

Capital Brownfields: An Assessment of Brownfield Planning
Policy in the City of Ottawa, Ontario

by

Mark Roy Ouseley

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AUTHOR's DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

A brownfield is previously developed land which suffers from actual or perceived contamination due to past uses. The City of Ottawa, like many of Canada's municipalities, is faced with a significant inventory of brownfields. As the legacy of industrial activities in earlier times, these sites have become an environmental threat, blight to the community and economic loss for their owners and the City. Unlike many of Ontario's more highly industrialized municipalities, Ottawa has a less industrialized history and, as the Nation's Capital, faces unique brownfield challenges and development climate, requiring a policy approach that is tailored to the Ottawa development market. Ottawa's major brownfield sites are owned by different levels of governments and private firms, ranging from the National Capital Commission owned LeBreton Flats to the City of Ottawa owned Bayview Yards.

This thesis intends to examine current development trends for brownfields, impediments and opportunities for development, assess the efficacy of current policies and provide suggestions for the improvement of the existing brownfield development planning process in Ottawa, using an applied research method. This study is developed through interviews with key informants, a collective case study analysis, a literature review and site visits. This thesis intends to study current policy and provide recommendations to improve Ottawa's approach to brownfield development.

The City of Ottawa has developed a Brownfield Community Improvement Plan, featuring multiple grant programs which has proved to be successful in incentivizing the development of brownfield sites which otherwise would have remained idle. However, the creation and development of this policy was a challenging process, requiring review and improvement in light of ongoing development applications.

The findings of this paper indicate the policy has been successful due to its encouragement of brownfield projects which otherwise would not have occurred. In addition, case studies of Bayview Yards, CLC Rockcliffe Lands, Lansdowne Park, LeBreton Flats, 1357 Baseline Road and 300 West Hunt Club Road illustrate the pursuit of significant brownfield development projects in the City. However, despite its success, some challenges still exist which the City of Ottawa must endeavour to overcome. By tackling these challenges, the City could further aid in erasing brownfields from Ottawa's urban fabric and leave a legacy to its residents, characterized by a robust urban centre free from severe environmental contamination.

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DEDICATION

To my parents, who travelled across the Atlantic Ocean with only two suitcases and a dream. They landed in Toronto, got fed up with the traffic there and eventually moved to Ottawa, the beautiful city I am proud to call home. Thank you for your continued support and reminding me that the journey of a thousand words begins with a single keystroke. This journey spanned over 40 000 words, excluding the 1 000 word count embedded in each picture.

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LIST OF ABBREVIATIONS

CCME: Canadian Council of Ministers of the Environment

CIP: Community Improvement Plan

CLC: Canada Lands Company

CNU: Congress of New Urbanism

CREA: Canadian Real Estate Association

EPA: Environmental Protection Act

ESA: Environmental Site Assessment

FCSI: Federal Contaminated Site Inventory

GMF: Green Municipal Fund

LEED: Leadership in Energy and Environmental Design Standard

NCC: National Capital Commission

NCPC: National Capital Planning Committee

NCPS: National Capital Planning Service

NCSRPP: National Contaminated Sites Remediation Program

NRTEE: National Round Table on the Environment and the Economy

MAH: The Ontario Ministry of Municipal Affairs and Housing

MOE: Ministry of the Environment

OMMAH: Ontario Ministry of Municipal Affairs and Housing

PPS: Provincial Policy Statement

QP: Qualified Person

RA: Risk Assessment

RMOC: Regional Municipality of Ottawa Carleton

RSC: Record of site condition

USEPA: United States Environmental Protection Agency

CHAPTER 1: INTRODUCTION

1.1. Introduction

Brownfield sites are parcels of land that have previously undergone development and suffer from actual or perceived contamination due to past uses. Most municipalities in Canada have an inventory of these sites which require active remediation to restore them to active use. The City of Ottawa is no exception and possesses its own inventory of sites ranging in size and owned by a variety of different parties. Unlike other municipalities, Ottawa and its brownfield development climate is unique due to its status as Canada's National Capital and due to its unique development market. In addition, Ottawa's brownfields are owned by different levels of government, ranging from the National Capital Commission's LeBreton Flats and the City of Ottawa's Bayview Yards.

This research studies current brownfield development trends, challenges and opportunities for development, assesses the efficacy of current policies and provides suggestions to improve existing brownfield development planning processes in Ottawa, using an applied research method. This study was developed through key informant interviews, a collective case study analysis, literature review and site visits. This research is intended to be of use to the stakeholders of Ottawa's brownfield development community from City staff and planners looking to improve the existing brownfield program to developers hoping to take part in revitalizing Ottawa's urban fabric. As no Master's level thesis papers have been found that are written on the topic of Ottawa's brownfield

development policy, this research fills a gap in existing brownfield research and serves as a starting point for further research.

This thesis is organized into seven chapters. Chapter 1 provides an introduction to the research topic and the methods used. Chapter 2 defines and explores the topic of brownfield development. Chapter 3 investigates brownfields in a Canadian context and at the Federal, Provincial and Municipal levels. Chapter 4 explores the history of Ottawa and the characteristics of the City itself. Chapter 5 features six case studies of Ottawa's largest brownfield sites. Chapter 6 analyzes the findings of the research in addition to providing guidelines for future studies and Chapter 7 presents the conclusions and recommendations for further research.

1.2. Site Selection

The City of Ottawa was selected for this study due to its unique status as Canada's National Capital and equally unique brownfield development landscape. As a result of Ottawa's capital status, the City has been rapidly transformed from a relatively small, industrial lumber town with rudimentary infrastructure along the Ottawa River to the bustling capital city that it is today. At the planning level, unlike most municipalities, the Federal Government has played a significant role in Ottawa's planning, especially the areas surrounding the Parliament Buildings on Barrack Hill. During Ottawa's nascent years as the National Capital, the Federal Government played a far more active role in planning and improving the urban core than the municipal government of the time which was relatively small and under-developed in its planning department. This Federal intervention has led to the removal of industries from the urban

core and the creation of brownfield sites as a result. The Federal Government currently owns a significant number of properties in Ottawa through the National Capital Commission, including brownfield sites in prime locations. In addition, the Federal Government and its various bodies is Ottawa's largest landlord (May, 2007) and still plays a significant role in municipal planning issues.

From a policy standpoint, Ottawa is interesting for two reasons. The first reason is the major revision of the Brownfield CIP by the City, a development which has not occurred in other Ontario municipalities with similar policies such as Kingston, Brampton and Hamilton. Secondly, some development of brownfield sites has occurred in Ottawa without tapping into the brownfield policy. This phenomenon is indicative of a development market that is suited for development without the need for external grants. The occurrence of such development begs the question, is the Brownfield CIP truly necessary to encourage further brownfield development in Ottawa?

Due to its industrial heritage, Ottawa possesses a variety of brownfield sites, some of which are large properties offering unique opportunities for urban redevelopment such as the Canada Lands Company (CLC) Rockcliffe Lands and LeBreton Flats. Due to their prime locations in the National Capital, these sites represent an excellent opportunity to further advance the field of brownfield development. Ottawa provides many opportunities to establish the viability of transforming brownfields from environmental hazards to examples of urban intensification and environmentally responsible development. Ottawa's brownfield policies and development projects have lacked the attention and press-coverage gained by the programs in other areas. Examples of renowned brownfield development programs include Quebec's Revi-Sols program or Hamilton's

Environmental Remediation and Site Enhancement (ERASE) community improvement plan and major brownfield development projects such as Dockside Green in British Columbia or The Hamilton Beaches in Ontario. Unlike cities such as Cornwall, Kingston, and Toronto, Ottawa's historic industrial base is relatively small, resulting in fewer brownfield sites than these more highly industrialized cities. This has created a unique brownfield development climate for Ottawa that is unlike those of other cities. Ottawa's lack of media coverage for brownfield site development may change with large properties such as the CLC Rockcliffe Lands and LeBreton Flats gearing up for re-development this has the potential to transform them into some of Canada's premier brownfield development projects.

The literature review process identified only one major graduate research project conducted on the City of Ottawa by May Pham (Pham, 2011) and a full Master's thesis has yet to be written on the status of Ottawa's brownfield program and development climate. This thesis expands existing brownfield literature on Ontario's municipalities and serves as a starting point for comparing Ottawa with similar municipal counterparts. The research for this thesis will serve as a case study for brownfield development programs for cities with relatively limited historic industrial uses.

1.3. Research Purpose and Questions

This thesis will investigate the planning policy surrounding brownfield redevelopment projects in the municipality of Ottawa, Ontario. More specifically, it studies current brownfield development trends, impediments

and opportunities for development, assesses the efficacy of current policies and discusses how to improve the existing brownfield development planning process in Canada's Capital City. The following research goals have been selected to guide this research:

1. Develop a comprehensive understanding of brownfields in Ottawa, Ontario
2. Investigate the planning policies and processes in place at a Federal, Provincial and Municipal level for tackling brownfield redevelopment
3. Conduct case studies of major brownfield sites in Ottawa
4. Identify deficiencies in current planning policies and provide recommendations for policy streamlining and improvement.

To achieve these research goals, the following research questions have been developed to guide this research:

1. Genesis and Description
 - a. What are the characteristics of Canada's brownfields?
 - b. What are the factors that have led to their creation?
2. Policy and Processes
 - a. What barriers to development do these sites face?
 - b. Which levels of government are responsible for these brownfields and what policies and incentives have they adopted to encourage the cleanup and development of brownfields?
3. Ottawa's Brownfields
 - a. What is the current status of brownfield redevelopment in the City of Ottawa?
 - b. How many brownfield sites exist and what factors have led to their creation?

- c. What are the barriers to brownfield development in Ottawa?
- d. How effective are the City of Ottawa's policies and programs at incentivizing brownfield development?
- e. What approaches has the municipality adopted with regard to these sites?

Through the pursuit of answering these questions, this research will develop and communicate a comprehensive understanding of the brownfield redevelopment landscape in Canada with a particular focus on the unique challenges faced by the City of Ottawa, where a variety of governing bodies overlap in jurisdiction.

1.4. Applied Research

This study utilizes an applied research method to explore the topic of Ottawa's brownfield development and address the research questions. Applied research examines a specific set of circumstances and its ultimate goal in relating the results to a particular situation. Thus, applied research uses data obtained directly for real world application (Hale, 2011). Applied research is motivated to move beyond the academic discipline and for knowledge to be useful in the context within which it was generated (Jupp, 2006). Applied research differs from basic research as basic research focuses on fundamental principles and testing theories. Applied research focuses on the use of knowledge in contrast to the pursuit of knowledge for its own sake (Jupp, 2006).

1.5. Study Methods and Approaches

1.5.1. Literature Review

This research uses a literature review to explore the current state of brownfield research and to address the research questions.

The literature review for this research provided a starting point by defining brownfields and determining the state of brownfields in North America and the differences between Canada and U.S.A. in terms of development policies. At a later stage in the literature review, research focused on evaluating the City of Ottawa and its planning history which has led to the current state of its brownfields and urban form. In addition, the literature review was the primary tool used for locating case study sites in the City of Ottawa. Site location also included a search using the Province of Ontario's Record of Site Condition database as well as the Federal Contaminated Site Inventory database. Finally, the literature review identified and discussed the policies and programs used by the City of Ottawa to guide and incentivize brownfield redevelopment. In addition, the literature review provided an initial list of potential contacts for interviews from documents, such as policy reviews and newspaper articles.

The literature review for this thesis was conducted with five primary foci:

1. Examining the literature for appropriate definitions for the term "brownfield"
2. Examining brownfield development trends and patterns in North America
3. Determining the history of planning and urban development in Ottawa and the National Capital Region

4. Identifying and describing Ottawa's brownfield development approach, relevant policies and major brownfield sites of interest
5. Identifying potential interviewees for the collection of data pertaining to Ottawa's brownfield development strategy

1.5.2. Collective Case Study

Due to the complexity and scale of the issues studied, a collective case study is the most appropriate means of studying this topic. A case study is one of several methods available to the social scientist. Additional methods include experiments, surveys, histories and the analysis of archival information (Yin, 2003). Case studies are a preferred strategy when the investigator has little control over events and when the focus is on a contemporary phenomenon within some real-life context (Yin, 2003). A case study can be used to deal with either single or multiple cases (Harling, n.d.).

The case study method uses an in-depth investigation of one or more examples of a social phenomenon and utilizes a variety of data sources (Jupp, 2006). This method utilizes "an intensive study of a single unit for the purpose of understanding a larger class of (similar) units" (Gerring, 2004). A unit is a spatially bounded phenomenon such as a municipality, development site or planning policy. A case study is a holistic inquiry which investigates a contemporary unit within its natural setting (Harling, n.d.). The natural setting is the context in which the unit appears.

The collective case study is defined as a case study method which creates a general understanding of a phenomenon through the use of a number of instrumental case studies which either occur on the same site or

come from multiple sites (Yin, 2003, Cousin, 2005). A broad research question may be refined into a pedagogic hypothesis to test across the sites (Cousin, 2005).

The collective case study approach was deemed the appropriate method for studying brownfield development policy in the City of Ottawa due to the availability of multiple brownfield sites. Through the study of these sites, a general understanding of the process could be developed for the municipality as a whole. However, this understanding of brownfield development was confined in scope to the City of Ottawa. This confined scope is due to Ottawa's unique status as the National Capital, its long history of Federal planning initiatives and intervention and the relatively recent development of a strong municipal planning body compared with municipalities unaffected by Federal planning intervention.

1.5.3. Case Study Selection

Six case studies were deliberately selected to showcase the diversity of Ottawa's ongoing brownfield development projects. These sites are Bayview Yards, CLC Rockcliffe Lands, LeBreton Flats, Lansdowne Park, 1357 Baseline Road and 300 West Hunt Club Road. Each site is unique due to their owners and developers, location, previous uses and intended uses. These sites are currently receiving considerable amounts of attention from local communities and media outlets. In addition, they are Ottawa's largest brownfield development projects and represent some of the last large tracts of vacant land remaining in the urban core available for development. These sites are Ottawa's largest brownfield sites and in the case of 1357 Baseline Road, their application to the program has had a major impact in the evolution of the Brownfield CIP. In addition, sufficient

data could be located pertaining to these sites as a number of brownfield sites lack documentation and their owners were unavailable for comment. Their variety in anticipated project scope and plans also serve to illustrate the wide array of potential uses for Ottawa's brownfield sites.

1.5.4. Policy and Program Identification

To develop an understanding of Ottawa's brownfield development programs and policies, relevant planning documents were located and reviewed. These documents were reviewed to identify the key components of Ottawa's brownfield development policy. To aid in distinguishing Ottawa's planning policies from policy tools, the City's policies and programs were separated into two categories: Planning Policy Approaches and Financial Incentives.

