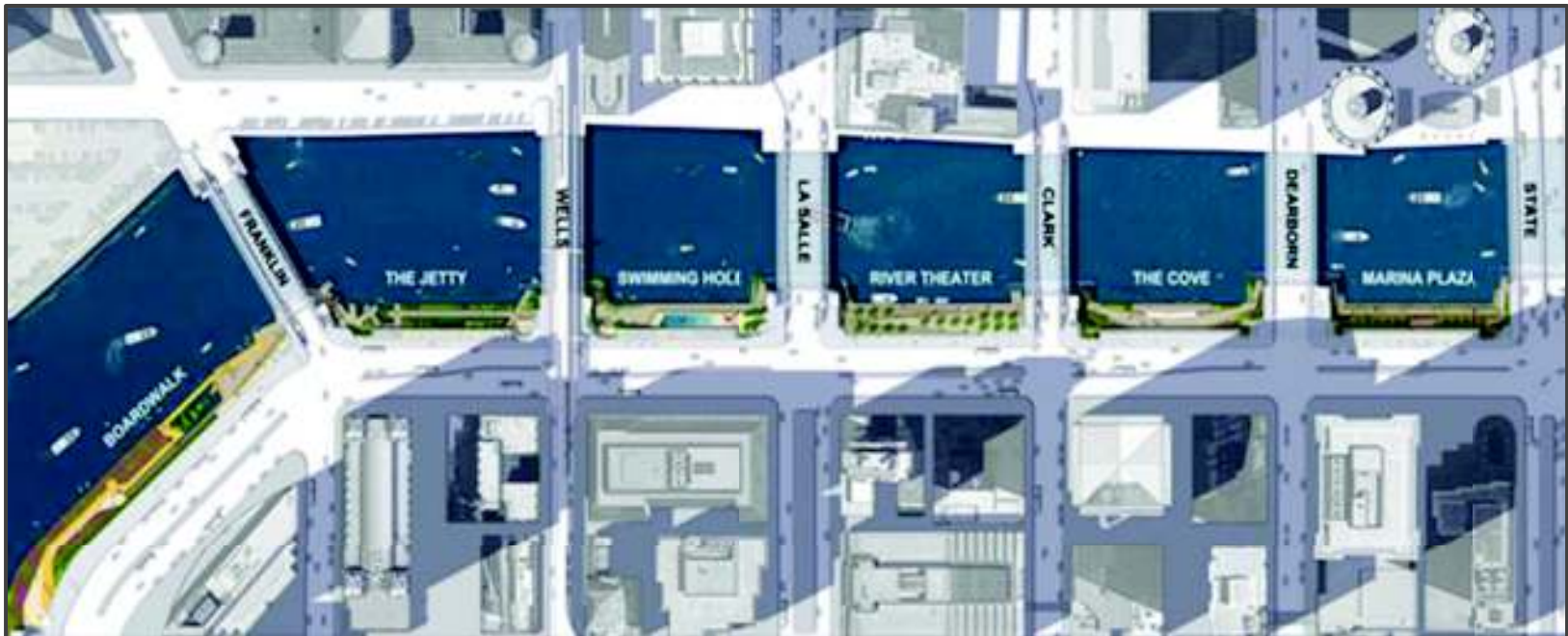
social spaces along the waterfront, to expand pedestrian corridor, and to provide direct access to the river.

Key Details: The Chicago Riverwalk Framework Plan proposes the creation of six distinct blocks along the shoreline of the river, each with its own specific activities, thematic characteristics and physical features. The Marina is designed to accommodate restaurant retail space and public seating. The River Theater will serve as the location for the vertical access between the Riverwalk and the upper streetscape. The Cove may accommodate kayak rental retail space and allow for human-powered watercraft to dock. The Swimming Hole provides a great area for recreation, which may include a water feature such as a zero-depth fountain. The Jetty is a location for learning about the ecology of the river, with floating gardens and piers for fishing. The Boardwalk will be the site of an iconic bridge bringing people from upper street level down to the Riverwalk level. Floating gardens and landscaping are proposed to surround the boardwalk structure (Furuto, 2012).

A mix of potential funding sources for the expansion project has been discussed, including Federal grants and private sponsorship opportunities (Blade, 2012).

Implications for City of Ottawa: The Chicago Riverwalk expansion project is a useful precedent for animating the Rideau Canal in that it highlights the wide range of initiatives that can be implemented to increase the functionality of an urban waterway. The project presents several innovative interventions that can help to increase the public's ability to access and interact with the shoreline and waterway. The use of boardwalks and public wharfs on the river is an excellent way to provide visitors with an opportunity to engage and view the river from a new perspective other than just being able to

look at the waterway from an elevated and barred walkway. The implementation of similar initiatives may benefit the Rideau Canal, especially in the northern more urban section where direct water access is non-existent for pedestrians due to guard rails.



Link: <http://www.archdaily.com/306813/chicago-riverwalk-proposal-sasaki-associates/>

City Centre Waterfront Program, Fort McMurray

City: Fort McMurray, AB

Country: Canada



Year Implemented: Plan released in 2012- work ongoing.

Implementation Agency: Regional Municipality of Wood Buffalo.

Specific Reason for Intervention: Fort McMurray was first used by First Nations and quickly became an important crossroads for arriving European settlers to the area. As the town developed, the railway and the rivers became the focal point of growth with industry and commerce along these arteries. With the most recent oil boom, the town has rapidly expanded, yet the waterfront has not kept up with development and new urban forms in the city centre. The waterfront development project is an important part of this new development.

Key Details: The city centre of Fort McMurray is surrounded on three sides by river. The waterfront plan seeks to address most of the riverfront around the city. Large sections of the waterfront will be turned into naturalized linear parks with a focus on the environment, but Snye Park along the Snye, a section of river that used to connect the Athabasca and Clearwater rivers, is very close to the downtown core and will be developed as an urban waterfront park with urban development addressing the water. The riverfront is to be turned into a series of linked waterfront parks that address the river in different ways from natural to developed with interesting connections between the water and the city.

The waterfront development program involves landscaping, urban development, the addition of retail, commercial and residential uses and night, day and seasonal programming.

Implications for the City of Ottawa: The Waterfront Program is a very recent planned waterfront development program that has at its core a commitment to joint municipal development and programming to enhance the character of the waterfront and make it a destination for users by striking a balancing between urban and natural elements. The plan specifically addresses the permeability of the space, and ways of attract users to the waterfront during the winter. The plan specifically addresses the waterfront as a space for public art, events and performance and includes a large public institution, the civic centre, on the waterfront.

Drawbacks: This is a new plan and much of it is being built on green and brownfield land. Fort McMurray also has significant revenue streams for large-scale projects such as this.

Link: <http://watersedgefirst.com/waterfront-redevelopment-plan/>

Onondaga Creekwalk, Syracuse NY

City: Syracuse, NY

Country: United States



Year Implemented: 2009- ongoing.

Implementation Agency: City of Syracuse and Onondaga County

Specific Reason for Intervention: Main reason for intervention centred on safety and aesthetic appeal. Also, it was meant to create alternative transportation paths and improved pedestrian amenities by connecting a variety of other trailways and canal trails. Furthermore, a desire to improve the environment of the canal and Onondaga Lake meant installing green infrastructure to minimise runoff into the waterways.

Key Details: The Onondaga Creekwalk already has a reputation as a beautiful walkway, and this project is intended

to enhance it. The Creekwalk is mostly a narrow strip of open space along the Onondaga Creek, but it also follows the Barge Canal and Inner Harbor. The urban section of trail passes several historic sites. The multi-use trail connects through several feeder trails to other recreational paths. It is not only integral to Syracuse's conservation efforts regarding their waterways, but serves as an active transportation corridor for commuters. When completed, it will enhance both the quality of life and recreational opportunities of local community members.

Implications for City of Ottawa: The Creekwalk provides a space where residents and visitors can interact with the waterways. By focusing on permeability and connections, it not only connects neighbourhoods, but it connects to other trail systems as part of the Greater New York State Canalway Trail. However, this project is largely about building a multi-use trail and its lack of animation may inhibit any long-term success as it may evolve into a commuter-only trail and not a place for public gathering.



Link: <http://www.syr.gov.net/Creekwalk.aspx>

Glasgow Canal Regeneration Project, Forth & Clyde Canal**City:** Glasgow**Country:** Scotland

Year Implemented: Glasgow Canal Regeneration Partnership was formed in 2004. Projected date of completion for entire project is 2020.

Implementation Agency: Canal Regeneration Partnership (a Joint Venture Partnership between Glasgow City Council and ISIS Waterside Regeneration, supported by British Waterways Scotland).

Specific Reason for Intervention: Canal was created in 1790 as a corridor to transport goods but after rail transportation grew in Scotland, the canal lost its value and fell into disuse, ceasing to be a navigable channel in 1963 (Glasgow Canal

Regeneration Partnership, 2013a). In 2001 canal was reopened with a goal to try and stimulate the economic and social health of communities along the waterway. Some of challenges the project addresses include redevelopment of vacant and derelict industrial/brownfield lands, improving visual and physical access to the canal, and creating greater awareness about the social, economic, and environmental value of the canal (Glasgow Canal Regeneration Partnership, 2013b).

Key Details: The regeneration project is comprised of a variety of interventions ranging from infrastructure upgrading, commercial and residential development, recreation and festival programing, and landscape treatments. Some of the completed and proposed projects, which may be transferable to the Rideau Canal, include the Garscube link, a dynamic pathway reconnecting the urban center of Glasgow to the canal. The project has a value of € 2.4 million (\$3,331,514 CAN) and was completed in 2010 (Landezine, 2010). The link consists of two distinct sections. The first section, known as “Phoenix Flowers” involved the transformation of a degraded underpass pathway into a dynamic and vibrant pedestrian route leading towards the canal. By reanimating the visual aesthetics, physical form, and lighting of the corridor the walkway is now a more interesting, engaging, and safe route to reach the canal. The Second section of the link picks up after the “Phoenix Flowers” providing a landscaped corridor for pedestrians and cyclists to reach the canal-side.