Table 1: Ottawa's Planning Policy and Policy Tools for Brownfield Development

Planning Policy Approach
Official Plan
Brownfield Community Improvement Plan
Ottawa 20/20
Financial Incentives
Project Feasibility Study Grant Program
Environmental Site Assessment Grant Program
Property Tax Assistance Program
Rehabilitation Grant Program
Building Permit Fee Grant Program

These policies and programs are discussed at greater length in section 3.3.4.4.

1.5.5. Site Visits

Site visits to Lansdowne Park, LeBreton Flats and Bayview Yards occurred on February 11, 2013. Site visits to CLC Rockcliffe Lands, 300 West Hunt Club Road and 1357 Baseline road took place on March 12, 2013, April 27, 2013 and April 30, 2013 respectively. These site visits were performed to assess the current status of these sites and to observe their surroundings for a contextual understanding. Photography of the sites was used to document their state and current activities.

1.5.6. The Interview Process

Interviews with key stakeholders comprised the bulk of the primary research for this thesis. Potential interviewees were initially identified in documents, located during the literature review stage of the thesis. Key informants were selected based on their exposure and familiarity with brownfield policy as revealed during the initial literature review or due to a referral by another key informant. Often, full contact details for interviewees were missing. In such cases, the information provided was used to obtain the contact information for the potential interviewee. Potential interviewees were initially contacted either by telephone or email, followed with an information letter explaining the research and process. Individuals expressing interest in the research were contacted, their participation was confirmed and a date and time were scheduled for the interview. Samples of emails sent to key informants can be seen in Appendix H at the end of the interview; interviewees were asked if they could recommend and provide contact details for potential participants

who could contribute further to the research. The contacting and recruitment process was then repeated for each new batch of potential contacts provided by interviewees.

In-depth interviewing is a qualitative research technique which involves conducting intensive individual interviews with a relatively small number of respondents in order to explore their perspectives on a particular idea, program or situation (Boyce and Neale, 2006). In-depth interviews were selected as the method for data collection to discover more detailed information than is customarily collected through email or mail surveys. In addition, by minimizing the effort required on the part of the interviewees to provide the researcher with information, a higher responsiveness is ensured. The in-depth interviews were conducted using the procedure outlined below.

Interviews were conducted with a variety of stakeholders in Ottawa's brownfield development scene, such as City Councillors, planning consultants and individuals from the development industry. In selecting potential interviewees, a broad range of individuals from a variety of sectors were chosen, in order to produce a comprehensive perspective on brownfield development. Key informants were selected based on their involvement in brownfield projects in the City of Ottawa. Their level of involvement was determined during the literature review process which revealed them to have been instrumental in developing and implementing brownfield policy or have been involved in consulting brownfield developers or developing brownfield properties themselves. In addition, the snowball sampling process enabled key informants to refer the researcher to additional key informants with relatively extensive backgrounds in Ottawa's brownfield developments. Ultimately, the key

informants interviewed were significant players in Ottawa's brownfield development climate both past and present.

Training for the ethical dimensions of this research was acquired through the TCPS 2 Tutorial Course on Research Ethics (CORE). Following this training, the necessary ethical clearance for the research was obtained to ensure that the interviews would be conducted in accordance with ethical guidelines (Boyce and Neale, 2006).

Key informants were first contacted with an introductory email explaining the nature of the research, the reason they were contacted and why an interview with them was important for the research. Individuals who were interested in participating were sent a follow up email with an information package attached. The information package contained a consent form to sign, an information letter explaining the research and a sample of the interview script which would be used during the telephone interview. Once given the chance to peruse this information, interview appointments were scheduled. Key informants who did not respond to the initial email were sent follow-up emails in an effort to remind them of their importance to the research and encourage them to participate.

1.5.7. Snowball Sampling

Snowball or chain referral sampling yields individuals for study sampling through referrals made by people who share or know of others who possess characteristics that are of research interest (Biernacki and Waldorf, 1981). A researcher accesses informants through contact information that is provided by other informants. This is a repetitive process as each additional set of informants refers the researcher to additional

informants (Noy, 2008). This method is well suited where the knowledge of insiders is required for locating people for study. It has even been argued that this method is uniquely designed for sociological research because it allows for the sampling of a natural interaction of units (Biernacki and Waldorf, 1981).

This method was actively used during the interview process to produce additional contacts from the initial batch of interviewees. Snowball sampling proved quite useful as insider knowledge was essential for locating additional contacts who were not identified with brownfield development in the documents studied during the literature review process. Often, the individual initially contacted professed a lack of expertise in brownfields but provided referral information to individuals who would be better able to assist with this research. By the end of the snowball sampling process, many of the interviewees suggested the names of individuals who had already been contacted, thereby validating the selection process of this research.

1.5.8. Develop Interview Protocol, Script and Follow-Up Method

An interview protocol was developed which guided the course of the interview. This protocol ensured consistency between interviews and the reliability of the data collected during the interview process (Boyce and Neale, 2006). The protocol developed included a telephone script which would guide the course of the conversation during the interview phone call. This script contained prompts for preparing the interviewee for the interview and starting the recorder. This script would first collect background information on the interviewee then proceed to collect data

pertaining to Ottawa's Brownfield Policy from the interviewee. The interview script is included in Appendix C. The script ensured that the interviews conducted would remain on target with addressing the research questions posed.

This telephone script was the primary interview instrument used during this research. It was continually refined during the research process to eliminate redundant questions and to encourage elaboration on critical data collection themes. The instrument was designed to collect both specific and general details regarding brownfield development in the City of Ottawa through the following levels of questions:

General Questions for Building Background

The instrument begins by asking general questions regarding Ottawa's brownfield development. This line of questioning was intended to collect macroscopic details pertaining to the informant's overall impression of Ottawa's brownfield development climate and the state of brownfield sites. This line of questioning was intended to build a background and foundation for the research, by trying to piece together the "big picture" based on key informant's opinions of the City's overall efforts.

Specific Questions through the Analysis of Current Initiatives

The study focused on the City of Ottawa's current brownfield development initiatives, policies and approaches such as the Brownfield CIP. This line of questioning provided a more directed approach which targeted the City of Ottawa's policy instruments and the handling of brownfield developers and applicants to brownfield development grants

to evaluate their effectiveness. Key informants were asked about The City of Ottawa's specific brownfield grant programs and their experiences and opinions regarding how the City is proceeding with fostering brownfield development.

Eliciting Opinions on Avenues for Improvement

As done previously, the line of questioning took a more focused angle and built on the foundation established by the previous line of focused questioning. Informants were asked how the City could improve upon the current status quo. This included addressing challenges for the City and the brownfield CIP that were raised in the previous questioning section.

Concluding Questions for Follow-Through and Snowball Sampling

To conclude, informants were asked to supply any additional information or opinions that were not raised throughout the course of the interview. In addition, their consent for further input and follow-up was obtained. Finally, they were asked if they could refer fellow brownfield experts for interview, thereby actively utilizing the snowball interviewing process as an integral part of the interview method.

1.5.9. Data Collection

Interviews were arranged and conducted following the interview protocol. Interviews were conducted using Google Chat software on a

laptop computer. Audio output and microphone input was recorded using Audacity recording software. Following the interview, the recording was replayed to verify accurate transcription of the interview's dialogue. The data were stored in a safe location to maintain the confidentiality of the interviewees.

Although the interviews were conducted using a script, the interview process was open-ended in nature which enabled participants to elaborate and contribute additional information which was beyond the original scope of the prepared questions.

It was essential that during the interview process, respondent opinions were elicited for the policies and programs displayed in Table 1. The interview instrument was designed to elicit direct responses from the key informants regarding these policies and programs and rate them on a scale of one to ten.

In order to aid in stratifying and sorting the data, interview responses were all combined into one word document and relevant responses were grouped by question. Negative and positive opinions were separated for each question. Numeric responses pertaining to policies and programs were assembled in an Excel spreadsheet to facilitate graphing and numeric data processing. Opinions pertaining to each policy and programs were extracted from each interview and collected for each policy and program.

The assembled interview data were actively used to write the results and recommendation sections. Key quotations from interviewees were extracted from audio files and transcribed as examples of informant opinions.

1.5.10. Interpretation of Data

The interpretation process first involved an extraction of themes from the raw research data which address this study's initial research questions. The primary themes investigated were:

1. Current State of Ottawa's brownfields
2. Development and Changes in Ottawa's brownfield policies and programs
3. Assessing the efficacy of Ottawa's current brownfield policies, programs and approach
4. Obstacles to brownfield Development in Ottawa
5. Avenues to Improve the City of Ottawa's brownfield policy, programs and approach

The grouping of interviewee responses by question greatly assisted in addressing each of the above themes. Where divergent opinions were expressed, an effort to balance the data objectively was made in order to balance interviewee opinions and minimize bias.

1.6. Attend Public Meetings and Information Sessions

The author attended a number of public meetings and information sessions related to this thesis research. The first was an open house held by the Canada Lands Company in October, 2012 to discuss the plans for the CLC Rockcliffe Lands. In addition, the author attended two Planning Information Sessions held by the City of Ottawa and presented by the City's Planning Department entitled "Planning Primers" and an open house in January 2013 on a city wide review of planning issues to update the Official

Plan in December 2013. These sessions were useful for forming research contacts, developing research context and identifying new materials for the literature review process.

1.7. Challenges and Limitations

Three major limitations were identified over the course of this research. The first limitation was the boundaries of the author's access to background literature while conducting the literature review. The only resources obtained by the author were either publicly accessible or available through the University of Waterloo's library system. This precluded some books and research papers identified during the literature review process which were unavailable through public access sites or the University of Waterloo system. The literature available on the study of brownfields in a Canadian context is limited in comparison with the publications available on the same subject in the United States. As the United States has a greater number of brownfield sites than Canada and its national government is more actively involved in cataloguing, profiling and encouraging their development, the research available south of the border is far more extensive. In addition, given the limited pool of previous studies of Ottawa's brownfield development climate, few resources were available to provide a starting point for this research. A larger body of resources exists for other municipalities such as Kingston, Toronto, Hamilton and Burlington and documentation on these cities was studied to provide a starting point for this research.

The second limitation for this research is the contact pool available for interviews. When initially contacting potential key informants, 35

individuals were contacted by the author. This initial pool included two members of the National Capital Commission, three city councillors, six developers, three City of Ottawa Employees and four planning consultants. However, from this initial contact pool, only seven consented to verbal interviews. Of this pool consenting to interviews, three were private consultants (two of whom formerly worked for the City of Ottawa), two were representatives of the development industry, one was a city councillor and one represented a professional association. Fortunately, those consenting to the interview represented the range of the stakeholders in brownfield development. Given the relatively specialized nature of brownfield development in the planning field, some respondents declined the interview as they felt they lacked the expertise to comment on the topic. In addition, a number of respondents said that they did not have the time, due to their busy schedules, to assist with the research. Some individuals were deterred from participating in the research process due to the consent form which they felt was either unnecessary or invasive in nature. As an example, a lawyer who specializes in municipal planning issues with a leading law firm, declined for this reason. For future studies, it is recommended that further attempts be made to interview representatives from NCC, members of the local development community from major firms such as Tega Developments, Claridge Homes, the Redevelopment Group and Trinity Development Group, as well as key employees of the City of Ottawa. At the time of this writing, no representatives of the above groups consented to a telephone interview and their insight on brownfield development in Ottawa would be of great research value.

Finally, given the qualitative nature of this research, bias on the part of key informants is an important limitation to consider. The past experiences of key informants or the organizations they represent served to bias the data collected by the author during the interview process.

However, through interviewing a variety of stakeholders in Ottawa's brownfield development landscape, an effort was made to minimize this bias and expose multiple perspectives regarding the topic. In addition, through the data sorting and assimilation process, macro-level trends were identified using the process of deductive reasoning to limit bias on the part of the author. However, all of the key informants interviewed were pro-brownfield development. During the course of the research, no anti-brownfield development informants were identified. In future research, opponents to brownfield development should be interviewed to provide a counter-example to the pro-brownfield movement.

Detailed information pertaining to site assessments, contaminants present, the clean-up required and cost of the cleanup were not provided as these data were not available to the researcher. This information is private in nature and available only to the developer of the site, the Ontario Ministry of the Environment and the City of Ottawa. These data could only be obtained through a voluntary release by the firms that commissioned the reports which is unlikely due to the potential negative repercussions of revealing the former contamination of the land.

CHAPTER 2: BROWNFIELD DEVELOPMENT DEFINITION, ADVANTAGES AND DISADVANTAGES

2.1. Introduction

Academic and industry literature is saturated with a diverse array of definitions of the term “brownfield”. These definitions vary by country which makes comparison of brownfields across nationalities a challenging endeavour. The selection of an appropriate definition by an organization or document is critical as the selection of a narrow definition can exclude many types of sites which merit the classification whereas the use of an general definition can be overly inclusive, incorporating many sites which are not aligned with traditional perceptions of brownfields.

The earliest known usage of the term “brownfield” is found in literature pertaining to the U.S. steel industry in the mid to late 1970s (Yount, 2003). More generally, the term was employed during the 1970s by planners and others involved in development work in the United States in reference to properties that have been previously developed, as opposed to undeveloped lands known as “greenfields” (Yount, 2003). However, the term has undergone significant evolution since then and a variety of organizations in Canada at a federal, provincial and municipal level have adopted definitions to suit their unique needs. This section will outline the most common definitions of brownfields and define brownfields in the context of this thesis.

2.2. Defining “Brownfield”

The most prominent definitions are those set out by the United States Environmental Protection Agency (USEPA) and the National Round Table on the Environment and Economy (NRTEE).

USEPA defines brownfields as:

“A property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant” (USEPA, 2012).

This definition applies to the estimated 450 000 brownfields located in the United States. However, this definition has been found to cause confusion, especially in the United Kingdom due to the U.S.’ inclusion of hazardous substances, pollutants or contaminants are in the definition implying that all brownfield land is contaminated, which is not the case in the United Kingdom (Alker et al., 2000). In Canada and the United States, the term brownfield is synonymous with *contaminated lands*, *derelict lands* and *former industrial sites*. However, the use of the term brownfield avoids the negative connotations that are associated with the terms *contaminated* and *derelict* (De Sousa, 2002).

In Canada, one of the most widely used definitions for brownfields is the one outlined by the National Round Table on the Environment and Economy. NRTEE was a federal government agency established in 1988 to provide guidance and leadership pertaining to the relationship between the Canadian environment and economy but ceased operations as of March 31, 2013 (NRTEE, 2013). The National Round Table on the Environment and Economy Act was introduced in 1992 and passed in 1993 giving NRTEE the power to support and recommend initiatives which would

incorporate the principles and practices of sustainable development into all aspects of government and society throughout Canada. NRTEE reported to the Government of Canada and Parliament through the Minister of the Environment (NRTEE, 2012). The Government withdrew its funding of NRTEE in 2012 and ordered it closed by March 2013. Its website has since been archived with Library and Archives Canada.