Another proposed project of the regeneration plan is a € 2.2 million (\$3,059,210 CAN) paddle sport recreation facility. The facility has been partial funded by local trusts organizations (STV news, 2012). The facility has been designed to include a large area of recycled shipping containers that will be used to

store equipment and will be leased to public users. A full-length canopy will extend along the waters creating a sheltered edge to provide a place for both the users and the public to gathering and watch activities taking place on the water.

Public Approval: The regeneration project has involved a number of local stakeholders groups including Housing Associations, local community groups, and local schools.

Implications for City of Ottawa: The initiatives of the Glasgow Regeneration Project, as touched on above, address a number of issues and similar spaces, which exist along the Rideau Canal Corridor. The Garscube link is a useful precedent for the Rideau Canal as there are a number of pathways along the canal that pass beneath underpasses. These sections of the pathway are currently both visual unappealing and underutilized as social spaces. By implementing similar design and lighting interventions, as done in Glasgow, these forgotten spaces along the Rideau Canal might become more dynamic places that will attract instead of repel visitors. Also, the use of recycled shipping containers is noteworthy because they could be altered to act as temporary nodes along the Rideau Canal and house a series of bars, cafés and public spaces.

The proposed paddle sport centre would be an ideal development for the southern portions of the Rideau Canal, where the waterway shifts into open water environments. By creating a hub where paddle sport enthusiasts, newcomers to the sport, and tourist can congregate, store equipment and receive lessons, water recreation activities on the canal can improved.



Link: <http://www.glasgowcanal.co.uk>

The High Line, New York NY

City: New York, NY

Country: United States



Year Implemented: 2009-ongoing

Implementation Agency: City of New York and Friends of the High Line.

Specific Reason for Intervention: The High Line was implemented in order to preserve the historic high line railway lines through West Manhattan.

Key Details: The High Line was built in 1930 to bring rail freight above street level. In the 1980s, trains stopped running along this inner-city freight corridor and it was under threat of demolition by neglect. In 1999, the Friends of the High Line group formed to protect and preserve this unique

aspect of New York's heritage. Their collective efforts would evolve into the creation of the High Line Park, a unique 1.6 km linear park and aerial greenway. Friends of the High Line also runs events, programs and venue rentals in the park to raise awareness and funds for its continued operation.

Public Approval: Based on the ongoing consultation of the public by Friends of the High Line and its media attention both nationally and internationally, it is evident the public take pride in their aerial greenway above the urban fabric.

Implications for City of Ottawa: The High Line is a long linear park that is not connected to street level. There are immediate similarities in how to redesign a linear corridor in order to create spaces to sit, engage and interact and how to re-animate the Rideau Canal. The use of contemporary park design on a long narrow canvas is noteworthy because it demonstrates how to bring people to a site through simple interventions, such as movable chaise lounge chairs that sit on the original rail tracks and can be rolled into place with a set of brakes.



Link: <http://www.thehighline.org>

Lachine Canal National Historic Site, Montréal PQ

City: Montréal, QC

Country: Canada



Year Implemented: 1997-2004

Implementation Agency: Parks Canada

Specific Reason for Intervention: The objective of the project was to enhance the commemorative and recreational potential of the Lachine Canal. The Federal government, the City of Montréal and the City of Lachine invested approximately \$100 million dollars into large-scale intervention. This included the restoration of the waterway with the purpose of reopening the canal to small pleasure craft and of offering local residents a unique recreational space on the water (Parks Canada, 2013a).

Key Details: Through this enhancement, the National Historic Site's facilities and recreational activities has grown to include pleasure boating, recreational rental services, interpretative signage, industrial installations, multi-use paths, bike rental services, picnic areas, the Footpath and a series of public outreach events and materials. Parks Canada partners with Mountain Equipment Co-Op on *Learn to Camp* Week-Ends. The Lachine Canal is used as a venue for Montréal's Folk Festival and the OSHEGA Music Festival. Parks Canada and the Association du design urban du Québec have also collaborated to create the Village Éphémère, an event with artists, urban designers and food trucks, centred on creating design installations (Parks Canada, 2013b).

Public Approval: The canal's multi-purpose path was ranked the third most beautiful urban circuit in the world by Time magazine in 2009 (Parks Canada, 2013b). By holding different events, and providing high quality facilities and amenities, the Lachine Canal has evolved far from its industrial roots into a cornerstone of the urban fabric and an urban oasis in Montréal.

Implications for City of Ottawa: The Lachine Canal National Historic Site shows that providing recreational activities and interactive events enhances the canal environment and brings a diversity of users. Elements suitable for City of Ottawa include markets, musicals, food truck, urban camping areas, ongoing exhibitions, interactive games, and a trail reserved exclusively for pedestrians. It is also important to improve the Rideau Canal's current pathway system to improve safety for cyclists and pedestrians through separating it from vehicular traffic.

Link: <http://www.pc.gc.ca/eng/lhnnhs/qc/canallachine/activ.aspx>

Liffey Boardwalk, Liffey Quays

City: Dublin (National Capital)

Country: Ireland



Year Implemented: 1997-2000

Implementation Agency: The Liffey Boardwalk emerged as an innovative idea within Dublin Corporation City Architect's Division in 1997 and a means to "reintroduce Dubliners to the river and provide relief from the traffic chaos of the north quays" (Irish Architecture Awards, 2001: 1). The main architecture firm behind the project and its implementation were McGarry NíÉanaigh Architects (McGarry Ní Éanaigh Architects, 2013).

Specific Reason for Intervention: The main motivation behind the Liffey Boardwalk in Ireland's national capital was to

improve the pedestrian route along this congested stretch of road near the city's old quays and take advantage of the visual sightlines of the river without widening the existing path that parallels the avenue (Oliveres, 2002). Not only was the project developed to provide relief from traffic congestion, but by intervening and implementing a south facing boardwalk, the project team capitalized on natural sun exposure to promote "a totally new relation with the river" for users (Oliveres, 2002, p.1).

Key Details: With a final cost of 2.9 million € (\$4,061,955 CAN) in 2000, the Liffey Boardwalk runs for 650 metres along the river Liffey and extends 4 metres over the water (McGarry Ní Éanaigh Architects, 2013). Rather than widening the existing footpath that parallels the avenue, the project team "opted for hanging a light structure over the water to segregate the circulation of pedestrians from the traffic along the road" (Oliveres, 2002, p. 1). Although the boardwalk is intentionally lower than the existing footpath and separated by wooden benches along the old wall, each segment of the boardwalk has varying heights, which are determined by a number of factors including the location of bridges, accessibility, the potential flooding of the deck, and the likelihood of floating debris striking the support struts of the boardwalk (Irish Architecture Awards, 2001). Furthermore, the incorporation of varying heights, multiple ramps, viewpoints, kiosks and other public amenities promote a diversity of uses and users (Oliveres, 2002). Finally, the structural design, which basic materials take cues from the merchant past of the area, "emphasises the lightness of the boardwalk without any flash technology" and has made it possible to secure the boardwalk into the historical old stone wall without detriment to its heritage character or structural integrity (Oliveres,

2002). Also the use of an advanced custom lighting scheme has enhanced use of the boardwalk at night.

Public Approval: The Liffey Boardwalk has won numerous international and national awards since its implementation, including the 2002 European Prize for Urban Public Space competition and the 2001 RIAI Irish Architecture Award and has also garnered a high degree of local support as it reconnects Dubliners to the river and enhances the pedestrian realm (McGarry Ní Éanaigh Architects, 2013). However, the project is not without its issues as of late there have been concerns around safety along the boardwalk due to high crime in neighbouring communities.

Implications for City of Ottawa: In terms of implications for the City of Ottawa, this permanent intervention in a national capital along is an excellent example of how separating pedestrians from adjacent traffic along an urbanized waterway can create a new urban experience within the city. Similar to Ottawa, Dubliners had traditionally turned their backs on their main waterway, but the introduction of a boardwalk addressed the uncomfortable nature of the existing footpath and created new spaces over the river for users to not only commute along, but also relax and interact. For example, within the study site, the segment of Colonel By Drive that overlooks Lansdowne Park could be the ideal site for a similar intervention because there is no separation between the major roadway and the multi-use path. Utilizing a similar modest and clear design could minimize any concerns regarding the heritage character and structural integrity of the canal, and add another dimension to the heritage resource's evolving narrative. Additionally, it may attract more users to the area.



Link:

<http://www.mcgnie.ie/projects/boardwalk1/boardwalk1.html>

Ohio Canal Towpath

City: Cleveland, OH

Country: United States

Year Implemented: in progress, estimated completion 2017.

Implementation Agency:

The Ohio Canal is a National Heritage Area, designated by the Federal government, but managed by collaborations between residents, local businesses, lower levels of government and not-for-profit organizations. For example, the Ohio & Erie Canalway Association was created to manage the towpath, Cuyahoga County has severed as the project manager for the Towpath extension, the City of Cleveland plays a significant role as the landowner of the Towpath Trail Greenway and is responsible for capital repairs to the Trail and Cleveland Metroparks is in charge of day-to-day maintenance of the Trail. The Ohio Canal Corridor organization raises funds for the Towpath Trail and does community outreach.

Specific Reason for Intervention: The towpath has been neglected and a forgotten segment of the city for decades.



Key Details: This 'park' stretches 117 km from Cleveland's waterfront to historic New Philadelphia. Cleveland is responsible for the urban section of the park. The towpath trail crosses public and private land, and goes through urban and rural areas. The Towpath moves through historic and upscale parts of Cleveland and the towpath trail seeks to engage these areas.