NRTEE defined the term “brownfield” in their seminal document *Cleaning up the Past, Building the Future, A National Brownfield Redevelopment Strategy for Canada*. This document defined brownfields as:

“An abandoned, idle or underutilized commercial or industrial properties where past actions have caused known or suspected environmental contamination, but where there is an active potential for redevelopment” (NRTEE, 2003,p.ix).

“Brownfields stand as a legacy of a century of industrialization in Canada. They can be found in cities and towns across the country: abandoned, vacant, derelict or underutilized commercial and industrial properties where past actions have resulted in actual or perceived contamination. However, brownfields differ from other contaminated sites in one important way – they hold excellent potential for being cleaned up and redeveloped for productive uses.” (NRTEE, 2003, p.1).

In the Province of Ontario, the Ministry of Municipal Affairs and Housing (MAH) leads government action on brownfields redevelopment. MAH outlines its definition of brownfield on its website as:

“Vacant or underused sites with potential for redevelopment. They may be contaminated, often due to former industrial or commercial use. Brownfields are found in all types of communities across the province.

In the last century, many industries operated within the city core along waterways. Some of these industries included mills, factories, railway yards and service stations. Many have since closed or moved away. The lands left behind – brownfields – lie idle and often are contaminated” (Ontario Ministry of Municipal Affairs and Housing, 2011).

Finally, the City of Ottawa defines brownfields in its Brownfields Redevelopment Community Improvement Plan. The plan refers explicitly to the aforementioned NRTEE document and adopts the same definition of brownfields as:

“Abandoned, vacant, or underutilized properties where past actions have resulted in actual or perceived environmental contamination and/or derelict or deteriorated buildings. They are usually, but not exclusively, former industrial or commercial properties.” (Ottawa, City of, 2010).

In addition to the aforementioned definitions, Alker et al., 2000 advance a straightforward yet effective definition of brownfields as:

“Any land or premises which has previously been used or developed and is not currently fully in use, although it may be partially occupied or utilized. It may also be vacant, derelict or contaminated. Therefore, a brownfield site is not necessarily available for immediate use without intervention”.

The above definition is in accordance with those previously discussed but the straightforward language clarifies the concept of a brownfield.

For consistency and to make this research especially relevant to the City of Ottawa, this research adopts the definition as set out by NRTEE in *Cleaning up the Past, Building the Future, A National Brownfield Redevelopment Strategy for Canada* as this definition has also been

adopted by Ottawa in its Brownfield Redevelopment Community Improvement Plan. This definition is specific enough to capture the most salient properties of brownfield sites including potential for redevelopment and reuse in addition to the site's previous uses which may have led to contamination.

2.3. The General Properties of Brownfields in Canada

Although the definitions discussed may differ in their use of terminology, they share the following key elements when defining brownfields:

1. Land or premises which have previously been used and developed
2. These sites may currently be abandoned or underused
3. These sites may be afflicted by either real or perceived contamination due to previous site usages but not all brownfield sites are contaminated or perceived as such
4. There is active potential for development or redevelopment on these sites
5. These sites are found in all types of communities both rural and urban
6. These sites are often strategically located in areas where infrastructure may already be in place

The following image of Bayview Yards, one of Ottawa's brownfield sites is a visual depiction of how a brownfield site appears to a passerby:



Figure 2.1: Bayview Yards, Ottawa, Ontario (Photo by author)

2.4. Contaminated Sites vs. Brownfields

Understanding the distinction between contaminated sites and brownfields is important for this research as the two different classifications can be easily confused. The Canadian Federal Contaminated Sites Inventory defines a contaminated site as:

“One at which substances occur at concentrations (1) above background (normally occurring) levels and pose or are likely to pose an immediate or long term hazard to human health or the environment, or (2) exceeding levels specified in policies and regulations” (Treasury Board of Canada Secretariat, 2011)

In comparing this definition with those discussed previously, a brownfield can refer to both known and potentially contaminated sites. The usage of the term brownfield avoids the negative connotations associated with the label of contaminated site (De Sousa, 2002). Another important difference between brownfields and contaminated sites is that brownfields hold excellent potential for being cleaned up and redeveloped for productive uses (NRTEE, 2003). Contaminated sites, on the other hand, may pose health and environmental risks but in some cases, due to their remote locations have limited potential for reuse. Examples of this are the Distant Early Warning military sites located in Canada's Far North. These sites established during the Cold War in the 1950s due to fears of a Soviet attack were abandoned in the 1980s (CBC, 2011). Their remote location, heavy contamination and the low to non-existent demand for their redevelopment are factors in these sites being classified as contaminated sites as opposed to brownfields.



Figure 2.2: An example of a remote DEW Line Site (CBC, 2011)

2.5. Brownfields vs. Greenfields

“Brownfields” constitutes a semantic counterpart to the term *greenfields* which is defined as: “a clean agricultural or open land site” (De Sousa, 2000, p. 833). Unlike greenfields which are undeveloped, brownfields have undergone previous developments which may have left a legacy of contamination. These two types of land available for development are often compared in planning literature.

2.6. Brownfields vs. Greyfields

“Greyfields” is a relatively recent term to be added to planning and development vernacular. The term is attributed to the Congress for New Urbanism’s (CNU) efforts to stem urban decline which saw several studies on the topic in the early 2000s. (Feronti, 2003). A greyfield is a property that has been developed, has infrastructure in place but suffers from outdated uses or blocks access to the “best” approach for the real estate (Greyfields, n.d.). This term, commonly applied to declining or abandoned shopping centres, is a commentary on the bleak colours and vast empty parking lots surrounding once vibrant, now moribund centres (Feronti, 2003) which require significant public and private-sector intervention to stem decline (CNU and PWC, 2001). Unlike brownfields, greyfields have little to no known contamination.

Both brownfield and greyfield apply to under-used, decaying and sometimes abandoned sites in rural or urban locations. The most significant factor for differentiating the two classifications is the degree of perceived or actual contamination afflicting the site.

2.7. The Emergence of Brownfields as Sites of Concern

The realization that contaminated sites and brownfields pose serious dangers originated in the 1970s when disasters such as Love Canal in the U.S. and Lekkerkerk in the Netherlands received widespread media coverage (Smith, 1980). The discovery of toxic wastes in residential neighborhoods attracted attention to the grave risks to human health and to the environmental integrity of a region that such sites posed (De Sousa, 2001). On contaminated sites there are various exposure pathways that bring the site's human occupants, flora and fauna in contact with site contaminants. Examples of potential exposure pathways can be seen in Figure 2.3 below.

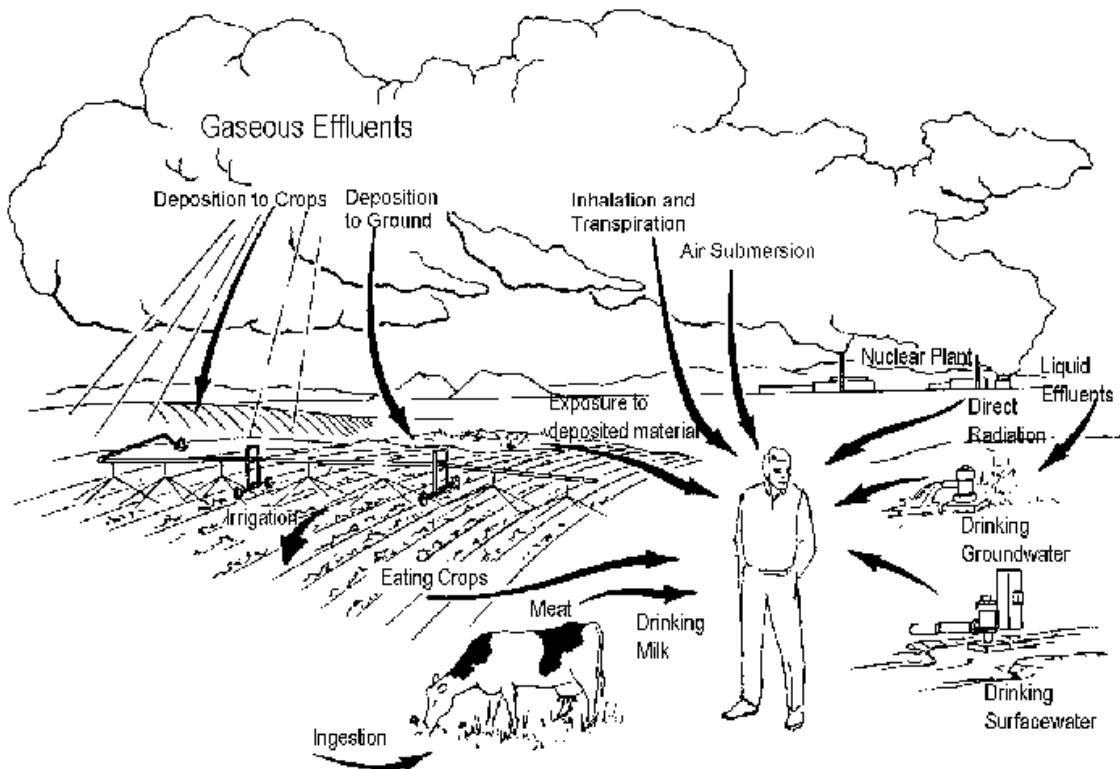


Figure 2.3: Potential Exposure Pathways (ATSDR, 2009)

The realization of citizens and governments that brownfields and contaminated sites pose a very real threat to site users and the environment sparked an interest in taking active remediation approaches to neutralize such threats and to return these sites to appropriate uses.

The brownfield problem is widespread in industrialized cities, driven by the steady migration of industries out of central cities since the mid-1970s which have left behind vast tracts of vacant industrial lands (De Sousa, 2006). This change was driven by industries seeking cheaper land and better infrastructure on the periphery that was better suited to manufacturing (Alonso, 1960). Recently, the urban exodus of manufacturers has been connected to the increasing globalization of production and the need for businesses to locate themselves where skilled workers have moved (De Sousa, 2006).

2.8. The Advantages of Brownfield Development

Brownfield development has potential benefits for all levels of governments and the community in which they are located. In addition, various stakeholders in these projects such as developers, future tenants and existing neighbours in close proximity to the site benefit in various ways from such development projects. The benefits discussed below are economic, social and environmental in nature.

2.8.1. Economic Benefits

Brownfield redevelopment projects create employment opportunities in the areas of cleanup technology and development and in enterprises that choose to locate in the redeveloped site (NRTEE, 2003). As expertise is required to properly remediate a site, a demand is created for qualified professionals and firms that are trained for this specialized remediation work. At a national level, the active pursuit of brownfield remediation creates a proving ground and publicity for Canadian cleanup technologies and firms (Ibid).

The redevelopment of brownfields increases the tax base for all three levels of government through the creation of new economic bases to sustain property, income and capital taxes. At a municipal level, a redeveloped site increases property tax revenues and funding that is available to municipal governments to provide public services (NRTEE, 2003). At a provincial and federal level, brownfield redevelopment brings increases in sales tax and goods and services tax and revenues in addition to an increase in income tax revenues (NRTEE, 2003). Brownfield projects raise surrounding home values (De Sousa, 2009) and create value by defusing potential liabilities such as contaminating local bodies of water (Sarni, 2010).

In addition, considering the limited availability of greenfield land within the urban boundaries of major cities, brownfields present an excellent opportunity for developers seeking urban real estate. Since these sites are often regarded as urban blight by the communities surrounding them, their development could be a welcomed alternative to similar projects which require the demolition of an existing structure, especially in the case of a heritage building or community landmark, which could be opposed by the

community. Consequently, the transformation of an under-used contaminated brownfield site into a de-contaminated, actively used facility is more likely to experience a positive reception from its surrounding neighbours.

2.8.2. Social Benefits

Brownfield redevelopment can be an engine for urban renewal and economic growth in neighborhoods and communities. It can increase access to centrally located affordable housing and create housing opportunities close to the workplaces of city residents (NRTEE, 2003). A brownfield redevelopment project could be instrumental in increasing a community's social vitality through the addition of local amenities, community spaces, creation of local business opportunities and venues for entertainment and places of gathering.

Brownfields have been known to attract open dumping and other illegal activity leading to urban blight (British Columbia, n.d.). Brownfields, where buildings are still present, pose a considerable safety risk as they provide opportunities for squatters and concealed locations for drug use and trafficking. In addition, crumbling structures, broken glass and other hazards pose considerable risks to local residents, especially children. Redevelopment of these sites puts an end to these safety risks and illegal activities, leading to a significant improvement for the area and its environs.

In some cases, brownfield sites are occupied by structures with heritage value. Brownfield redevelopment is an opportunity to develop the site in a manner which preserves and potentially enhances existing

heritage assets on the site which have become victims of decay. The redevelopment can halt this decay and make these heritage elements accessible to the general public and site users.

2.8.3. Environmental Benefits

Developing brownfields reduces the pressure to develop greenfields in a community's outlying areas. Considerable savings are realized when development occurs in areas with existing infrastructure (De Sousa, 2002 and NRTEE, 2003). NRTEE estimated that every hectare of a brownfield redeveloped for residential purposes could save as much as \$66 000 per year in transportation costs relative to equivalent greenfield development (NRTEE, 2003). Every hectare developed in a brownfield project saves an estimated minimum of 4.5 hectares of greenfield land from being developed (NRTEE, 2003). Typically, greenfield development consumes more land than an equivalent brownfield project and is less compatible with pedestrian and public transit uses (Ibid). In addition, by increasing housing stock on brownfield sites close to workplaces, the commuting and transportation requirements of residents, workers and businesses are reduced which can result in improved air quality through reduced transportation emissions.

Due to the presence of contaminants on brownfield sites that pose a risk to neighbouring residents and workers, remediation of these sites can help restore environmental quality in communities and remove threats to health and safety (NRTEE, 2003). By removing threats to local groundwater, air and soil quality through the removal of contaminants, the environmental quality of sites is preserved for future generations. This is

especially significant in cases where subterranean pollution plumes are spread by groundwater. The earlier such environmental concerns are dealt with, the lower the remediation cost and the smaller the risk posed by the hazard.

2.9. Groups Supporting Brownfield Development

A number of organizations support the development of brownfields. These organizations provide funding and support for brownfield developers and are valuable catalysts in stimulating brownfield development.

2.9.1. aboutRemediation

aboutRemediation (AR) is an information resource for site remediation and brownfield redevelopment. Launched in 2001, this website aims to provide solutions, disseminate knowledge, showcase industry leaders and advance the remediation and brownfield sector across Canada (aboutRemediation, 2013).

AR is an industry led initiative developed in partnership between the private and public sector and managed by the Bloom Centre for Sustainability. AR serves as a clearinghouse for existing brownfield inventories, resources and a considerable wealth of information pertaining to brownfield redevelopment in Canada (aboutRemediation, 2013).

2.9.2. Canadian Mortgage and Housing Corporation

The Canadian Mortgage and Housing Corporation (CMHC) was established as a government-owned corporation in 1946 to address a post-war housing shortage in Canada. Since then the agency has evolved into a major national institution.