Implications for City of Ottawa: This trail goes through urban, semi-urban and more natural areas similar the Rideau Canal. Accordingly, this is an ideal example of how establishing dynamic partnerships can help build a cohesive corridor that connects with different urban and rural fabrics. Additionally, how the trail terminates in the City of Cleveland and seeks to engage the city leading up to its terminus is worth noting because it illustrates the success of a canal is heavily dependent on its capacity to engage surrounding neighbourhoods through place-making and becoming both a destination and commuting corridor.



Link:

<http://www.ohioanderiecanalway.com/main/pages/57.aspx>

The Revamp of the Ljubljana Banks and Bridges, Ljubljana River

City: Ljubljana (National Capital)

Country: Slovenia



Year Implemented: 2004- 2011

Implementation Agency: The Revamp of the Ljubljana Banks and Bridges was a long-term project implemented by City Municipality of Ljubljana and Ljubljana Tourism in partnership with a diverse array of Slovenian architecture and design firms. The multi-year project of specific interventions along a 2 kilometre stretch of the Ljubljana River in Slovenia's Capital of 272,220 is estimated to of cost over 20 million euros (\$27,881,400 CAN) (Bordas, 2012; NAI, 2012).

Specific Reason for Intervention: The main motivation behind the project in Slovenia's capital city was to enhance the city centre and counter urban sprawl by reconnecting citizens with

the river as a lack of up-to-date infrastructure and decades on investments in roads and parking, not the pedestrian realm had left most river spaces inaccessible and fragmented (NAI, 2012). Taking cues from the 1930s architect Jože Plečnik, who is responsible for recognizing "the structural role of the river and endowing it with a welcoming and cultured monumentalism", contemporary architects and designers aimed to return the two-kilometre river corridor to its past role as the city's leading public space (Bordas, 2012, p. 1).

Key Details: Due to differing types of urban fabrics and landscapes along the Ljubljana River, professionals involved with the project focused on site-specific and realistic interventions that embodied Plečnik past vision. For example, at the beginning of the corridor a new footbridge connecting the botanical gardens of University of Ljubljana and a new river bank space in order to enhance connectivity and the image of the city centre (Bordas, 2012). In addition, several other pedestrian bridges were implemented as well to improve connectivity. Focusing a high attention of public spaces, there was also the introduction of more seating areas and floating piers along embankments to create spaces for citizens to sit and interact (NAI, 2012). There was also an investment in new public furniture, open space activities and street life. Not only has the project improved longitudinal connectivity along both sides of the embankment, it was created permeability across the river. As some have described, the project has transformed the river into "a unitary public space, and yet at the same time, one that is endowed with a profusion of special parts" (Bordas, 2012).

Public Approval: In terms of public approval, this dynamic project was declared the joint winner of the 2012 European Prize for Urban Public Space competition (Europaconcorsi, 2012). In addition to international recognition, it has been widely regarded locally as an effective means to enhance the city centre and counter ongoing urban sprawl in the surrounding region (Bordas, 2012).

Implications for City of Ottawa: The Revamp of the Ljubljana Banks and Bridges is an innovative precedent of how a capital city can address the fragmented nature of a water corridor to improve the livability and quality of life of the old city centre to counteract urban sprawl. By investing in the public realm, concentrating resources on collective efforts and treating the two kilometre stretch of the river as a single-entity, the project was able to bring life back to the Ljubljana River as first planned by Plečnik during the early 20th century. As a relatively small capital, Ljubljana was able to reimagine the river by building permeability both along and across the river. The City of Ottawa should take note of this small European capital because of the transformative nature of the long-term project and its capacity to bring multiple stakeholders and firms together to collaborate on a common vision. To remain competitive as a city and curb suburban sprawl, Ottawa and its partners will need to use the Rideau Canal to its advantage and promote the rediscovery of this historical corridor through improving permeability, connectivity to adjacent neighbourhoods, access to the water, and by offering a choice of varying experiences as Ljubljana did.



Link: <http://www.visitljubljana.com/en/journalists/press-resources/ljubljana-riverbanks/>

RiverWalk, Bow River Calgary AB

City: Calgary, AB

Country: Canada



Year Implemented: 2008- present

Implementation Agency: The major driver behind the implementation of this multi-phase project to enhance the public realm along the Bow River from Chinatown to Stampede Park has been the Calgary Municipal Land Corporation (CMLC). In fact, the RiverWalk is part of the implementation of the Rivers District Community Revitalization Plan, a plan to kick start the regeneration of Calgary's East Village Area (CMLC, 2013).

Specific Reason for Intervention: The main motivation behind the RiverWalk was to connect the East Village area with the rest of Calgary, particular Chinatown, Inglewood and Stampede Park, and return "the banks of the Bow and the Elbow to Calgarians" (City of Calgary, 2013). In an area

previously known for crime and neglect, this permanent intervention was meant to increase the diversity and amount of users in the area and create one of Calgary's "most treasured amenities" (CMLC, 2013).

Key Details: With Phase I (Centre Street Bridge to 9th Avenue SE) and Stage 2 (9th Avenue SE to 13th Avenue [Victoria Crossing]) already implemented, the 4 km RiverWalk is nearing completion. In particular, these initial phases consist of separate multi-use pathways for cyclists and pedestrians. It also features a series of riverfront observation decks, a new lighting strategy, public art installations, outdoor and movable furniture, washrooms, terraced steps leading to the edge of the Bow and a public plaza, which acts as a landmark to the corridor and can accommodate up to 2,000 people (CMLC, 2013). In addition, to this there has been a high degree of landscaping and reintroduction of native grasses and vegetation to the waterfront to naturalize the shoreline (CMLC, 2013). Not only does it connect to surrounding neighbourhoods, but when completed it will connect into the 700 km system of existing pathways in the city.

Public Approval: Still to be determined as the final phase has yet to be complete, but based on an initial scan of media sources, there is a high degree of public support for reconnecting surrounding neighbourhoods and Calgarians with the shores of the Bow and Elbow River through this large-scale permanent intervention. Increasingly, it is being regarded both locally and nationally as one of the best public spaces and waterfronts in the country (CBC, 2012; ULI, 2013).

Implications for City of Ottawa: In terms of implications for the City of Ottawa, this permanent intervention is an ideal example of how enhancing the public realm along a

waterfront can return users and life to a waterfront. Not only is the RiverWalk in Calgary attempting to reconnect users to the waterfront through terraced steps to the shoreline and other simple site specific interventions, but through the creation of observation decks and outdoor plazas, it is creating new spaces where Calgarians can interact with each other and the Bow. While Calgary does not have a historic canal running through its centre, the urban edges of the Bow River has a similar evolving history of uses and this recent phase in the waterfront's history illustrates that corridors along narrow waterways can be more than commuting parkways, and become "both a journey and a destination" (CMLC, 2013). The City of Calgary is currently taking an unconventional approach to attract citizens back to its centre and create a highly accessible and innovative waterfront that enables Calgarians to "reconnect with the river and literally dip their toes into the Bow" (CMLC, 2013). Based on the amount of guard rails and gates linked to the Rideau Canal, Ottawa and its partners should take note of this innovative precedent on how to reconnect citizens with a main waterway by simple changes that reconnect citizens to the water.



Link: <http://www.calgarymlc.ca/explore-projects/river-walk/master-plan>

Rochdale Canal

City: Manchester

Country: England



Year Implemented: 2002

Implementation Agency: The wider project is being delivered by a partnership made up of local community and interest group representatives, The Waterways Trust, Pennine Prospects, Calderdale Council, Rochdale Metropolitan Borough Council, Oldham Council, Manchester City Council and British Waterways (My Rochdale Canal, 2013).

Specific Reason for Intervention: The Rochdale Canal Society was established in 1974 to promote the restoration of the canal. In 2000, the canal was transferred from the Rochdale

Canal Company to the Waterways Trust. Funding of 23 million pounds was announced, mostly from the Millennium Commission and English Partnerships that would enable the remaining obstacles to be removed. In July 2002, the whole canal became navigable once again, almost 200 years after its original opening (Pennine Waterways, 2013). Today the intervention aims to connect local people to the Rochdale Canal, increase understanding and appreciation of the canal's heritage, increase active participation in the canal's regeneration and create improved physical linkages on and along the canal. These objectives are being realised through the installation of interpretive pieces and signage along the canal (My Rochdale Canal, 2013).

Key Details: The Rochdale Canal links intriguing historic towns, integrated walking paths and cycle routes, pubs and unique shops, as well as providing a physical connection to the Upper Calder Valley's industrial past. The Rochdale Canal is also now home to a variety of birds, plants and fish, and rare and protected species (Pennine Waterways, 2013). The main towpath provides easy walking, and most of it is being upgraded to a cycle path. There is easy access at many points along the route. In terms of the recent revitalization, the canal street has been enhanced by an introduction of new third spaces, including bars and restaurants facing the canal which do not take up much space along the canal, and provide a relaxing environment to interact both with the canal and others (Pennine Waterways, 2013).

Public Approval: The restoration project received a commendation in the 'Community' category at the 2008

British Urban Regeneration Association Waterways Renaissance Awards, which recognizes the best practices in sustainable waterway regeneration and development throughout the United Kingdom (My Rochdale Canal, 2013). Furthermore, one of the specific interventions, Canal Side Square, was recognised by the Civic Society with an award for best new public space in 2003 (East Manchester, 2010).

Implications for City of Ottawa: The restoration project of Rochdale Canal shows that appropriate use of public space along the canal; even constricted space and transforming it to small bars and restaurant facing the canal can attract people to the site and connect them to the canal. Also use of public art as represented in Side Walk Square makes the canal more visually appealing to the visitors and adds another layer to the collective heritage of the space.



Link: <http://www.myrochdalecanal.org.uk>



Site-Specific Waterway Intervention

Badeschiff Spreebrücke (Spree Bridge Bathing Vessel) - Spree River

City: Berlin (National Capital)

Country: Germany



Year Implemented: 2005

Implementation Agency: The Badeschiff was implemented by the StadtKunstProjekte, a public institution in Berlin focused primarily on promoting artistic interventions in public space, as part of a 2002 project called *con_con*. With collaboration and support from the City of Berlin, several pilot projects including the Badeschiff were implemented along the river in an attempt to reconnect Berliners back with the river they had previously turned their back on (Bordas, 2006).

Specific Reason for Intervention: The main motivation behind the Badeschiff in Germany's national capital was to reconnect citizens back with the bridges and banks of the river.

Following both World Wars, the Spree River became polluted and the City's public baths closed. With Berlin then becoming the dividing line between East and West Germany, the capital city turned its back to the river for decades. In 2002, *con_con*, an intervention-based project to reimagine the Spree River as a place of social interaction and public gathering, brought artists and architects together to 'construct connections' and the idea of a bathing vessel was established as the water itself was still too polluted to swim in (Bordas, 2006).

Key Details: With a final cost of €400,000 (\$556,959 CAN), this floating project in Germany's capital city consists of a swimming pool, an artificial beach, a bridge and a container (Bordas, 2006). Taking design elements from the city's nautical industry past, the structure itself is made up of the hull of a converted cargo ship commonly used on the Spree. The main pool vessel is 32.5 m in length and 8.2 m wide and can hold 395 m³ of water (Molitor, 2013). The artificial beach, directly adjacent to the pool consists of two parallel wooden platforms, which can be easily moved if needed. The final component beyond the bridge, which connects the floating project to the riverbank, is the floating container that houses not only the pumps and filters, but also a bar, washrooms and changing rooms. Furthermore, similar to Ottawa, Berlin is a winter city, and from October to April the floating facility is converted into the Winterbadeschiff, a set of covered saunas and an indoor swimming pool (Molitor, 2013).

Public Approval: Based on its year-round use and popular public support, the Badeschiff has become a highly successful intervention in the capital city. Although the Spree River is still highly polluted, this floating facility has become a

landmark “where the Berliners and their river meet” (Bordas, 2006). Resting just above the river’s waterline, gives users the sense of swimming directly in the Spree and for that among other reasons it has become one of the best summer spots in the city.

Implications for City of Ottawa: In terms of implications for the City of Ottawa, this precedent is highly worth noting because of Berlin’s similar climate, role as a national capital and history of turning its back to a waterway. The Badeschiff demonstrates the capacity of a site-specific intervention to reconnect individuals to a waterway and become a widely-accepted landmark and public venue. Not only has the facility been successful in summer through daily swimming and music festivals, but in winter, its conversion to a set of saunas and a heated pool, has attracted a diverse array of users. The City of Ottawa should take note of this precedent with its partners, the NCC and Parks Canada because this type of facility can be an innovative and unconventional means to create a public space for social and cultural exchange along the canal. Furthermore, as a temporary, collapsible and movable bathing area, this type of project would not infringe on development restrictions nor conflict with seasonal boating traffic. In addition, it would act as a node along a parkway that has primarily been used for commuting.



Link: http://www.stadtkunstprojekte.de/con_con/projekte/amp/inhalt_en.php

Clock Tower Beach – St. Lawrence River

City: Montréal, QC

Country: Canada



Year Implemented: 2012

Implementation Agency: Old Port of Montréal Corporation with sponsors including Vins de Provence and ESKA, Coppertone, the Government of Canada, TELUS, Sleeman and Coca-Cola, and of the Canadian Wildlife Federation.

Specific Reason for Intervention: The beach was created in order to provide visitors and residents with better access to the riverfront.

Key Details: Located just a short distance from the historic district, the urban beach at the Old Port creates a vacation atmosphere, with fine sand, colorful chairs and parasols, breathtaking vistas of the St. Lawrence, refreshing misters, as well as a restaurant/bar where visitors can gather for drinks or snacks until dusk (Old Port Montréal Corporation, 2013).

Clock Tower Beach is unique in that it provides a unique space where tourists and residents of the city can gather and enjoy tranquil and aesthetically pleasing environment while still being connected directly to the city core and the lively Old Port district.

Public Approval: Some controversy has arisen in response to admissions fees charged to visitors (Reid, 2012). As of 2013 there is no admission fee to enter the site before 5 p.m.

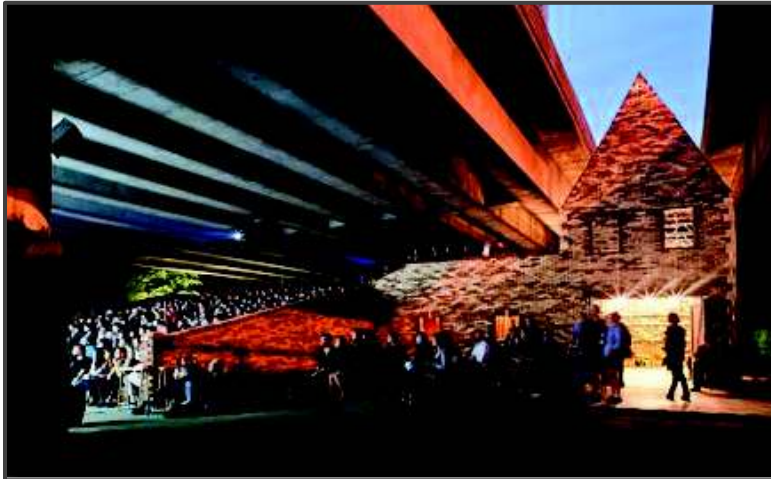
Implications for City of Ottawa: Interesting case showing the potential impact that an urban beach can have on the aesthetic and character of an urban space located along a shoreline that does not have direct access to a water body. The project provides more than just a space for visitors to sit in the sand, the site also hosts cultural activities such as art shows, music/dances and has facilities onsite where patrons can buy food and beverages into the evening. The Clock Tower Beach highlights how an urban beach, through the programming of diverse and interactive events and by providing facilities and amenities throughout the day and night, can create an interesting and engaging public space along an urban waterway.

Link: <http://www.oldportofmontreal.com/clock-tower-beach.html>

Folly for a Flyover- Lea Navigation Canal

City: London (National Capital)

Country: England



Year Implemented: 2011

Specific Reason for Intervention: Folly for a Flyover was a short term theater built under the A12 motorway flyover beside the Lea Navigation Canal by Assemble in East London as part of the Create festival. Create is an organization that works to connect residents of East London to the vibrant arts and culture in the area. Assemble is a London not-for-profit architecture and design initiative with a mandate to address the disconnect between people and the way spaces are made. Folly for a Flyover brings theatre to a unique part of East London.

Key Details: Folly for a Flyover was built using found and donated materials and scaffolding to create the look of a

historic East London building under a cavernous flyover. The structure supports a café, bar and theater for six weeks and afterwards is disassembled and the materials are donated to other local projects. The canal side theater ran a café, workshops and access to small boats for local canal explorations during the day and a theatre and bar in the evenings. This project was built by a team of volunteers.

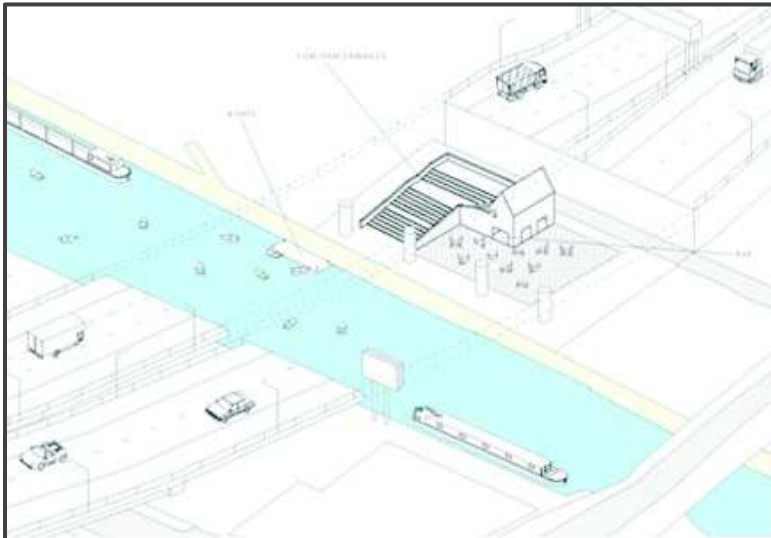
Public Approval: Create is a public art and culture festival, Assemble is a volunteer organization and the Folly for a Flyover project has received many positive reviews.



Implications for the City of Ottawa: The Folly for a Flyover project is a great example of the use of the underside of a bridge or overpass for other purposes. While there may not be room for something this large under Ottawa bridges, the project illustrates a concept in using these spaces as stages for art and performance. These types of spaces could be used for theatrical performance during road shutdowns or other spaces could be found for similar projects. This project

involved a theatre space, café, bar, educational space and access to the canal via boats for local canal exploration, any of which or any combination of which could be replicated in a smaller scale in similar places along the Rideau Canal or anywhere that will allow sufficient space for interesting temporary structures to be built.

The structure of the theatre was designed to look like a historic building from the area another example of possible heritage interpretation that could be attempted along the Rideau Canal. Temporary structure built to resemble historic industrial buildings can connect people to the significant industrial history of the canal.



Link: <http://www.dezeen.com/2011/07/05/folly-for-a-flyover-by-assemble/>

Havnebadet (Harbour Bath) - Copenhagen Harbour

City: Copenhagen (National Capital)

Country: Denmark



Year Implemented: 2003

Implementation Agency: Following a push to modernize Copenhagen's sewer system and expand wastewater infrastructure, several firms including BIG, PLOT A/S, and Julien De Smedt (JDS) were hired to re-establish public bathes along the former industrialized canal.