CMHC is involved in brownfield development through showcasing various redevelopment projects in a case studies series hosted on its website (CMHC, 2013). These detailed case studies provide project overviews, site history, a breakdown of development costs and financing, site planning, discussion of the lessons learned from each project and provide contact information for CMHC and planning staff involved in each project.

2.9.3. Federation of Canadian Municipalities (FCM)

FCM is a civic advocacy group of Canada's municipalities founded in 1901. FCM advocates and lobbies on behalf of Canada's municipalities and their citizens (FCM, 2013b).

FCM supports brownfield development through its Green Municipal Fund (GMF). This fund was supported by the Federal Government which endowed FCM with \$550 million to establish the Green Municipal Fund (FCM, 2013a). To be eligible for GMF funding, the brownfield project must involve site remediation or risk management or renewable energy

production. Examples of site remediation or risk management include (FCM, 2013c):

- a) The removal and disposal of contaminated soils or materials
- b) In situ or ex situ treatment of contaminated soils, groundwater or materials
- c) Risk management activities (construction or installation of engineering controls and monitoring systems)
- d) Building demolition undertaken as part of a site remediation

For the renewable energy production category, the redeveloper of the site must return a brownfield site to productive economic use through the installation of on-site renewable energy generation with or without prior remediation (FCM, 2013c).

2.10. The Obstacles to Brownfield Development

Despite the benefits offered by the remediation of brownfields, a number of obstacles exists which can prevent such benefits from being realized. Often, these obstacles lead to brownfield sites remaining idle and underused for years or even decades. Addressing these obstacles and mitigating them where possible is a key task for both planners and governments or brownfields will continue to lie fallow and thereby potentially pose greater risks to their surrounding communities as time progresses.

2.10.1. Financial Barriers

Remediating and redeveloping a brownfield site can be costly, especially when compared to a greenfield site development where minimal upfront costs are required to prepare the site for construction (De Sousa, 2001). The lack of access to capital to cover the upfront costs of site assessment and remediation has been one of the most significant obstacles to brownfield development (NRTEE, 2003 and CIELAP, 2011). Liability concerns and the related uncertainty that the real estate asset will retain its value are major deterrents for major lenders and financial institutions in providing capital financing until contamination issues have been resolved to the satisfaction of the provincial Ministry of the Environment (MOE) (RCI Analytics et al., 2004 and CIELAP, 2011). A developer considering the site would be justifiably quite wary of the unknowns hidden beneath the surface and the associated costs posed by their existence. In order to successfully develop a brownfield site, a purchaser must have access to sufficient funds both to acquire the site and to pay all costs related to remediation as there is typically no traditional third party financing participation (MacMillan Binch LLP, 2005). The steps required to redevelopment a brownfield site are discussed in section 3.3.3. Following these significant upfront costs, the developer must then pay the costs of construction leading to a significant overall cost for redeveloping these sites. As a result, brownfield redevelopment is expensive and complicated and often discourages the interest of developers (De Sousa, 2001). In addition, purchasers must have sufficient funds to withstand cost overruns which are often associated with such development (MacMillan Binch LLP, 2005). Traditional sources of capital have exhibited a reluctance to support upfront site assessment and cleanup phases of brownfield redevelopment projects as this represents a relatively high-risk investment

due to the presence of a great deal of uncertainty (NRTEE, 2003). Lenders are hesitant to provide financing for environmentally troubled sites due to a concern that liability will impair both the enforcement of their security and the marketability of the property (MacMillan Binch LLP, 2005). The capital-intensive nature of brownfield projects forces lenders to seek assurances that the risk of supporting such projects are worth taking. However, brownfield developers can rarely offer such assurances due to the significant amount of uncertainty that is often present with such projects (MacMillan Binch LLP, 2005). Pre-project costs for the assessment and cleanup and the cost of insurance to guard against remediation cost overruns could make redevelopment prohibitively expensive, especially in comparison to open greenfield projects (NRTEE, 2003).

The return on investment for redeveloped land appears low in comparison to that from greenfield sites which typically have a much shorter development period due to ease of site preparation and the processing of development approvals. The development period of brownfield sites is extended and complicated by the need for site assessments and approvals which could take considerable time to process. Following the necessary approvals to remediate the site, the cleanup process takes additional time to complete properly and a second round of approvals is required, following the remediation, to ensure the safety of the site for its next intended use. For developers accustomed to short site preparation periods which lead to a relatively rapid turnaround period, the extended amount of time required for a brownfield redevelopment project, during which no revenue is generated and considerable costs are accrued, could be a significant disincentive for both small and large builders.

2.10.2. Liability Concerns

Current provincial and federal legislation exposes participants in brownfield redevelopment projects to liability, arising from the contamination caused by the property's original use. Each participant could be individually exposed to the sum of all the liability concerns which might emerge when the land use changes from vacant to active and occupied. In certain jurisdictions, regulators will not provide an approval for a remedial action plan or a certification of completion following remediation (NRTEE, 2003). This reluctance to approve and certify the completion of remediation plans could be due to a reluctance to accept liability for ensuring the safety of the site. Small municipalities may be unprepared to shoulder this responsibility and, in response, may upload this task to the province and its environmental regulatory procedures.

The liability concern with regards to brownfields is compounded by the problems of uncertainty with these sites. Prior to site assessment, the magnitude, type, concentration, toxicity and spatial extent of contaminants are uncertain. In addition, the cost of investigating and remediating the site is uncertain, pending the investigation of the site and its pollution (Andrews, 2009).

The following three types of liability impact brownfield redevelopment (Chalifour and Abdel-Aziz, 2004): civil, regulatory and joint and several liability.

Civil Liability

Civil liability is a legal obligation arising under the law of private rights which permits individuals to seek redress in courts for alleged harm done by others (NRTEE, 2003). This is of particular concern for developers of brownfield sites who could be sued in court by a party who has been impacted by remnant on-site or off-site contamination (Regional Analytics Inc et.al., 2004).

Regulatory Liability

Regulatory liability is a legal obligation established by the state (NRTEE, 2003). For brownfield developers, this is the potential to be sued or ordered to complete additional environmental remediation by a regulator such as the province. This could be a result of changes in cleanup standards, change in property use or the discovery that historical contamination had not been adequately addressed at the time of site assessment/remediation (Regional Analytics Inc. et al., 2004).

Joint and Several Liability

Joint and several liability is a principle applied to a party of defendants against whom a judgement in regards of liability for environmental contamination has been entered (Regional Analytics Inc et.al., 2004). The defendants may be held individually and collectively liable for covering cleanup costs and any other awards such as damages (Chalifour and Abdel-Aziz, 2004). This could mean that individual defendants could be required to pay up to 100% of the cleanup costs and

damages despite being responsible for only a small percentage of the damages (Hara, 2003).

The absence of reliable closure on liability and the unpredictable duration of the risk of liability affect all of the interested parties. The concerns of potential stakeholders in these projects are summarised in Table 2 below.

Table 2: Liability Concerns of the various stakeholders involved in brownfield redevelopment projects (NRTEE, 2003).

Stakeholder	Concerns
Brownfield Owners	<ul style="list-style-type: none"> • Unwilling to accept the risks associated with civil liability to the subsequent owners and occupants of redeveloped sites • Potential regulatory liability arising out of changes in land use • No provision in federal or provincial legislation to permit liability transfers that would be binding on regulators and third parties
Conventional Developers	<ul style="list-style-type: none"> • Unwilling to assume liability risks • Lack of access to a mechanism enabling them to assume risks with predictable closure
Lenders	<ul style="list-style-type: none"> • Unwilling to finance redevelopment due to exposure to liability
Municipalities	<ul style="list-style-type: none"> • may ease their own liability concerns through obtaining indemnities
Provincial agencies	<ul style="list-style-type: none"> • may fail to grant redevelopment approvals due to ongoing concerns over the assumption of liability
End-users	<ul style="list-style-type: none"> • subject to the same liabilities applied to current and former users • may fear they will be held responsible for environmental impacts stemming from contamination caused by the original property users

2.10.3. Regulatory Barriers

Provincial and municipal approvals processes often require brownfields to be remediated to meet a generic set of criteria, even where a site-specific risk assessment indicates that the condition of the property, and its anticipated uses, may not warrant this approach. The various levels of government do not always concur on the validity of risk assessments (NRTEE, 2003).

Developers of brownfields must navigate a maze of regulatory requirements and legislated processes established by all levels of governments. Each level may be required to review and approve proposed brownfield development projects. This may lead to inconsistent and overlapping development requirements (NRTEE, 2003).

In addition, the complexity of brownfield redevelopment requires the involvement of multiple disciplines and responsibility areas within a single government. Without a well-coordinated approach at each level of government that integrates planning, review and approval requirements or clear assignment of responsibilities between different government bodies, brownfield plans can stall (NRTEE, 2003). The regulatory barriers to brownfield developments are summarized by Delcan et al., (1997):

- a) Onerous, unrealistic and unscientific remediation criteria
- b) Lack of acceptance of risk assessment and risk management approaches
- c) Lack of readily available sign-offs or certificates of completion from provincial regulators where sites have been remediated

- d) The ability of regulators to reopen approved cleanups at some future point in time as a result of new toxicity information or a change in land use
- e) Lack of consistent qualifications for qualified professionals carrying out a site assessment, risk assessment/management and planning and supervising site remediation
- f) The inability to relocate soil that may not meet residential criteria at one site to another site being used for industrial purposes
- g) The lack of licensed hazardous waste disposal facilities
- h) Inefficient and overlapping approvals processes, e.g. between provincial regulators and municipalities
- i) Inconsistent and uncertain approvals processes between provinces
- j) Lack of area wide designations and approaches to deal with multiple site contamination on a regional basis
- k) Slow regulatory reviews, especially of risk management approaches

2.10.4. Planning Barriers

The following barriers have been identified by Delcan et al., (1997) as planning barriers to the redevelopment of brownfield sites:

- a) Lack of information on the location of potentially contaminated sites
- b) Lack of early identification of contaminated sites

- c) Land use policies that encourage greenfield development and urban sprawl instead of residential infill, intensification and brownfield redevelopment
- d) Lack of municipal planning practices and incentives which recognize the cost savings of developing residential uses in already serviced areas
- e) Planning approvals requirements which add an additional layer of regulation on contaminated sites which cause project delays
- f) Lack of favourable planning policies and development incentives for brownfield redevelopment

2.10.5. Stigma, Education and Awareness

Traditionally, brownfields have suffered from negative perceptions especially from a development standpoint. They are considered to be difficult to deal with and plagued by delays, unexpected costs and regulatory hurdles (CREA, n.d.).

The following stigma, education and awareness barriers have been identified by Delcan et al., (1997):

- a) Misconceptions and fear of liability in brownfield redevelopment stakeholders, stemming from basic lack of information on brownfield redevelopment
- b) Lack of educational tools that could be used by non-technical participants such as developers, municipal planners, politicians, financial institutions and the general public
- c) Lack of public consultation and transparency with respect to the development of housing on contaminated sites

- d) Exacerbation of environmental and liability risks and fears by the media

The stigma attached to brownfields is the perception that these sites present serious environmental and health dangers. Stigma could negatively influence potential developers and affects the willingness of financial institutions to consider financing a project (Regional Analytics Inc. et al., 2004).

In addition, a lack of knowledge and understanding about brownfield redevelopment on the part of the general public might act as a barrier to brownfield redevelopment (Regional Analytics Inc. et al., 2004). In some cases, residents aware of contaminated sites opposed their clean up due to a fear of declining residential property values caused by widespread publicity about the site and stigma associated with a polluted environment (Andrews, 2009). Also, potential users may fear the residual effects of contamination, notwithstanding site remediation measures having been taken. However, community engagement early in a brownfield development project could considerably lessen any fear, apprehension and organized opposition (Regional Analytics Inc. et al., 2004).

2.10.6. Technical Barriers

In certain cases, the full cleanup and remediation of a brownfield site may be technically impossible. This may be due to natural features which prevent access to buried contaminants or due to the chemical and physical properties of the contaminants which are not amenable to

cleanup. In such cases, containment of the contaminants is the best possible outcome will limit certain sites uses due to the persistent presence of contaminants on the site. One example of this situation is groundwater contamination which is extremely difficult and sometimes impossible to clean up (Environment Canada, 2010).

CHAPTER 3: BROWNFIELDS IN A CANADIAN CONTEXT

3.1. Introduction

Brownfields are remnants of historic industrialization trends which have evolved into an inventory of used and potentially contaminated land. These sites fall into disuse and abandonment as a result of industrial restructuring which led to the departure of industrial and manufacturing from the urban core. However, despite the departure of their original users, these sites remain an integral component of the urban fabric of many communities, ripe with potential but currently suffering from neglect.

Brownfields and their associated challenges are widespread among the industrialized cities in North America. Their creation has been driven by the steady migration of industries out of central cities since the mid 1970s that have left behind tracts of vacant industrial lands (De Sousa, 2006).

Despite the growth of Canada's municipalities, tax policy, changing economic activities, new environmental regulations and zoning rules have conspired to make well-located brownfield properties unprofitable to develop (CREA, n.d.), hence the need to create economic incentives.

3.2. Brownfields in Canada

Some estimates claim as much as 25% of the Canadian urban landscape is potentially contaminated due to previous industrial activities (Benazon, 1995). NRTEE estimated that there might be as many as 30 000 brownfield sites in Canada (NRTEE, 2003). However, not all brownfield sites are created equal. Depending on their location and surroundings, these

sites experience different levels of potential for redevelopment. NRTEE, in producing its paper *A National Brownfield Redevelopment Strategy for Canada*, has grouped brownfields into three tiers as seen below in Table 3 which stratify Canada's brownfield stock by their potential for redevelopment (NRTEE, 2003):

Table 3: The Three Tiers of Brownfield Types in Canada (NRTEE, 2003)

Site Category	Percentage of Total Canadian Sites	Location	Properties
Top Tier	15-20%	<ul style="list-style-type: none"> Centrally located former industrial site 	<ul style="list-style-type: none"> Market values exceed costs of remediation Redevelopment driven by market forces due to profitability
Middle Tier	60-70%	<ul style="list-style-type: none"> Established urban areas along transport corridors 	<ul style="list-style-type: none"> High cleanup costs High potential for redevelopment Market value of cleaned land equal the combined cost of land and cleanup Sit idle due to market obstacles
Bottom Tier	15-20%	<ul style="list-style-type: none"> Rural or remote areas or smaller urban areas 	<ul style="list-style-type: none"> Cost of cleanup far exceeds the value of the land after remediation High cleanup costs and uncertainty dampen market interest No realistic development prospects

This stratification system is useful for the classification of brownfield properties within a municipal boundary. Each municipality will likely have brownfields from each tier due to the variability in site location, surrounding land uses and their unique real estate markets.