Specific Reason for Intervention: The main motivation behind the creation of the Harbour Bath by municipal officials was not only to enhance the recently de-industrialized Copenhagen Harbour, but it was to extend the adjacent city park over the water and simultaneously restore the Islands Brygge district's system of public baths, which were closed in 1954 due to health risks associated with poor water quality.

With a shift in industries away from this section of the Harbour canal and a push by the City to address combined sewer overflows into the waterway through new infrastructure, municipal officials pressed to reclaim the waterfront and reconnect the adjacent neighbourhood with the development of the Harbour Bath.

Key Details: With a final cost of €520,000 (\$721,828 CAN), the Harbour Bath has become a widely-heralded success story in the ongoing revitalization of the waterfront and adjacent Island Brygge district in Denmark's national capital. Consisting of a platform of treated pine slats, the rectangular structure with a perimeter of 25 metres by 90 metres has four openings of different shapes and sizes, which act as swimming pools. With the largest pool designed for sporting-use only, a diving platform into the deepest pool, a central pool, that is only 1.2 m deep, and a shallow wading pool for small children and elderly people, the Harbour Bath attracts a wide variety of users during the summer months. Since 2011, although Copenhagen has below-zero temperatures, the Harbour Bath has been used for winter swimming. In summer months, lifeguards service the facilities and admission is free, but due to safety only 600 people are allowed on the platform at the same time. Furthermore, the design respects the industrial past of the district, using reclaimed materials from decommissioned factories to make a unique public space of dry-docks, piers, cliffs and playgrounds. Ultimately, it acts as a landmark, bringing life back to the canal.

Public Approval: The project has become a focal point of the City and has been regarded as "the most popular summer spot in the city" and "an iconic landmark" (ARUP, 2011, p. 8). Furthermore, it has enhanced local residences' sense of

place and has catalyzed the ongoing regeneration of the adjacent de-industrialized district.



Implications for City of Ottawa: In terms of implications for the City of Ottawa, this precedent from Denmark's national capital illustrates how a site-specific and untraditional intervention can reconnect residents back to a canal. Not only did this project catalyze the return of users to the area, it has promoted a sense of pride and ownership in the waterway (ARUP, 2011). Although water quality remains an issue along the Rideau Canal, a similar project could be implemented in a wider area of the canal, ensuring it does not hinder boat traffic along the navigation channel and the platform could consist of a set of enclosed pool membranes to avoid potential health and safety issues tied to canal water quality. This type of terraced structure could create an innovative public space that extends out into the canal, giving users the sense of swimming in the Rideau Canal. Such an intervention could create a temporary and seasonal landmark along the

canal, attracting local residents and tourists to area for social interaction, as well as rest and recreation.



Link: <http://kulturogfridid.kk.dk/havnebadet-islands-brygge>

H₇O Park, Toronto ON

City: Toronto, ON (Provincial Capital)

Country: Canada



Year Implemented: 2007

Implementation Agency: Implemented by the City of Toronto. Designed by Janet Rosenberg + Associates Landscape Architects (Toronto) and Claude Cormier Architectes Paysagistes Inc. (Montréal), in partnership with the City of Toronto's Parks, Forestry & Recreation Division (City of Toronto, 2013). The project did face a number of delays as a result of bureaucratic issues, resulting in it being two years behind schedule (Hume, 2006).

Specific Reason for Intervention: The project is part of a larger long-standing city initiative to redevelop parks, open spaces, and the waterfront (City of Toronto, 2007). Prior to construction of the park the area was polluted, and

underutilized industrial brownfield. Construction of the park involved remediation of a contaminated brownfield.

Key Details: The park's focal point is a long sand pit extending along the water's edge, with metal yellow beach umbrellas providing shade, and Muskoka chairs pitched in the sand. Along the edge of the beach area is a wooden boardwalk that fronts the lake throughout the waterfront. The urban beach provides visitors with a beach experience only minutes away from the dense downtown urban core of the city. According to Janet Rosenberg, "HTO envisages a dynamic zone between the city and the water, a place that synthesizes the best qualities from the urbanity to the north, and the islands to the south. The plan creates a diverse and animated waterfront meeting place" (City of Toronto, 2013).

Implications for City of Ottawa: Similar to the Clock Tower beach in Montréal, the H₇O Park is an interesting case showing the potential impact that an urban beach can have on the aesthetic and character of an urban space located along a shoreline that does not have direct access to water. Implementation of a similar project along the Rideau Canal may help to create a more diverse landscape along the canal that could provide visitors with an interesting space in which they could congregate and enjoy the canal without having to directly enter the waterway.

Link: <http://www.toronto.ca/parks/featured-parks/hto-park/>

Paris Plages, Seine River

City: Paris (National Capital)

Country: France



Year Implemented: 2002

Implementation Agency: The municipal government first implemented this program along the Seine in 2002. It originated from the office of the Mayor of Paris as a flagship event for the summer months to attract more tourism to the capital. At first the event was held along three kilometers of the banks of the Seine through Paris. Over time the attraction has grown with more beaches being placed and additional activities integrated into the public space.

Specific Reason for Intervention: The City wanted to create a public space that would provide the experience of a beach vacation in the heart of Paris. This in turn would attract more tourism to Paris in the summer as an attractive and affordable alternative to vacationing. The goal of the program is to transform Paris so that "The cityscape dons greenery and the riverside thoroughfares become car-free resorts." (Paris Office de Tourisme et des Congres, 2013)

Key Details: There is a large variety of activities available to pedestrians over four weeks from mid-July to the end of August. The parkways along the Seine are closed to vehicle traffic during the event. Sand is dumped onto the roads and palm trees are brought in to create the feeling of an artificial beach at certain points along the river. Lounge chairs and parasols are provided to emphasise this feeling. Paris Plages includes many different activities including free concerts, fountains, mini pools, sports and games, as well as cafes and snack bars. (Trab, 2013)

Public Approval: The event attracts millions of tourists to the centre of Paris every year. As a result of the amount of tourism brought to the city, Paris Plages has been promoted as being extremely successful. Many locals also attend the event over the four weeks as an inexpensive alternative to traveling. (NPR, 2013) Based on the popularity of the event and its growth since it was first developed, Paris Plages is strongly supported by the public.

Implications for City of Ottawa: Paris Plages takes an automobile-oriented waterfront and transforms it into a place that provides affordable summer recreation. The event also is an attraction for encouraging tourism in Paris during the summer. While the Seine's context is significantly distinct in comparison to the Rideau Canal, both waterways have parkways on narrow strips of land running along the waterfront. This summer event also takes place in a highly urban area in a national capital, a location similar to the northern end of the Rideau Canal by the Ottawa River. The summer weather for both Paris and Ottawa is also inductive to outdoor public events. Therefore, there are many similarities between the physical locations of the Seine in Paris and the Rideau Canal in Ottawa.

Paris Plages also demonstrates a temporary change in land uses along a parkway corridor. After the event is held the sand and palm trees are removed and the space once again becomes open to vehicle traffic. This type of intervention on the built environment represents a useful method for the City of Ottawa and Parks Canada to attract people to the Rideau Canal during good weather months. It would not require any permanent alteration to the area, important for maintaining the UNESCO world heritage designation for the canal.

Link:

<http://www.npr.org/blogs/parallels/2013/08/19/212384535/sun-sand-and-the-seine-the-beach-comes-to-paris>



Rotterdam City of Architecture@night , Rotterdam Harbour

City: Rotterdam

Country: Netherlands



Year Implemented: May 24 – June 24, 2007

Implementation Agency: The City of Rotterdam's Department of Town Planning implemented a lighting design project as part of a yearlong initiative highlighting the city's architectural heritage. Specifically, Rotterdam Festivals, an agency that reports to the city, was responsible for the implementation of all the events associated with the City of Architecture. Since EURO 2000, Rotterdam has held a semi-annual program based on different themes. In 2007, the city worked with the European Light Designers Association to create temporary

public lighting displays on sites around Rotterdam's harbour (Public Spaces, 2008).

Specific Reason for Implementation: Multi-disciplinary workshops, including architects, designers, and planners, were intended to explore new ideas and techniques for lighting public spaces. The workshops were regarded as an opportunity to have international experts from many fields work together with city staff to emphasize the architectural heritage of the city through the use of innovative lighting techniques.

Key Details: The specific component of the yearlong City of Architecture festival examined here is called *City of Architecture at Night*. This project included six different lighting projects at three locations around Rotterdam's harbour on the Nieuwe Maas River. Lighting project locations were selected that had the best opportunities to highlight key structures with significant architecture. These projects were aimed to fulfill many functions including acting as public displays of art, contributing to a safer environment, and attracting tourism. One project along the riverbank included the installation of a lighting system that illuminated a public garden at night and provided a sense of safety (Public Spaces, 2008). The multi-functional focus of the projects illustrates how lighting projects can be extremely useful in urban environments.

Public Approval: The lighting projects remained illuminated at night for a month after the workshops were completed. They represented a municipally funded public intervention on the built environment that added to the sense of place. The public had mainly positive opinions on the lighting projects. The projects made public spaces safer for pedestrians and cyclists at night, and acted as modern art. As a result, more

people were drawn to these public spaces at night (Public Spaces, 2008). These projects helped to create a more vibrant urban environment that was used for a greater duration of the day.

Implications for City of Ottawa: These lighting projects were successful in illuminating large areas of public space in an urban environment and were energy efficient in comparison to typical uncoordinated commercial lighting techniques. Rotterdam (city of 600 000) was able to implement an innovative lighting project at a cost of €350 000, or \$581 000 Canadian (Public Spaces, 2008). The public lighting displays were an outlet for cultural expression, were energy efficient, and provided a sense of safety, thereby making areas more accessible, around Rotterdam's waterfront.