3.3. Brownfield Policy and Regulation at Canada's Federal, Provincial and Municipal Level

3.3.1. Federal

Currently, the Federal role in brownfields redevelopment consists largely of information gathering with little or no direct intervention and support (De Sousa, 2006). The only exception is where the Federal Government is conducting development projects on federally owned land, such as LeBreton Flats, which is owned by the National Capital Commission. NRTEE had taken a leading role in this process through data collection and document creation. Information gathering and processing was accomplished by three Federal bodies: the Canadian Council of Ministers of the Environment which is concerned with environmental risk management and stakeholder perspectives, NRTEE which addressed policy concerns, and Canada Mortgage and Housing Corporation which addresses housing opportunities (De Sousa, 2006). However, no single Federal agency is responsible for maintaining a comprehensive inventory of brownfield sites, making it difficult to estimate the total number of such sites in Canada (Wigle, 1998).

In the past, the Federal Government provided direct support for brownfield redevelopment projects by initiating the National

Contaminated Sites Remediation Program (NCSRP) in 1989 under the auspices of the Canadian Council of Ministers of the Environment (CCME). This program was a collaborative venture between the Federal Government and the provinces. NCSRP was designed to provide both the human and financial resources to jurisdictions across the country for identifying and assessing contaminated sites, remediating high-risk "orphan sites" (abandoned sites without proprietors) and conducting research on issues such as remediation technologies, liability policies and clean-up criteria (De Sousa, 2001). This program was discontinued in 1995 (Wigle, 1998). In place of this initiative, the provinces were left to develop their own policy mechanisms although CCME continues to undertake work in this area. In 1993, CCME outlined thirteen principles to guide public policy on the remediation and redevelopment of contaminated sites. Although these principles are not fully enshrined in Federal or Provincial legislation, they establish a framework to guide future policy and action (Wigle, 1998).

In 2000, the Federal government established the Green Municipal Enabling Fund (GMF) which is administered in partnership with the Federation of Canadian Municipalities. Although this fund is not exclusively for brownfield redevelopment projects, it can provide grants of up to \$100 000 for community brownfield inventories and assessments of development and policy options but does not cover cleanup costs (NRTEE, 2003).

3.3.2. Federal Brownfield Development on an International Scale

Since 1995 with the abolition of NCSRP, the national effort has declined resulting in significant variability among the provinces (De Sousa, 2001). Due to this downloading of responsibilities to the provinces,

Canada's approach to brownfields and contaminated sites has been largely piece-meal in comparison to efforts in other industrialized nations (Ibid.).

While central and state governments in Europe and the U.S. are protecting private investors from prospective liability and provide financing in the forms of direct funding programs and financing incentives, all governments in Canada, with the exception of Quebec, transfer these costs and financial risks of developing brownfield sites with the private sector (De Sousa, 2001).

Canadian policy-making in this area is evolving more slowly than it is in the United States and most European nations, due to the following four primary factors as discovered by De Sousa, (2001, p. 147) in his interviews with Canadian policy-makers:

1. The perception across Canada that the contaminated sites issue is a relatively minor problem
2. The fragmented system of environmental policy-making
3. The perception that Canadian cities are not beset by the negative kinds of social conditions that plague many US cities
4. Contaminated sites receive little attention from environmental and social advocacy groups in Canada

3.3.3. Provincial

Currently, the regulation of brownfield redevelopment is mostly the responsibility of the provincial and municipal governments (De Sousa, 2002). The generic approach of these governments is to hold the private

sector financially responsible for cleanup and redevelopment and they see their own role primarily as regulatory and advisory in capacity (De Sousa, 2001). Although the provinces are primarily responsible for environmental policy-making, they work cooperatively with the Federal government through the Canadian Council of Ministers for the Environment (De Sousa, 2001). Ontario's provincial government has taken a position which supports municipalities in their pursuit of brownfield redevelopment. The *Provincial Policy Statement (PPS)* encourages municipalities to redevelop brownfield sites. Section 1.7.1 c of the PPS (MMAH, 2005) states that:

" ... long-term economic prosperity should be supported by promoting the redevelopment of brownfield sites."

In addition, Section 1.1.3.3 of the PPS states

"... planning authorities shall identify and promote opportunities for intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs".

Ontario's Ministry of the Environment can order the remediation of a brownfield site through the Environmental Protection Act. However, the preferred process is the voluntary route following the assessment and remediation process as laid out by the Ontario Ministry of *the Environment's Guideline for Use at Contaminated Sites in Ontario* (De Sousa, 2000). This document provides information to property owners and other related parties on the process to assess and remediate brownfield sites. The standards in this document are enforceable by law thus developers would be well advised to pay close attention to the contaminant concentrations

specified (Ontario Ministry of the Environment, 2011a and Ontario Ministry of the Environment, 2011c).

3.3.3.1. The legislative framework of Ontario's Brownfield Law

In Ontario, environmental liability is governed by the *Environmental Protection Act* (EPA) in addition to other collected pieces of legislation. The Government of Ontario passed the *Brownfields Statute Law Amendment Act, 2001* which amended the EPA with an aim to encouraging the revitalization and redevelopment of underutilized and contaminated land. The amendments extending protections to secured creditors, municipalities, receivers and trustees in bankruptcy came into force in December 2002 (McMillan Binch LLP, 2005).

Further amendments to the EPA related to the record of site condition (RSC) were proclaimed on October 1, 2004 together with the accompanying Regulation (153/04). Collectively, this amendment and the regulation establish the requirements for the assessment and clean-up of properties, and an administrative framework for processing and filing RSCs. This new amendment also establishes certain limits on liability in the event of an RSC being filed in the Ministry of the Environment registry (McMillan Binch LLP, 2005). In addition, further amendments were made to Ontario Regulation 153/04 in the spring of 2007 and on April 15, 2011. These amendments improved the RSC process to make it more predictable and transparent, streamlining modified generic risk assessment and the strengthening of the environmental site condition standards (Ontario Ministry of the Environment, 2011a).

3.3.3.2. The Brownfields Statute Law Amendment Act

Unlike most U.S. jurisdictions, Ontario lacks a permanent funding or financing program for attracting private investment in brownfields. In 2000, the Provincial government announced its intentions to introduce brownfields legislation to address key financing, liability, and technical guidance issues as part of the Smart Growth Initiative (De Sousa, 2002). These plans came into effect in 2001 with Ontario's *Brownfields Statute Law Amendment Act* which received Royal Assent in November, 2001.

The *Brownfields Statute Law Amendment Act* improves the public accountability framework for a set of existing municipal planning and financing tools and creates a new regime for addressing regulatory liability (NRTEE, 2006). The key provisions of this Act are displayed in Table 4.

Table 4: Key Provisions of the *Brownfields Statute Law Amendment Act* (NRTEE, 2003, p.12)

Planning and Financing	Environmental Liability
<ul style="list-style-type: none"> • Greater flexibility in designating community improvement project areas • Ability to create grants or loans to help cover the cost of rehabilitating lands and buildings • Enables municipalities to freeze or cancel the municipal portion of the property tax on contaminated site • Provides municipalities with a one-year option to take ownership of land in a failed tax situation 	<ul style="list-style-type: none"> • Provides clear rules for site assessment and cleanup standards • Five-year liability protection from environmental orders for municipalities, secured creditors, receivers, trustees in bankruptcy, fiduciaries and property investigators • Liability protection from environmental orders for owners who follow prescribed site assessment procedures and file a record-of-site condition stating the site meets required standards • Quality assurance through the mandated use of certified site-cleanup professionals, mandatory filing of a record-of-site condition to a publicly accessible registry, acceptance of risk assessments by the Ministries of Environment and Energy and an enhanced auditing process

The Brownfields Statutory Law Amendment Act paved a way for municipalities to address the province’s brownfield sites. This legislation opened the possibility of municipalities to offer financial incentives to property owners or their agents for properties that were considered

brownfield sites. This Act encouraged cities to create a Community Improvement Plan where financial incentives could be used to remediate property based on criteria established by the municipality (Davis, 2009).

3.3.3.3. Record of Site Condition

The Province of Ontario sets the standards which must be met for remediation, in addition to the assessment and processes required to demonstrate that a property is safe for redevelopment. Completing this process is mandatory before redevelopment in circumstances where the owner wishes to change the use of the property. The Record of Site Condition (RSC) is a form of report card on the environmental condition of a property at a particular point in time, based on the condition of the property and intended use (OMMAH, 2007b).

The investigation and remediation of a property is largely driven by property owners with the work being carried out by a Qualified Person (QP), a consultant such as a professional engineer who has met certain government criteria, on their behalf (McMillan Binch LLP, 2005). The QP is responsible for ensuring that a property has been remediated to the appropriate standards for the intended use. Once the QP has demonstrated the property meets provincial standards, the RSC is filed with the Ministry of the Environment by the QP on behalf of the property owner. Following the filing of an RSC, property owners will receive written acknowledgement from the MOE that the RSC has been posted on the Brownfield Environmental Site Registry.

The Environmental Protection Act prescribes the form of the RSC (EPA, section 168.4 (2), 2010) which includes:

1. A description of the property
2. Name of the person submitting the RSC and the names of any other owners of the property
3. The type of use intended for the property for which the RSC is filed
4. The standards applied by regulators for the purpose of the RSC
5. Description of any soil removals or other action taken to reduce the concentration of contaminants on, in or under the property
6. The maximum known concentration of each contaminant for which sampling and analysis has been performed
7. A statement indicating whether a certificate of property use has been issued in respect of the property
8. A list of all reports relied on by qualified persons in making the certification is required for the site
9. Certifications, information and documents prescribed by relevant regulations

RSCs are mandatory in the event of change of use to a more sensitive use such as the conversion of an industrial or commercial site to residential (OMMAH, 2007b). In addition, property owners may be required to provide an RSC to meet a condition of sale, secure financing, obtain municipal development approval or become eligible for municipal financial incentives.

The completed RSC may be filed on the MOE's Environmental Site Registry if applicable standards have been met for soil, sediment and ground water. Not all property owners are required to file an RSC in the Registry but the EPA's limited liability protection is only available for the properties for which an RSC has been filed (McMillan Binch LLP, 2005).

The procedure for filing an RSC and conducting an ESA is detailed in Figure 3.1:

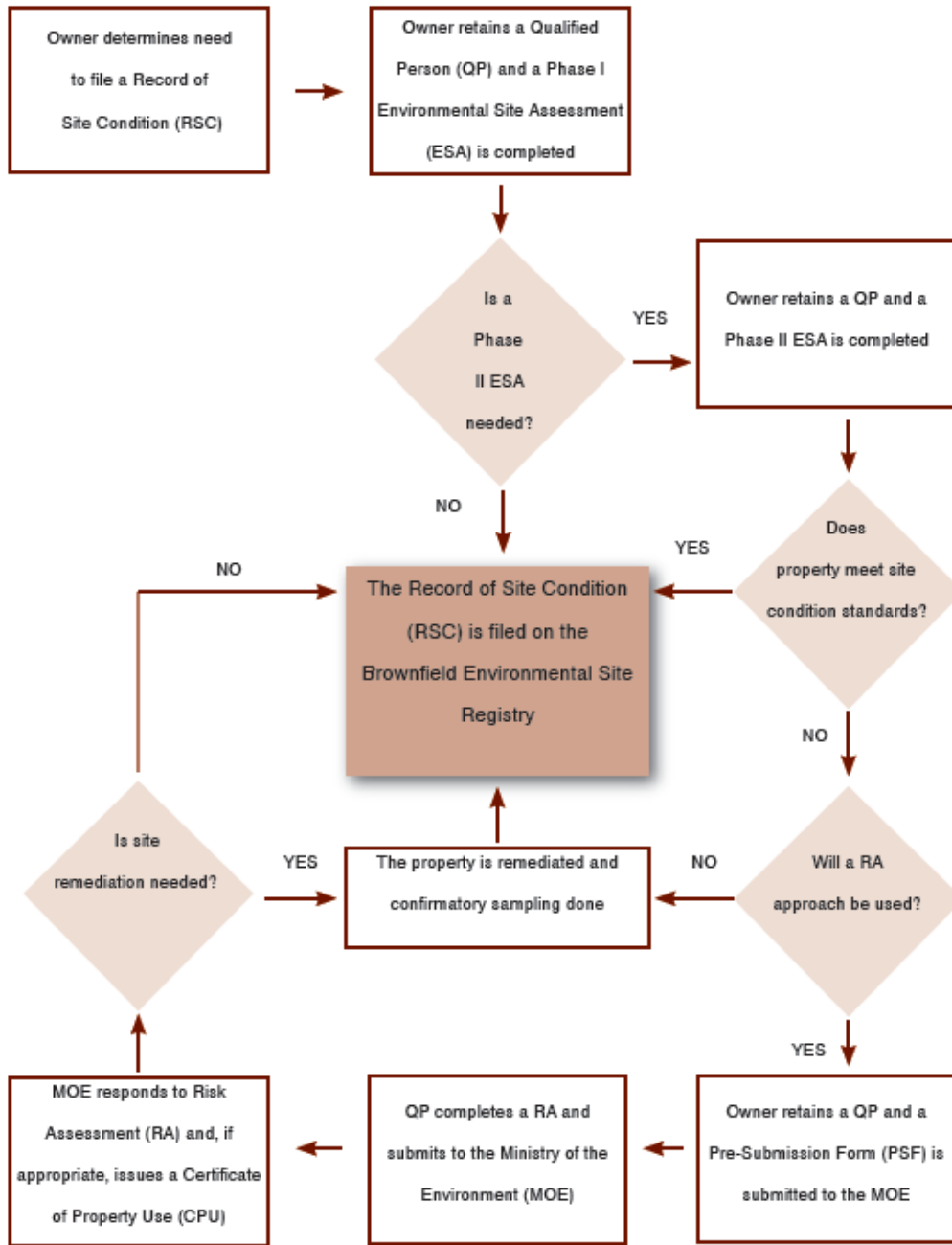


Figure 3.1: Filing a Record of Site Condition (Page 25 in OMMAH, 2007b)

Filing an RSC which receives acknowledgement of the registration by MOE means that MOE will no longer issue certain types of orders against the owner and subsequent owners of the subject property. MOE is barred from issuing control orders, stop orders, remedial orders, preventative orders, minister's spills orders, provincial officer's contravention orders and provincial officers' prevention orders. The protection provided by these orders is significant.

3.3.3.4. Environmental Site Assessment (ESA)

When an RSC is filed, an environmental site assessment (ESA) is required. An ESA consists of two phases, Phase I which is an initial assessment to determine the presence of contaminants, and Phase II occurs if it is determined that one or more contaminants have affected all or part of the property which requires the site to undergo remediation (OMMAH, 2007b and Ontario Ministry of the Environment, 2011).

ESA Phase I

Phase I of the ESA is the initial assessment of property in accordance with the regulations by or under the supervision of a QP, in order to determine the likelihood that one or more contaminants have affected all or part of the property (McMillan Binch LLP, 2005 and Ontario Ministry of the Environment, 2011). This assessment does not include invasive sampling and analysis of the property. It is an office procedure which uses archived material, newspaper records and other forms of data to determine if there are any historic sources of contaminants. If the QP conducting the

assessment determines that the Phase I results are sufficient and a more extensive Phase II is unnecessary, the RSC may be completed and filed (Ibid). If the property is, or has ever been used for an industrial or certain commercial uses detailed in the Regulation, a Phase II must be completed (Ibid).

ESA Phase II

The Phase II of the ESA is an assessment of property conducted in accordance with the regulations by or under the supervision of a QP to determine the location and concentration of one or more contaminants in the natural environment. This entails extensive testing and laboratory analysis of soil and ground water samples (McMillan Binch LLP, 2005 and Ontario Ministry of the Environment, 2011). Results from these studies are compared with the standards set out by MOE. In order for the RSC to be filed without a Risk Assessment (RA), the results of the Phase II must be better than the requirements established in the MOE standards (Ibid).

Risk Assessment

In the event of an RA, a pre-submission form must be submitted to MOE. This step provides MOE with an opportunity early in the RA process to provide input with regards to the scope of the RA and provide a review timeline (McMillan Binch LLP, 2005).

If a property fails to meet the MOE standard, the property owner may either remediate the property in order to bring it up to specifications in the Standard, or develop property specific standards through the preparation of a Risk Assessment (RA) (McMillan Binch LLP, 2005). The RA is “an

assessment of risks prepared in accordance with the regulations by or under the supervision of a qualified person” (EPA, section 168.1, 2010). An RA allows for the accommodation of site-specific conditions in the development of soil, ground water and sediment standards for the property. Through a scientific examination of the nature and magnitude of potential risk, the effects of potential contaminant on human, plant and animal life are analysed. The RA must provide appropriate property-specific standards (e.g. residential, industrial) for each contaminant of concern that is discovered on the site (ibid). The completed RA is sent to an MOE reviewer who provides comments and recommendations to the Director of the MOE who decides if the RA is acceptable. While the Regulation establishes a maximum response time for an RA of 16 weeks for a typical RA, the limits are not binding and response times are determined by the availability of resources. This unpredictable response time can be problematic as it may result in high costs to a developer in the event of delaying a closing (Ibid).

3.3.4. Municipal – City of Ottawa

In Canada, municipalities lack constitutional status as a legitimate level of government (Andrews, 2009). Cities are regarded as 'creatures of the province', as defined by Section 92 of the *Canadian Constitution Act* which mentions that “Municipal Institutions in the province” are under exclusive jurisdiction of the provinces (Kitchen, 2004). Efforts by municipalities require enabling legislation and policy at the provincial and sometimes federal level (Andrews, 2009). Provincial statutes created their governing structure, define their powers and expenditure responsibility and access to revenue sources are under provincial control. Most of the

burden of stimulating and managing the redevelopment of brownfield sites has been downloaded to municipal government due to the lack of political and economic support from the upper levels of government (De Sousa, 2002). However, Ontario has empowered its municipalities with the ability to offer financial assistance to promote community planning goals, including brownfield redevelopment (OMMAH, n.d.).

3.3.4.1. 2001 Municipal Act

The City of Ottawa is permitted to provide tax assistance to eligible properties in the form of a deferral or cancellation of part or all of the taxes levied on that property for municipal and education purposes, during the rehabilitation and development period of that property. Section 365.1(2) and (3) of the *Municipal Act, 2001* permits this action through allowing municipalities to pass a by-law which provides such tax assistance (Ottawa, City of, 2010).

3.3.4.2. Growth Management – Ottawa 20/20

The City of Ottawa has identified brownfield redevelopment as a key component of the implementation of the City's approved Growth Management Strategy outlined in the document *Ottawa 20/20*, adopted in 2003 (Ottawa, 2013). This document, in addition to Ottawa's Official Plan, seeks to manage growth by directing it to the urban area through infill and intensification.

3.3.4.3. Ottawa Brownfields Redevelopment Strategy

This strategy establishes the general policy framework guiding the City's program activities to promote brownfield redevelopment in Ottawa. It contains a detailed critical needs analysis, rationale for the incentive programs contained in the Community Improvement Plan and strategies for marketing the Brownfield Redevelopment CIP programs (Ottawa, City of, 2010).

3.3.4.4. Brownfield Community Improvement Plan (CIP)

The Brownfield CIP was adopted by City Council in 2007 (Cockburn, 2013). Through a CIP, the City of Ottawa encourages brownfield redevelopment by offering financial incentives to registered or assessed owners, tenants or assignees within a designated CIP (OMMAH, 2007). Section 28 of the *Planning Act* (Government of Ontario, The, 2011) allows municipalities to designate by by-law a "community improvement project area" and prepare and adopt a community improvement plan for the community improvement project area. Section 28 (1) defines a "community improvement project area" as:

"a municipality or area within a municipality, the community improvement of which in the opinion of the council is desirable because of age, dilapidation, overcrowding, faulty arrangement, unsuitability of buildings or for any other environmental, social or community economic development reason" (Ottawa, City of, 2010)

Once any CIP has come into effect, the municipality may:

- I. Acquire, hold, clear, grade or otherwise prepare land for community improvement (Section 28(3) of the *Planning Act*)
- II. Construct, repair, rehabilitate or improve buildings on land acquired or held by it in conformity with the community improvement plan (Section 28(6))
- III. Sell, lease, or otherwise dispose of any land and buildings acquired or held by it in conformity with the community improvement plan (Section 28(6))
- IV. Make grants or loans, in conformity with the community improvement plan, to registered owners, assessed owners and tenants of land and buildings within the community improvement project area, and to any person to whom such an owner or tenant has assigned the right to receive a grant or loan, to pay for the whole or any part of the eligible costs of the community improvement plan (Section 28(7))

The primary goal of the Brownfield CIP is to promote the remediation, rehabilitation, adaptive re-use, redevelopment and overall improvement of brownfield sites in the urban area and designated villages in the City of Ottawa. The Brownfield CIP prioritises brownfield redevelopment in the Central Area, Mixed Use Centres, along Main streets and within 600 metres of existing or planned rapid transit stations (Ottawa, City of, 2010).

Additional goals of the Brownfield CIP include (Ottawa, City of, 2010):

- I. Promote Smart Growth, reduce urban sprawl, construct energy efficient buildings
- II. Improve the physical and visual quality of brownfield sites in the urban area
- III. Improve environmental health and public safety
- IV. Retaining and increasing employment opportunities

- V. Increasing tax assessment and property tax revenues for the City of Ottawa and the Province of Ontario
- VI. Utilizing public sector investment to leverage significant private sector investment in brownfield remediation, rehabilitation, adaptive re-use and redevelopment

The Brownfield CIP contains the following incentive programs (Ottawa, City of, 2010):

- I. Project Feasibility Study Grant Program
- II. Environmental Site Assessment Grant Program
- III. Property Tax Assistance Program
- IV. Rehabilitation Grant Program
- V. Building Permit Fee Grant Program

The salient properties of these programs are discussed in Table 5 below.

Table 5: Summary of the City of Ottawa's Brownfield CIP Incentive Programs (Ottawa, City of 2010):

Program	Property Location	
	Central Area, Mixed Use Centres, along Main streets or within 600 metres of existing / planned rapid transit stations	Not in Central Area, Mixed Use Centres, along Main streets or within 600 metres of existing / planned rapid transit stations
Project Feasibility Study Grant Program	Grant equivalent to 50% of the cost of an eligible project feasibility study. Maximum grant of \$5,000. Maximum one study per property.	Grant equivalent to 50% of the cost of an eligible project feasibility study. Maximum grant of \$5,000. Maximum one study per property
Environmental Site Assessment Grant Program	Grant equivalent to 50% of the cost of an eligible environmental site assessment, remedial action plan or risk assessment. Maximum grant of \$15,000 per study. Maximum of 2 studies per property/project. Maximum total grant of \$25,000 per property/project.	Grant equivalent to 50% of the cost of an eligible environmental site assessment, remedial action plan or risk assessment. Maximum grant of \$15,000 per study. Maximum of 2 studies per property/project. Maximum total grant of \$25,000 per property/project.
Property Tax Assistance Program	Cancellation of the municipal property tax increase for up to 3 years. Cancellation of the education property tax increase for up to 3 years	Cancellation of the municipal property tax increase for up to 3 years. Cancellation of the education property tax increase for up to 3 years
Rehabilitation Grant Program	Grant equivalent to 50% of the municipal property tax increase for up to 10 years	Grant equivalent to 50% of the municipal property tax increase for up to 5 years
Development Charge Reduction Program *	Grant equivalent to 30% of building permit fee	Not available

*Although often grouped with the grants in Ottawa's Brownfield Incentive Program's Package of programs, the Development Charge Reduction Program was a pre-existing program passed by City Council on June 24, 2009 (RCI Consulting, 2010). The development charge reduction program is fully integrated with the Rehabilitation Grant Program contained in the Brownfield CIP and requires an application for a Rehabilitation Grant to be submitted and approved (RCI Consulting, 2010).

The Brownfield CIP applies to the area of the entire municipality of the City of Ottawa. Currently, this municipality-wide application of a CIP is in accordance with prevailing trends for municipal CIPs to cover the entire municipal area. The Brownfield CIP coverage is seen in Appendix B. Figure 3.2 below diagrams the sequential phases of brownfield development and illustrates when a developer can apply to the relevant municipal grants and expect to receive support. As seen in the figure, grant applications occur prior to incurring costs and the grants are provided following the completion of the work. The details of conditions to be met to be awarded the grant are detailed through correspondence between the City and the developer following grant submission.

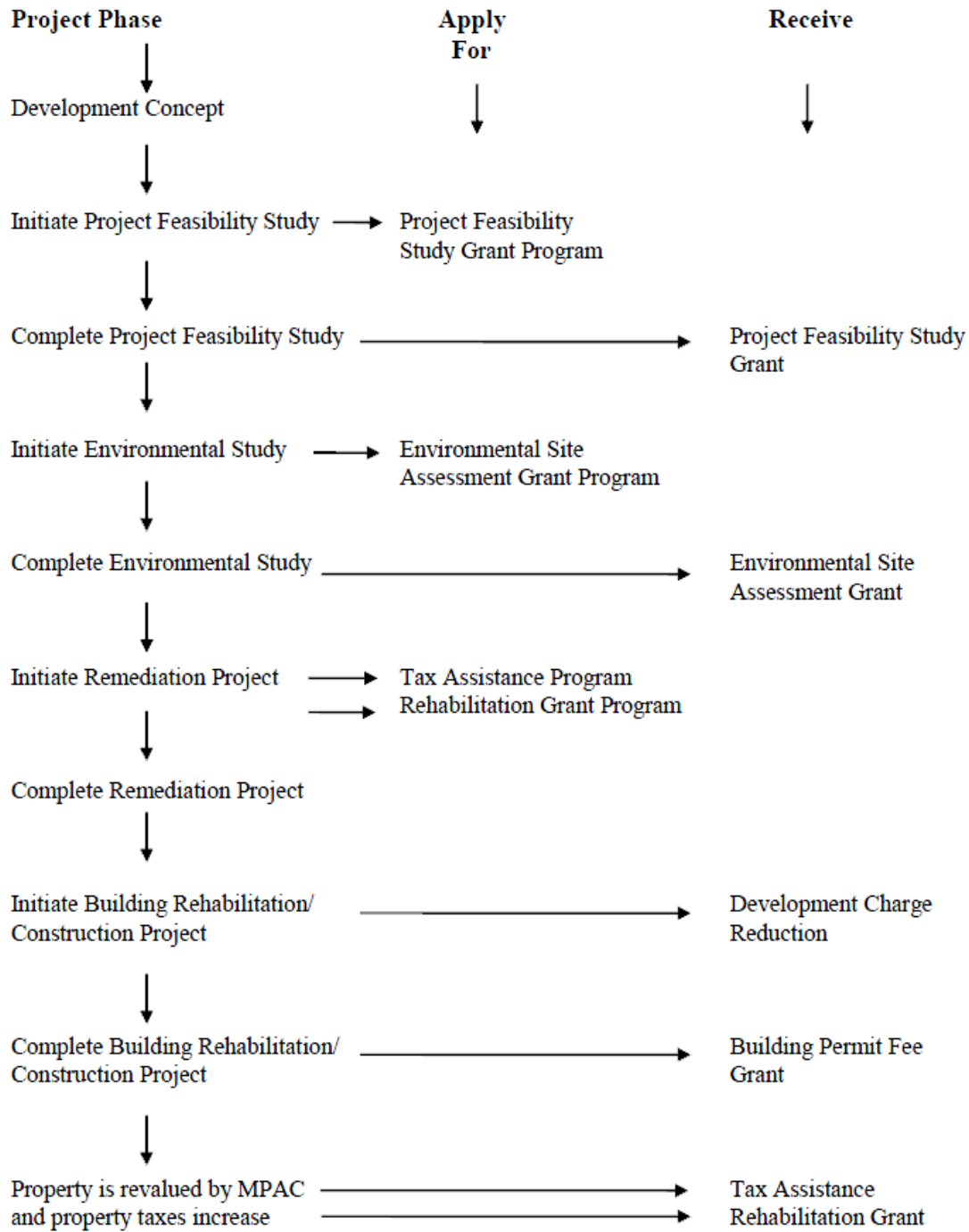


Figure 3.2: The Utilization of Incentive Programs for a Brownfield Redevelopment Project (Ottawa, City of, 2010)

CHAPTER 4: THE CITY OF OTTAWA AND THE NATIONAL CAPITAL REGION'S HISTORIC PLANS AND CURRENT PLANNING CONTEXT

4.1. Introduction

As Canada's National Capital, the City of Ottawa has a unique planning history. Since its selection as the National Capital in 1857, the Federal Government has taken an active interest in the development and growth of Ottawa and played a significant role in guiding the development of the City's urban form. Canada's early history as an industrial city with a heavy focus on the lumber industry is also important for accounting for the presence of brownfield sites within the urban boundaries.

This section will outline key characteristics of Ottawa and the National Capital Region in its present form and examine the history of the area and the influences which have formed its contemporary urban landscape. Sections 6.3 and 6.4 are abridged versions of only the most relevant history of Ottawa's Federal and municipal planning efforts; extended versions of these chapters are located in Appendix D.

4.2. The National Capital Region

The National Capital Region is the symbolic heart of Canada and its political centre. The National Capital Region is the federal designation for Canada's capital City of Ottawa and the neighbouring City of Gatineau

(formerly Hull), Quebec and their surrounding communities as shown in Figure 4.1 below.