The City of Ottawa can easily take techniques illustrated by *City of Architecture at Night* to improve the lighting along the Rideau Canal. The city and the NCC already have comparable programs for different places in Ottawa. The city currently has a public lighting program highlighting the heritage bridges over the canal, and the NCC is responsible of illuminating Parliament Hill during Christmas. Therefore, new lighting projects could be designed to highlight the engineering heritage of the canal while providing a greater sense of safety at night.



Link: <http://www.publicspace.org/en/works/e075-architecture-night-rotterdam2007>

The Trail River, The Forks Winnipeg MB

City: Winnipeg, MB (Provincial Capital)

Country: Canada



Year Implemented: 2008

Implementation Agency: The Forks is the area where the Red River meets the Assiniboine River in Winnipeg. In the winter the waterway freezes, providing an opportunity for winter activities. The Trail River is the winter festival where people can skate along the world's longest skate path. The Forks North Portage is the company responsible for managing events during The Trail River. They are also responsible for specific programs implemented for the rest of the year around the Forks.

Specific Reason for Implementation: Over the past few years, new and innovative programming has been developed by The Forks North Portage and implemented as part of The Trail River. These programs are an attempt to provide a superior winter festival experience through enhancing public space, thereby attracting more tourism to the city during the winter.

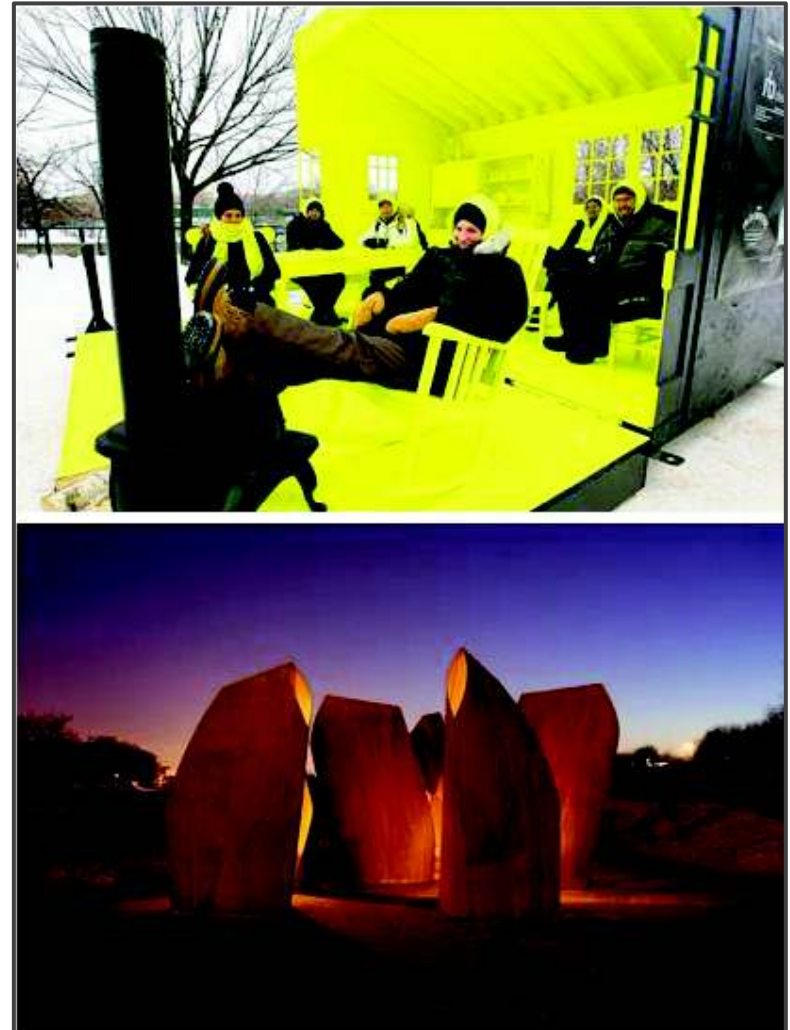
Key Details: There are several standout features that have recently been added to The Trail River. The skating path was designated by The Guinness Book of World Records as the world's longest skating trail in 2008 (CBC News Manitoba, 2008). This helped the winter festival to gain more attention as a destination for winter tourism. In 2010 an annual international design competition was held for the first time to develop ice-warming huts for the skating path. This competition has become a prominent feature of The Trail River and is now the main feature that is attracting tourism to the area. Since 2010, a new design competition has been held each year with the winning designs being constructed and placed onto the trail at regular intervals (Winnipeg Free Press, 2012). Finally, in 2013 a pop-up restaurant was set up on the ice. People were able to skate up to the restaurant, get a table, and experience a complete dining service. It was a fully functional restaurant with cooks working on an elevated platform, and was removed once the ice became unsafe at the end of the winter season (Winnipeg Free Press, 2013).

Public Approval: The public has responded favourably to the new features of The Trail River. The unique warming hut design competition and restaurant have attracted international attention. There does not seem to be any negative press or opinion available on these new features of the winter festival. The warming huts were featured in a segment of an episode of the Rick Mercer Report (The Forks,

2013). Because all of these innovations are on temporary structures on the ice, there does not seem to be any political barriers to implement new and innovative programs at this location.

Implications for City of Ottawa: This is the only other major comparable winter festival in an urban setting in Canada. It strongly parallels Winterlude with the types of activities it offers. The city can learn from the precedent of both the warming hut design competition and the pop-up restaurant that new and innovative temporary structures can revitalize a winter festival. A similar design competition could be arranged with coordination from Carleton University's Architecture School for multi-use temporary structures along the canal. Diversifying connecting additional food sources on the ice can help attract more people to participate in Winterlude activities.

Link: <http://www.theforks.com/events/signature-events/river-trail>

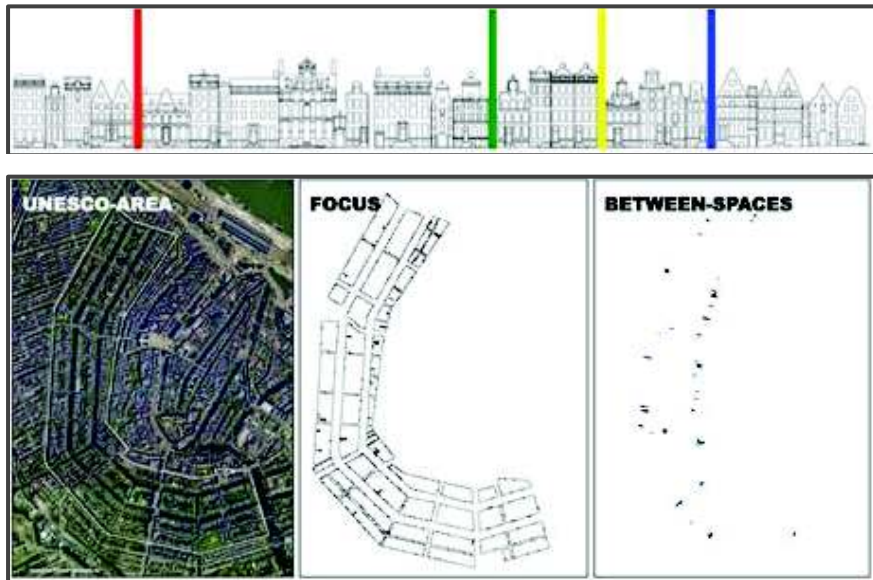


Tussen-Ruimte (Between-Space)- Amsterdam Canal*

*UNESCO World Heritage Site

City: Amsterdam (National Capital)

Country: Netherlands



Year Implemented: 2013

Implementation Agency: Tussen-ruimte is an innovative and temporary project within the boundaries of a UNESCO World Heritage Site and the national capital of the Netherlands by the Office Jarrik Ouburg, Non-fiction and TAAK in partnership with Castrum Peregrini. This set of pilot projects was implemented to address the ‘unused space’ between canal buildings and were funded by the Amsterdam Fund of the

Arts, Amsterdam 2013 (City of Amsterdam) and Lecturis Printing Company.

Specific Reason for Intervention: With the 17th-century canal area receiving its UNESCO designation in 2010, the main motivation behind this temporary intervention was to “show the transformative potential of this UNESCO World Heritage site and open up some of these spaces for temporary use in order to enhance the area’s livability” (Van Lersel & Rumping, 2012). With 2013 being the canal area’s 400th anniversary, Tussen-ruimte has emerged because of fears on the part of some, that strict preservation rules may threaten the liveability and diversity of the area and turn it into a large-scale static museum.

Key Details: Focusing on the UNESCO area, collaborators in the project through ongoing fieldwork have identified between 30 and 40 underutilized and closed-off spaces, covering a total of 198 ha. The majority of these spaces are dead-end alleys and small courtyards, which have been closed off for safety reasons or new additions. Rather than continue to ignore these “urban left-overs” or residual spaces, Tussen-ruimte, as a collaborative installation project attempts to use experiment, contemporary art and architecture to reinvent them and create “micro-public spaces” (Van Lersal & Rumping, 2012).

Implemented in the summer of 2013, several pilot project spaces have been implemented through approval of adjacent landowners including, a music installation to create a place of calmness in a former morgue alleyway, a hidden garden and art in another formerly closed-off courtyard, a new destination for temporary programs in a remnant space adjacent to a church and a space for contemplation between two canal houses to illustrate the potential of enhance the space

without altering the heritage structures (Tussen-Ruimte, 2013). In addition to the pilot projects open at various times during the summer, there have also been open houses, tours, concerts, performances, film nights and lectures all focused on how people can engage with these invisible spaces found at the heart of a UNESCO World Heritage Site.