Figure 4.1: The National Capital Region (NCC, 1999)

The Capital is the administrative base for the operations of the Federal government and this Region covers approximately 4 660 km², 2720 km² of which are in Ontario and 1940 km² are in Quebec. The region is Canada's fourth-largest metropolitan region with a population of 1 236 321 according to the 2011 census of the census metropolitan area (Statistics Canada, 2012). Seventy five percent of the region's population is located in Ottawa-Carleton, and 25% in the Outaouais (NCC, 1999). Federally owned lands comprise over 11% of the total land area of the National Capital Region. The centre of the Capital is the Core Area of Ottawa-Hull where Parliament Hill and national cultural institutions, such as the National Art

Gallery, Museum of Civilization and War Museum, National Arts Centre, National Archives and National Library, are situated (NCC, 1999).

4.3. Federal Planning History

Since being named as Canada's Capital in 1857, Ottawa has had to respond to two development forces: the sheer growth of government with its associated employees and buildings and its corresponding needs for services, and the perceived need to create a national and even international showpiece (Taylor, 1986). An analysis of Ottawa's planning history facilitates an understanding of its current built form as well as the contemporary players in the City's planning scene. Over the past 150 years, Ottawa has evolved from a remote and rudimentary industrial town into a vibrant urban capital. Ottawa's industrial roots and lax environmental standards at the time would set the stage for the creation of its current brownfield sites. Ottawa, originally founded as Bytown in 1826, was not the first choice for the seat of government for the United Canada (Gordon, 2001a). Ottawa was chosen by Queen Victoria to become the seat of the Federal Government in 1857. At that time, Ottawa was inhabited by roughly 10 000 people and was considered a dreadful place due to the presence of ugly wooden buildings and the presence of the industrial aesthetic as a result of the local lumber industry, which was the major employer in the Ottawa-Hull area. (Gordon, 2002). The lumber industry owed its strength to the Ottawa Valley's rich red and white pine forests (Bond, 1984). The City's natural amenities were marred by the lumber and pulp industries in the late 19th century (Gordon, 2001a). In addition, the soon-to-be capital lacked the infrastructure of a modern city at the time, with no paved streets, sewers, gaslights and piped water

(Taylor 1979). As a result of this dreary urban fabric, Ottawa was considered:

"... one of the roughest, booziest least law-abiding towns in North America". (Gwyne, 1984)

Ottawa suffered from neglect from legislators who dragged their heels on projects such as the construction of the parliament buildings (Young, 1995). Few legislators cared for Ottawa; it was certainly not the first choice of most politicians and officials, either as a capital or as a place to live (Gordon, 2006).

Planning literature divides the Federal planning periods of Ottawa into six major phases (Gordon, 2006):

- | | |
|--|-----------|
| 1. The Ottawa Improvement Commission (OIC) | 1899-1913 |
| 2. The Federal Plan Commission (FPC) | 1913-1916 |
| 3. The Federal District Commission (FDC) | 1927-1939 |
| 4. The immediate post-war period | 1945-1958 |
| 5. The National Capital Commission (NCC) | 1959-1971 |
| 6. The transition to regional government | 1971-2001 |

4.3.1. The Ottawa Improvement Commission, 1899-1913

The neglect of Ottawa by legislators began to change in the 1890s when Canada was under the leadership of Prime Minister Wilfrid Laurier. Laurier established the Ottawa Improvement Commission (OIC) in 1899. This commission was granted \$60 000 per year to improve the Capital's appearance. The initial agenda of OIC was to beautify Ottawa and it

employed a small staff for park maintenance and construction supervision (Gordon, 2002a).

4.3.2. The Federal Plan Commission, 1913-1916.

Criticism of planning in Ottawa grew in the first decade of the 20th century. The new Conservative Prime Minister, Sir Robert Borden, proceeded cautiously with regards to planning in the National Capital. Borden desired a planning process that was under his direct political control instead of an independent panel of expert professionals. He also wanted a plan which would cover both Ottawa and Hull. In September 1913, his administration appointed the Federal Plan Commission (FPC) to draw up a comprehensive plan to guide the future growth and development of Ottawa, Hull and their surroundings.

The Federal Plan Commission retained Edward H. Bennett of Chicago as its consulting architect and urban planner. He prepared a plan for Ottawa in the City Beautiful style with comprehensive technical planning for infrastructure and zoning. The first draft of *the Report of the Federal Plan Commission on a General Plan for the Cities of Ottawa and Hull* was completed in early 1915 and was commonly referred to as the 'Holt Commission report'.

This plan was one of Canada's first comprehensive plans and included a regional park and forest preserve system, a parkway and playground plan, street layouts for future suburban expansion, regional passenger and freight railway plans, regional highway plans, new plans for street railway lines, utility analysis, waterway and flood analysis, plans for federal and municipal government buildings, central business district plan and a

preliminary zoning scheme as seen below (Gordon, 1998). As seen in Figure 4.2 below, this plan proposed a circular form of urban development in Ottawa and Hull. The innermost circle was a central business district; the next ring was central residential development.

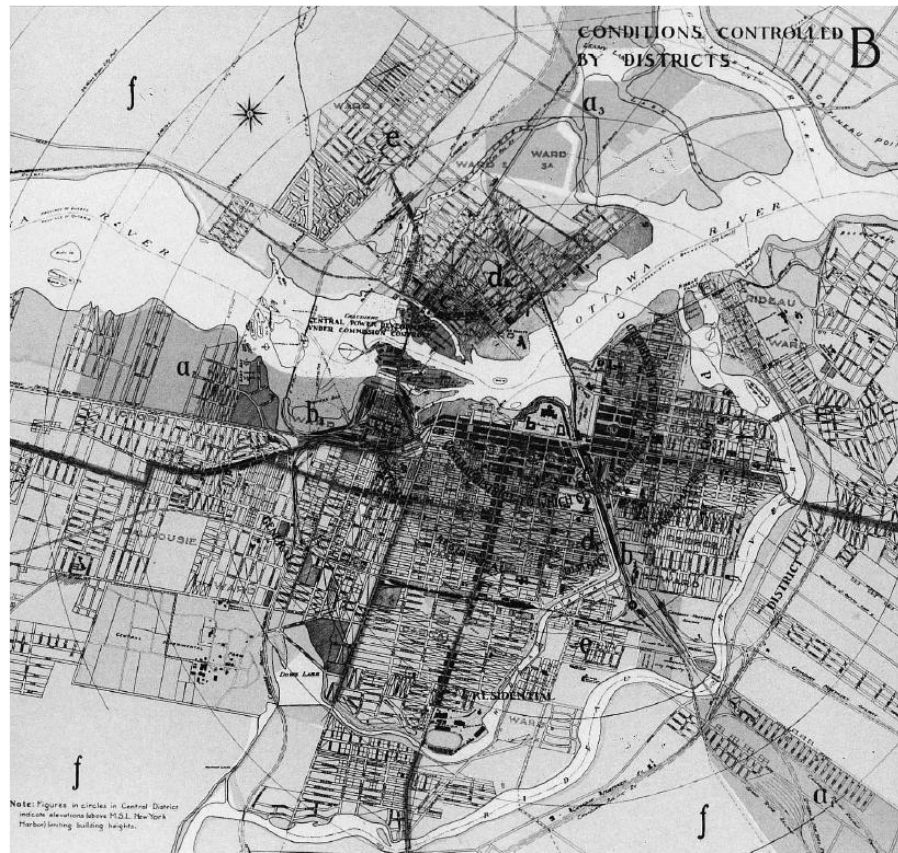


Figure 4.2: Bennett's proposed zoning scheme for Ottawa-Hull (Gordon, 1998).

Bennett's zoning scheme separated Ottawa-Hull into six distinct districts (Gordon, 1998):

1. industrial areas
2. general railway and transport areas
3. central business district including retail, wholesale and light industry
4. central residential district
5. outer or general residential district
6. suburban residential district

4.3.3. The Federal District Commission, 1927-1939

The next phase of planning was overseen by William Lyon Mackenzie King, Canada's longest-serving prime minister who held office for most of the period from 1921-1948. King took control of the Ottawa Improvement Commission during his first term in office from 1921-1930 and recruited Ottawa utilities tycoon Thomas Ahern as the new chairman. In 1927, he dissolved the OIC and established the Federal District Commission (FDC) which was endowed with a wider mandate and larger budget.

King found a planner to execute his vision in Jacques Gréber, a renowned Parisian planner-architect, at the 1937 Paris World Fair. Gréber designed the new square in time for the War Memorial to be unveiled during the 1939 Royal Visit but the remainder of Gréber's plans for downtown Ottawa were put on hold during World War II (Gordon, 2006).

During the inter-war years, there was a limited implementation of Federal plans for Ottawa due to King's lack of political support and FDC

suffered from poor funding and limited project management capacity. In addition, both the economic and political environment for the implementation of capital plans was weak in the 1920s and outright hostile in the 1930s.

4.3.4. The Immediate Post-war Years, 1945-1957

Following the war, Mackenzie King intended that the construction of a national capital for Canadians would be the principal memorial for Canada's fallen during World War II. He established a National Capital Planning Committee (NCPC) which was independent of FDC and composed of representatives from across the nation. NCPC's task was to simultaneously prepare a regional land use plan for both the Ontario and Quebec sides of the river, urban plans for Ottawa and Hull, a regional infrastructure plan and urban design for the downtown area (Gordon, 2001c). Gréber was installed as head of the National Capital Planning Service (NCPS) which was endowed with a significant budget, numerous staff and a wide mandate. NCPC consulted with local and provincial governments on both the Ontario and Quebec side and worked to build public support with news stories, radio interviews, newspaper inserts and exhibits featuring a large model of the future capital that was held in cities across Canada (Gordon, 2006).

Following five years of research and consultation, the Gréber National Capital Plan was published in 1950 which built upon the previous plans and reports of Todd, Bennet and Noulan Cauchon (discussed in Pre 1945 Local and Regional Planning History below) and was published in both French and English.

The National Capital Plan included the following components (Gordon, 2001c, Gordon, 2006 and NCC 1999):

- relocation of the railway system and industries from the inner city to the suburbs
- the construction of new cross-town boulevards and bridges
- slum clearance and urban renewal in the LeBreton Flats district
- decentralize government offices to suburban satellite locations such as Tunney's Pasture and Confederation Heights
- expansion of the urban area from 250 000 to 500 000 in neighbourhood units
- surrounding the future built-up area with a Greenbelt four kilometers in width to control the outer limits of urbanization
- a wilderness park in the Gatineau hills and a parks system along the canal and rivers

Railway relocation was a key element integral to the plan as a whole. There was a pressing need to accommodate intensified automobile traffic and Gréber saw the removal of railways from the urban core as essential to this (Taylor, 1986). Removing the Canadian National line running from east to west and its adjacent industry would reconnect the road grid and separate noxious industries from residential areas. A sample panel below depicts the effects of removing the rail lines. Relocating the two downtown rail stations freed up land for a convention centre, shopping and a hotel and the rail lines were replaced by new boulevards and an expressway (Gordon, 2006).



Figure 4.3: Undated photos of the downtown core prior and post rail removal (NCC, 1999)

The 1950 National Capital Plan became a landmark in Canadian planning history and set the standard for the comprehensive plans that followed in the decades to come (Gordon, 2002b). The plan was beleaguered by a slow start due to weak provincial legislation and the lack of consensus among municipal governments (Gordon, 2001a). Both Ottawa and Hull were granted strong links to the plan as both mayors were appointed to FDC and councillors and senior staff to NCPC (Gordon, 2006).

By the 1950s, FDC enjoyed the benefits of heavy funding and strong support by successive Prime Ministers King, St. Laurent, and Diefenbaker. It launched a major program of property acquisition including the Greenbelt in 1958 (Taylor, 1986).

4.3.5. The National Capital Commission, 1959-1970.

The Federal District Commission was renamed the National Capital Commission (NCC)/La Commission de la Capital National in 1959 in an effort to smooth over political contentions on the Quebec side.

NCC absorbed NCPC and Gréber's staff. It was granted the power to expropriate land, build infrastructure and create parks. These powers were utilized to expropriate the land for the Greenbelt.

NCC's excellent reputation for management enabled them to implement elements of the National Capital Plan. By 1970, when the majority of the plan had been implemented, NCC had spent \$243 million (Gordon, 2002b). Much of the work on the plan was carried out following the rise of John Diefenbaker's Conservative party to power from 1957 to 1963. Mackenzie King had given the project sufficient political momentum to endure for almost two decades. NCC was virtually unstoppable as an agency for implementation for twenty years following the end of World War II. The elements for NCC's strength included political support, long-term finance, good economic conditions due to the post-war economic boom, skilled planning staff and strong project management. Large-scale planning had become an accepted strategy and Ottawa-Hull was transformed from a blue-collar to white-collar population due to the decline of the lumber industry and due to the increase in civil servants during the two World Wars.

4.3.6. The transition to regional government, 1971-2001

Although a powerful NCC may have been needed in the early stages of planning and development of Ottawa, it became less relevant as the municipality became established. The magnitude of power vested in

such an agency was more challenging to justify once the principal activity of the organization shifted from rapid physical development to more routine local governance. NCC relinquished control of Federal planning initiatives in the mid 1960s (Gordon, 2006).

NCC's planning capacity was decreased while it was given the added responsibility for programming the National Capital to ensure a bilingual image. NCC now produces major public festivals which promote national unity, including Canada Day and Winterlude (Gordon, 2006).

NCC did not withdraw entirely from planning in the 1970s. It became refocused on the portfolio of federally-owned property in the region and prepared large-scale master plans based on ecological principles for the Greenbelt and Gatineau Park. NCC was given urban design projects which improved public spaces such as the Parliamentary Precinct and the Confederation Boulevard which created a ceremonial route that linked Ottawa and Hull. The absence of co-ordination between the municipalities of Ottawa and Hull enabled NCC to play a role as a facilitator in regional transportation and land-use concerns.

4.3.7. Summary of Federal Planning History

Since being named as Canada's Capital, the Federal Government has played an active and key role in transforming Ottawa from its early urban form as a small lumber-based industrial town into today's modern metropolis. Federal intervention has been directed by a series of prime ministers which resulted in radical planning intervention in Ottawa's urban core. In the absence of a strong municipal planning body, the Federal Government and the National Capital Commission and its early

predecessors would become the primary planning bodies which shaped the urban core. The Federal Government also played a role in brownfield creation in the forced removal of industries from the urban core and the expropriation and demolition of the buildings on LeBreton Flats, discussed in a later chapter.

4.4. Municipal and Regional Planning History

4.4.1. Pre 1945

The Federal government's modest planning activity far surpassed that of most local efforts in the first half of the 20th century. The Ontario provincial government passed permissive town planning legislation in 1917 due to the encouragement of Federal advisor Thomas Adams. The City of Ottawa established the Ottawa Town Planning Commission (OTPC) in 1921 which was chaired by Noulan Cauchon, a local activist, railway engineer and founder of the Town Planning Institute of Canada. However, OTPC was purely advisory, under-funded and, as a result, had little impact.