Public Approval: Although temporary, the project has received a high degree of public approval and many landowners have asked organizers to have their unused alleyways and courtyards be used by artists and architects as part of Tussen-ruimte. Based on its success, organizers may begin to install more permanent projects to open up these invisible corners of the UNESCO site. However, it should be noted that there has been some kickback from local planning department, as some installations have been deemed illegal (Keuning, 2013).

Implications for City of Ottawa: In terms of implications for the City of Ottawa, this capital city precedent demonstrates how temporary installations can enhance a UNESCO World Heritage Site by creating spaces for individuals to listen, work, relax, watch, engage and contemplate beside a canal. Based on the increase of landowners coming forward to be part of the Tussen-ruimte as the project progressed throughout the summer, it illustrates the great opportunity to add a new layers of complexity to a static canal space through direct, site-specific interventions that the public widely supports. Although the Amsterdam Canal is more urban and much of its unused space is between urban structures, a parallel can be drawn because the Rideau Canal has a similar issue with unused spaces on different sections of the canal. Accordingly, this precedent should be regarded as an ideal example of how temporary interventions can reinvent a space and create

a focal point for local residents and tourists without directly affecting its heritage designation or past. Heritage is an evolving narrative, and the Rideau Canal is great opportunity for the City of Ottawa and its partners to rediscover and reimagine some of the unnoticed parts the canal.



Link: <http://tussen-ruimte.com/?lang=en#/news>

WaterFire, Providence RI

City: Providence, RI (State Capital)

Country: United States



Year Implemented: 1994 - ongoing

Implementation Agency: WaterFire, first performed or deployed by artist Barnaby Evans in 1994 (Klein, 2000). Currently, it is supported by WaterFire Providence, which is an independent, non-profit arts organization. WaterFire has a small core staff and relies on the efforts of hundreds of volunteers, and donations from both from the public and private sector (WaterFire, 2013).

Specific Reason for Intervention: Barnaby Evans, an American artist, first created WaterFire in 1994 as a commission to celebrate the tenth anniversary of First Night Providence. In June 1996, he established WaterFire organization whose mission is to inspire Providence and its visitors by revitalizing the urban experience, fostering

community engagement and creatively transforming the city by presenting WaterFire for all to enjoy.

Key Details: This award-winning sculpture installed on the three rivers of downtown Providence, has been praised by Rhode Island residents and international visitors alike as a powerful work of art and a moving symbol of Providence's renaissance. With over eighty lite bonfires, the constant flickering firelight on the arched bridges, torch-lit vessels traveling down the river, and the use of classical music- WaterFire has captured the imagination of over ten million visitors, bringing life and a diversity of users to the downtown, and revitalizing Rhode Island's capital city.

Public Approval: Cited by the Providence Journal in 1997 as "the most popular work of art created in the capital city's 371-year history" and by Friedrich St. Florian as the "crown jewel of the Providence renaissance," WaterFire continues to grow and gain in popularity (Waterfire, 2013).

Implications for City of Ottawa: In terms of implications for the City of Ottawa, this precedent shows how a powerful work of art that pictures the history of the city can attract visitors to the canal. The power of WaterFire to attract visitors is strong example of the importance of public art to a city's urban fabric and its ability to restore stagnant spaces. This type of historic public art can be created along the Rideau Canal in the more urbanized section of the canal. Furthermore, this precedent illustrates the importance of creating partnerships to enhance a historic waterway through innovative programming and events.

Link: <http://waterfire.org/>

Appendix 4

Design Charette

Attendees

A total of 29 participants, including the project team attended the design charette.

- The Project Team included Jacob Bolduc, Stephen Bohan, Arthur Grabowski, Ben Holthof, Golsa, Kheir-Moghadam, Mattson Meere, Fraser McLeod, Jeff Nadeau, Ryan Poulton, Jason Sands and Dave Westbrook.
- School of Urban and Regional Planning Faculty included, Dr. Ajay Agarwal, Dr. David Gordon and Dr. John Meligrana.
- Heritage Professionals included Dr. Marcus Letourneau a heritage specialist with Golder Associates and Dr. Brian Osborne professor *emeritus* with the Queen's University Geography department.
- City of Ottawa Staff included Amy Falkner, Peter Giles, Jennifer Hemmings, Rose Kung and Charles Lanktree.
- A representative from the Cataraqui Region Conservation Authority, Michael Dakin, attended.
- A senior planner from Planning and Development with the City of Kingston, Chris Wicke, attended.
- Several students, Angus Beaty, Jessica Jiang, Robert McIntosh, Kyle Pakeman, Miranda Spessot and Shazeen Tejani took part in the Charette.

Charette Format

Presentation

The Charette began with a presentation about the project. The aim of the project was to generate creative ideas for improving urban life along the Rideau Canal. The question...

How do we take a 19th century canal and make it relevant in a growing 21st century city? How do we better connect the Rideau Canal to its surrounding neighborhoods and to the lives of Ottawa's citizens?

was asked and a preliminary SWOC was presented through images illustrating the challenge and opportunities of connecting the Rideau Canal more fully into the urban fabric of Ottawa. (For SWOC Analysis see Chapter 2.4)

Corner Presentations

Following the large group presentation, more detailed presentations to rotating small groups were conducted. These corner presentations illustrated the existing conditions around the Canal, the history of the Canal and precedents of great Canals from around the world.

Existing Conditions focused on....

- Neighbourhood Profiles: Information regarding the demographics, housing and employment of neighbourhoods adjacent to the Canal.
- Focal Points: Areas of special interest along the Canal.
- Environmental Constraints: Floodplains, brownfields and other environmental concerns.

The Existing Conditions presentation was illustrated through posters with members of the project team available for questions.

The History presentation illustrated past activity, use and built form around the Rideau Canal through posters and a slide show of historic images from around the Rideau Canal. Project team members were sharing the history and available for discussions of the historic significance of the Canal.

The Precedents presentation involved 15 posters illustrating three categories of waterway interventions from around the world.

- Established Waterways (Examples of successful urban waterway revitalizations and uses)
- Large-scale Interventions (Massive revitalization projects)
- Small-scale Interventions (Site specific implementations)

Project team members were available to answer questions and stimulate discussion of the merits of good urban canals.

Group Work

After the presentations concluded Charette attendees were divided into one of five working groups with project team members, faculty, professionals and students at each. These working groups were assigned a section of canal and asked to draw on trace paper overlaying a map of their section and determine the interventions they would like to see and to identify potential sites for intervention. The following images and charts illustrate some of the work completed by the groups.

4. Tables of Input from Design Charette Stations

Workshop Station	Overall Comments
Urban	<ul style="list-style-type: none"> • Urban section provides unique tourist and institutional uses • More public Art would encourage visitors to explore • Year round amenities, places to eat and drink would be beneficial • Stimulate more boat activity • More canal access (railings act as barriers) • Major roadways are a barrier, add safe crossing areas • Unique section of the canal (most urban, most tourist oriented) • Wayfinding maps to help connect visitors to destinations, also enhancing the 'journey' • Food Trucks and moveable furniture to add places to "hang out"

Workshop Station	Overall Comments
Midtown	<ul style="list-style-type: none"> • Need for new pedestrian destinations and 'things-to-do' • Lansdowne has great potential to bring vibrancy to Canal, other projects could build off this • Lansdowne will bring accessibility, parking and traffic concerns as well • Need to re-examine relationship between Canal and Echo Dr., potential location for a mix of land uses • Canal acts as neighbourhood park space for residents of the Glebe, Centretown and Old Ottawa East • New bridge or tunnel could connect Ottawa South and Ottawa East with Lansdowne • Separation of bikes and pedestrians • Patterson Creek is underutilized, needs better signage, activities and programming to establish itself as entryway to the Canal and Landmark in the corridor • Creation of boardwalk along the Canal, at the location of Canal Ritz, could drive pedestrian traffic and create places for eating and drinking on the banks of the canal

Workshop Station	Overall Comments
Suburban	<ul style="list-style-type: none"> • Suburban section should have its own distinct character, reflecting the surrounding neighbourhoods • Bronson Avenue has potential to be a vibrant mainstreet, and intensification • North end of Carleton University's campus has potential to address the canal more directly • Canal could integrate through mixed use development along key corridors • Potential connection between Dows Lake Pavilion/Little Italy and Carleton University • Potential Pedestrian bridge connecting Carleton University with Arboretum • Separate pedestrians and cyclists along pathway • Incorporate more types of activities and uses along the Canal • Dow's Lake area is suitable for redevelopment, LRT and Preston St bring excitement to the neighbourhood

Workshop Station	Overall Comments
Corridor	<ul style="list-style-type: none"> • Lack of Parking in many areas (reduces accessibility) • Parkways often have heavy traffic, create bottlenecks • Lansdowne Park redevelopment may exacerbate parking and traffic concerns. • Need for greater variety and quantity of street furniture along the Canal Pathways • Canal acts as barrier for pedestrians and cyclists • Need for greater signage and Canal marking for better place-making • Landscaping could be enhanced to offer greater variety of landscape • Improved accessibility could enhance relationship between the Canal and surrounding neighbourhoods • Street lighting and illumination enhancements could improve user experience and safety • Bridges could act as Patio space

Workshop Station	Overall Comments
Tactical Urbanism	<ul style="list-style-type: none">• Important themes: Create destinations, improve linkages and add to the life of the Canal.• Potential to connect Universities to canal open space• Temporary structures will not interfere with current canal operations allow for flexibility and risk-taking• Crossings such as temporary bridges or zip lines could improve mobility without disrupting Canal operation.• Bridges could offer weather sheltered spaces for events and interaction with Canal• Low cost street furniture encourages people to stay and enjoy the Canal waterway• Program activities in off seasons (such as fall months) to create a 4 season experience• Create temporary uses/destinations that add excitement to the canal, such as saunas, boardwalk, pop-up retail and cafés, food trucks and mobile libraries• Must overcome barriers such as Colonel By Drive and Queen Elizabeth, to bring people into the Rideau Canal Corridor• Tactical Urbanism should reflect the needs of the surrounding neighbourhoods and greater context of the City

Appendix 5

Stakeholder Interviews

5.1 Summary of Input

The following tables provide a summary of input from the 6 stakeholder interviews conducted for this study.

University of Ottawa Physical Resources Services

	Summary of Input
General Thoughts	<ul style="list-style-type: none">- Canal provides year round campus greenspace- LRT will increase transit catchment area and improve transit experience- Corktown Bridge increased pedestrian traffic of students and non-students, provides access to transit and Sandy Hill.
Issues/Concerns	<ul style="list-style-type: none">- The University of Ottawa has a lack of functional greenspace- Transitway, Nicholas and Colonel By Drive act as barriers to access Canal- Parkways are auto-oriented, “static”, and symbols of heritage.

Community Association Representatives – Glebe, Ottawa South, Ottawa East (2)

	Summary of Input
General Thoughts	<ul style="list-style-type: none"> - The Canal nice-looking, yet anti-septic - Canal provides vital greenspace for local community. - Pathways are important and functional amenity - Skateway and Winterlude provide a rich urban experience. - Dow's Lake Pavilion allows access to the canal. - Corktown Bridge big success - The 8 Locks Flat a good idea, poorly implemented - The "park" seating by the convention centre created a positive change. - 5th Ave Bridge has great potential for cyclists, connecting Ottawa East to Lansdowne Park, and creating activity.
Issues/Concerns	<ul style="list-style-type: none"> - Poor integration with neighbourhoods - Limited safe/signalized pedestrian crossings - Limited access to waterway (boating/fishing) and skateway - Lack of signalized pedestrian crossing between Pretoria Bridge and Carleton University. - Parkways are commuter routes with heavy traffic - New developments must more be sensitive to existing neighbourhoods - Tension between cyclists and vehicles/pedestrians – no safe place to bike.
Ideas/Suggestions	<ul style="list-style-type: none"> - The NCC should do more tree planting on this (eastern) side of the canal. - Need for designated bike lanes, or cycle track - Add events/activities on canal – especially at Lansdowne - Improve integration between pathways and City's cycling network - Lawn section of Lansdowne should be developed for community events. - Not sure the NCC needs to add interest to the canal, besides a few spots to enjoy the water, sit and drink a coffee overlooking the Canal. - Create better accessibility and engagement with water

City of Ottawa Councillor

	Summary of Input
General Thoughts	<ul style="list-style-type: none"> - 8 Locks Flat was a good start. We do need to look at whether there are more spaces. - Scarcity of “non-sponsored” space in Ottawa. - Canal is beautiful from afar
Issues/Concerns	<ul style="list-style-type: none"> - Rideau Canal a frustration for the cyclist. - Access can be dangerous, and has too few crossings - you have to “pray and dash.” - Scenic driveways have become commuter driving routes. - Must find balance between maintaining heritage and open space while introducing new developments and commercial activity. - Skateway season getting shorter
Ideas/Suggestions	<ul style="list-style-type: none"> - The NCC seems to be cutting back—the City may need to step up in terms of Skateway and Winterlude. - A proper bike track would allow current path to be converted to pedestrian use. - People want access to canal for personal watercraft

5.2 Stakeholder Consent Form

SURP 826 Project Title: Animating the Rideau Canal

Name: _____

I _____ (name) have read the Letter of Information and have had any questions answered to my satisfaction.

I understand that I will be participating in **Animating the Rideau Canal**, that I have been informed that my involvement consists of an interview that will be recorded, that I understand that the purpose of the study is to prepare a community planning study in support of animating the Rideau Canal in Ottawa.

I am aware that I can contact the Project Manager, Jeff Nadeau at jeff.nadeau@queensu.ca or, 613-316-4277 or the course instructor, Dr, David Gordon, 613-533-6000 x 77063; david.gordon@queensu.ca or Chair of the General Research Ethics Board at chair.greb@queensu.ca or 613-533-6081 with any question, concern or complaint that I have.

I understand that my participation is voluntary and that I am free to withdraw at any time. I have been assured that my contact information will be kept confidential, that interview content may be included in the study and that recordings and interview notes will not be published and will be disposed of at the end of the study.

Name: _____

Date: _____

Signature: _____

By initialling the statement below,

____ I am granting permission for the researcher to take notes.

____ I am granting permission for the researcher to attribute my name to any quotes.

Appendix 6

Glossary of Terms

Active Transportation: Modes of travel which require the individual to be physically active.

Business Improvement Area (BIA): An association of commercial property owners and tenants within a defined area who work in partnership with the Municipal government to create engaging, safe, and competitive business areas that attract residents, tourist, and investment.

Central Area: An area of the City of Ottawa that acts as the major focus of economic and employment activity. It is bound by Sandy Hill, Old Ottawa East and LeBreton Flats.

Community Facilities: Elements, structures, or greenspace in the public realm which enhance the liveability of the area.

Comprehensive Planning Approach: Developing policies and strategies that collectively address all aspects of the Rideau Canal including open space, connectivity, and land use and built form.

Cultural Heritage Elements: Parts of the heritage landscape including tangible things such as buildings, monuments and artefacts and intangible items such as customs, traditions and beliefs which have an impact on the heritage landscape.

Cultural Heritage Landscapes: Represent the 'combined works of nature and of man' and illustrate the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by the natural environment and of successive social, economic and cultural forces, both external and internal.

Downtown Hub: See Central Area.

Edge: As defined by Kevin Lynch, linear elements of the built environment that separate different areas of a city.

Established Waterways: Within the context of waterway precedents section, established waterways have existed for some time and demonstrate a clear vision for public space and incorporate multiple uses, limit barriers, and enhance cultural interventions.

Façade: Is the exterior of one side of a building, usually, but not always the front.

Greenspace: Naturalized or landscaped areas within a city or a community that is protected from development.

Greenway: A vegetated, multipurpose, linear open space corridor.

Heritage Resource: Any physical or non-physical element of a place or area that holds historical value to a community.

Infill: Is the use of land within a built-up area for further construction.

Inter-jurisdictional Steering Committees: A committee that makes strategic decisions concerning the development of future projects. They can also provide guidance on key issues including, budgetary control, resource allocation, and ensuring that internal policies are followed.

Landmarks: As defined by Kevin Lynch, elements of the built environment that function as a reference point for people in the area.

Large-scale Waterway Interventions: Projects that address multiple issues along large segments of specific urban waterways.

Mixed-use Development: Buildings or structures which have more than one type of land use.

Multi-use Spaces: Where a diversity of activities, amenities, and facilities are designed to promote many users and uses at all times of the day.

Navigable Waterway: A waterway accessible to motorized vessels, under federal jurisdiction and must not be obstructed.

Natural Heritage: Elements of the natural environment that has historical significance for a community.

Parkway: A limited access roadway which traverses a naturalized or landscaped greenspace corridor.

Passive Transportation: Modes of travel which enable the individual to be inactive or sedentary.

Pilot Projects: Small scale, low cost, preliminary intervention in the built environment. They can be a tool to help determine if there is a need for more permanent, large-scale infrastructure development.

Pop-up Town Halls: Public meetings that provide a venue for civic discussion typically held in politically neutral locations such as underutilized spaces in the community. They can be held in concert with other events or festivals.

Pop-up Uses: See Tactical Urbanism

Provincial Policy Statement Section 37: Mandates that a local municipality may authorize increases in the height and density of development otherwise not permitted by by-law in return for facilities and services that will serve the public interest.

Provincial Policy Statement Section 42: Mandates that as a condition of development or redevelopment of land a local municipality may by by-law require that land be conveyed to the municipality for park and or other public recreational purposes.

Public Consultation: A process through which city officials actively involve members of the public when making planning decisions. Public consultation programs can include open houses, community visioning workshops, and design charettes.

Public Private Partnerships: A cost sharing approach used to facilitate the procurement of infrastructure where the private sector assumes a major share of risks associated with the financing and construction.

Rideau Canal Corridor: A section of the Rideau Canal from Hog's Back to the Ottawa River, the Rideau Canal acts as a major north-south transportation corridor for the City of Ottawa. Examining the Canal as a corridor requires taking a broad perspective of the study area and emphasizes issues regarding connectivity and transportation.

Sense of Place: How people experience and how their perspectives are affected by a place.

Sightlines: Locations where specific lines of sight are maintained to protect or enhance cultural values.

Site Plan Control: Provides the ability to review development applications before issuing building permits. It can specifically be used to ensure that any future development maintains an appropriate scale in terms of building height.

Site-specific Waterway Interventions: Projects that address specific issues on urban waterways and are designed to enhance the public realm.

Special Areas: Locations within the study area that provide excellent opportunities for creating new destinations for the public. Facilitating the development of these destinations requires special direction.

Study Area: The Rideau Canal from Hog's Back to the Ottawa River. It also includes both NCC and City of Ottawa lands around the Canal, and also extends several blocks into neighbourhoods surrounding the Canal.

Tactical Urbanism: Small, temporary interventions on the built environment that test new concepts and ideas in a low-cost, low risk, politically neutral manner. It is an optimal tool for manoeuvring between regulatory policies regarding land uses, and enhances existing spaces.

Temporary Land Uses: See Tactical Urbanism

Traditional Mainstreet: Linear corridors of development along roadways built before 1945 typified by a compact urban form, mix of uses, and pedestrian-oriented development.

Transit Oriented Development (TOD): A form of development that integrates transportation infrastructure into urban design. They are often associated with a pedestrian-oriented environment, mix of land uses, different housing densities and multiple transportation options.

Wayfinding: Positioning and consistent use of signage and other cues within the built environment in a manner that helps users navigate and experience a space.

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