The municipality of Ottawa focused on improving private property which constituted the primary tax base in the early 20th century. Mayors changed frequently and they rarely supported urban planning initiatives (Gordon, 2006). Powerful Federal politicians, such as Laurier and Mackenzie King, had sufficient funds and staying power to pursue their own agendas often overriding local officials (Taylor, 1989). The Federal government appropriated most of the planning initiatives in Ottawa which served to weaken local groups such as civic improvement leagues and

town planning commissions which were more active in other Canadian cities where the Federal influence was less prevalent.

The Canadian community planning movement collapsed during the Depression and the Town Planning Institute suspended operations from 1932 to 1952. Across Canada, only a few municipalities had planners and the Federal government almost had a full monopoly in the Ottawa-Hull region. Mackenzie King and the Federal government made community planning a central element of its national post-war reconstruction programme (Gordon, 2002a). King also launched a major planning initiative in the National Capital which became a pilot project for the slow reconstruction of the planning profession (Gordon, 2006).

4.4.2. Post 1945

The Federal District Commission was supported by the City of Ottawa by establishing the Ottawa Area Planning Board (OAPB) in 1946 in an effort to control unregulated suburban expansion. However, suburban townships continued to approve low-density subdivisions which lacked municipal services. The City reacted to this in 1948 by attempting to annex all the land inside the proposed boundary of the Greenbelt. Rural townships opposed the annexation but lost. These townships also fought the Greenbelt by refusing to incorporate it into their zoning bylaws and approving subdivisions (Gordon, 2001c).

While the planning expertise of FDC was growing in addition to its authority, that of the City of Ottawa was weakening. This was due to the failure to develop a strong planning department and also as a result of the more general loss of local autonomy in the 1940s and 1950s (Taylor, 1986).

FDC/NCC's relations with the City of Ottawa were pragmatic in nature. Ottawa tended to accept Gréber's plan and there was a significant level of interplay between the City and NCC at a technical and engineering level. FDC/NCC's broad policies included a "degree of interest" clause enabling NCC to finance local works according to the "degree of interest" that the FDC/NCC had in them.

In the 1960s, the City of Ottawa had developed a greater degree of maturity in its engineering, planning and other civic departments. The improved and expanded local bureaucracy enabled the City to hold its own with Federal operatives. With the arrival of this political nerve came a new batch of local politicians who were neighbourhood-based (Taylor, 1986). Most of the planning done by the City in the 50s and 60s was oriented towards the demands of expansion and development in the City's suburbs (Taylor, 1986).

NCC's primacy in regional planning began to disappear in the 1970s. The local governments on either side of the Ottawa River developed their own complement of planning staff and planning ideas. Ontario and Quebec both established regional governments with sweeping planning powers (Gordon, 2001a). The Province of Ontario established the Regional Municipality of Ottawa Carleton (RMOC) in 1968. RMOC completed a regional land-use plan in the mid 1970s which coordinated suburban township plans prepared by local professional staff.

Jacques Gréber's National Capital Plan guided the growth of the Ottawa-Hull region from 1946 to 1966 which saw the population of the region double from 250 000 to 500 000, filling the area inside of the Greenbelt. The local and regional plans guided growth as the region doubled its population once again to 1.1 million by 2001. During the 1990s, Ottawa improved its planning agencies and began to question the

decentralized suburban model with RMOC developing an advanced bus transitway system that was co-ordinated with nodes of Federal employment (Gordon, 2006).

Under an extensive province-wide initiative to amalgamate municipalities, Ontario dissolved all the local governments and the Regional Municipality of Ottawa-Carleton to create a new City of Ottawa in 2001. The new City of Ottawa encompassed almost all of the National Capital Region south of the Ottawa River. On the other side, Quebec consolidated most of the urban municipalities into the City of Gatineau. As a result of these developments, there were three major actors at the table in planning in the National Capital Region: Ottawa, Gatineau and NCC (Gordon, 2006).

4.5. The Development and Growth of the City of Ottawa

4.5.1. Geography

The new City of Ottawa is located on the south bank of the Ottawa River. It is bounded to the east by the United Counties of Prescott and Russell, in the west by Renfrew and Lanark County, on the south by the United Counties of Leeds and Grenville, the United Counties of Stormont, Dundas and Glengarry and on the North by the Ottawa River and the Regional County Municipality of Les Collines-de-l'Outaouais and the City of Gatineau. Ottawa and its surrounding areas are seen in Figure 4.4:

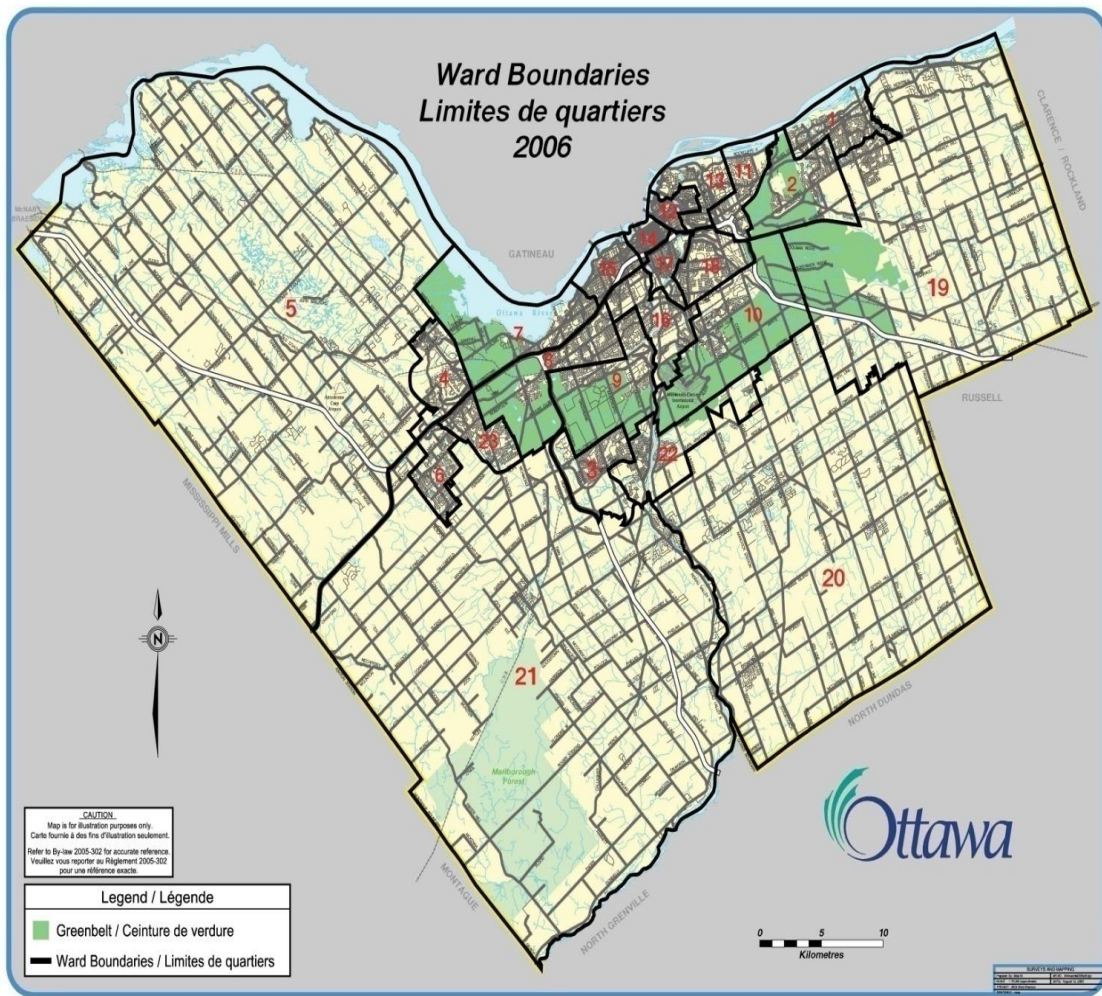


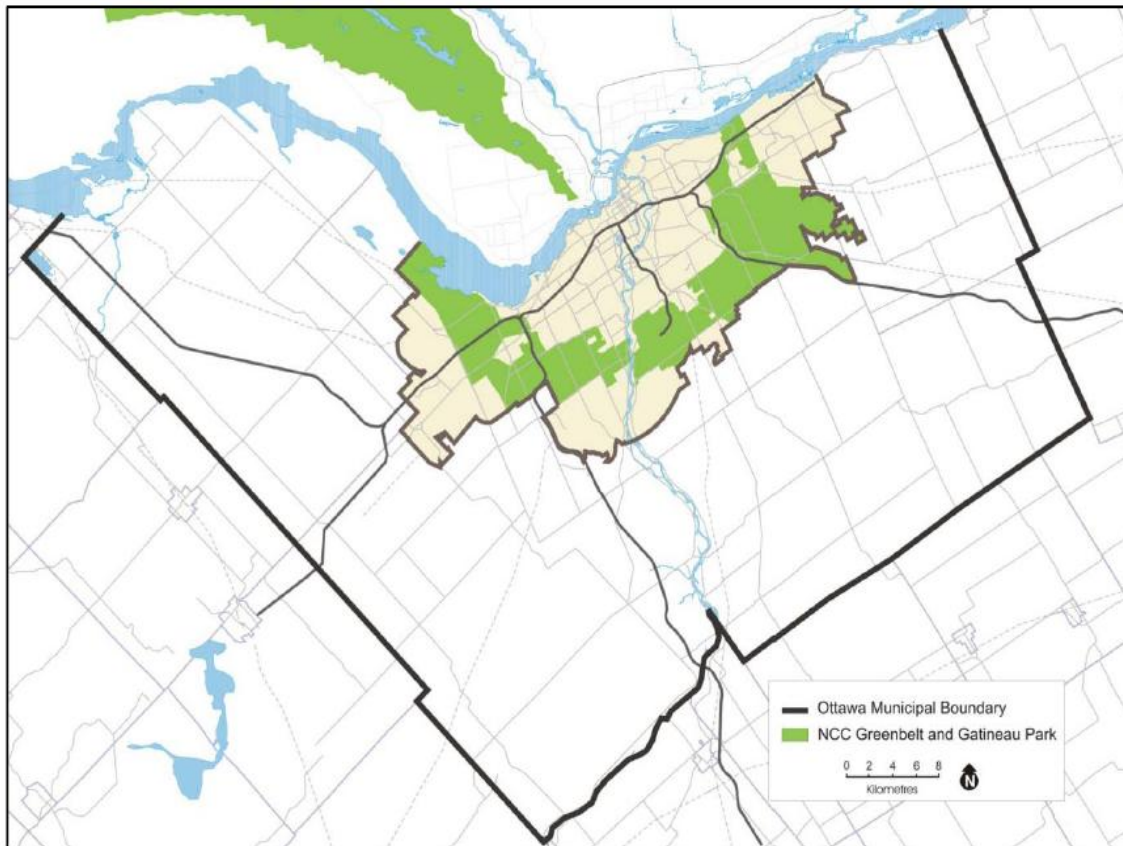
Figure 4.5: Ottawa's 23 Wards and the Greenbelt (Ottawa, City of 2013).

A list of each of the wards by name and number is found in Appendix A.

Ottawa has a main urban area but the municipal boundary includes multiple urban and suburban villages and rural areas (David, 2007).

4.5.2. Government and Politics

The current Municipality of Ottawa has its roots in the Regional Municipality of Ottawa-Carleton which was formed in 1969 through restructuring the former municipalities in Carleton County and the City of Ottawa into a two-tier structure. More recently, a single tier municipality was created in 2001 when the Province of Ontario legislated the amalgamation of the regional government with the lower tiers (Slack and Chattopadhyay, 2009). This amendment to the City of Ottawa Act



amalgamated 11 former municipalities which together constituted the Regional Municipality of Ottawa-Carleton.

Figure 4.6: The New City of Ottawa's Municipal Boundaries (Figure 5.3 in Heydorn, 2007)

Each of these municipalities was represented by a mayor and municipal council. The amalgamation resulted in each of these wards of

the former region becoming new wards in the new City of Ottawa (Ottawa Rural Communities, 2002). Currently, Ottawa City Council is composed of 23 councillors, one for each city ward and one mayor, currently Jim Watson. The mayor and councillors serve four-year terms, the current one of which began on December 1, 2010 (Ottawa, City of, 2012c).

The Federal Government is Ottawa's largest landlord and tenant; it currently pays the city nearly \$170 million a year in lieu of property and business taxes for its buildings scattered across the city (May, 2007).

4.5.3. Demographics

Ottawa is Canada's fourth largest municipality with a population of 927 120 at the end of 2011 (Ottawa, City of, 2012a). Between 2006 and 2031, Ottawa's population is expected to grow by 265 000 people (Ottawa, City of, 2012c). In 2006, Ottawa possessed a growth rate of 7.9% in comparison to the 2001 population count. This growth rate was faster than Ontario's rate of 6.2% and Canada's rate of 4.8% (Ottawa, City of, 2006). Ottawa's 2003 Official Plan predicted a growth rate of 37% from 2003-2018. Ottawa City Council adopted the growth projections seen Table 6 below in 2007 which were incorporated into the City's Official Plan in 2009 (Ottawa, City of, 2012a):

Table 6: Ottawa's population projections

Year	Population
2006	871 000
2011	923 000
2021	1 031 000
2031	1 136 000

Immigration is cited as the major reason that Ottawa's population is growing at a faster rate than that of Ontario's or Canada's (Ottawa, City of, 2006). Between 1996 and 2001, Ottawa welcomed almost 25 000 immigrants from international destinations. In 2006, there were 70 500 immigrants living in Ottawa representing the fourth highest concentration in Canada (Ottawa, City of, 2006).

4.5.4. Economy

The latest available statistics show that Ottawa's economy is based primarily on two major sectors - high technology and the Federal Government. These sectors collectively account for 37% of Ottawa's GDP (Ottawa, City of, 2006). The City also has a vital rural sector. The rural economy contributes over \$1 billion to the GDP with agriculture accounting for \$400 million. The rural economy consists of agriculture, retail sales, construction, forestry, aggregate mining, tourism, manufacturing, personal and business services and transportation. Table 7 contains the 2006 division of GDP by sector (Conference Board of Canada, 2006):

Table 7: Ottawa's GDP by Sector

Ottawa's GDP by sector	
Sector	% of total GDP
High tech	18.9%
Federal Government	18.2%
Tourism	2.1%
Health and education	7.5%
Finance, insurance, real estate	10.4%
Trade	9.4%
Construction	4.0%
Primary	0.9%
Others	28.6%

Ottawa's high tech industry which emerged in the late 1960s was concentrated primarily in Kanata (Ward 4 and 23). In the 1970s, approximately 40 high-tech firms were established in the city. By 1981, three of Ottawa's largest employers were the high tech firms Bell Northern Research, Digital Equipment of Canada Ltd. and Mitel Corporation (Taylor 1986). The emergence of this high tech centre was attributed to the government presence in the form of the National Research Council and the Communication Research Council which invested in electronics research and created a demand for electronic equipment. In addition, the government was becoming a major market for electronics for data processing in departments such as National Revenue, Health and Welfare and the Dominion Bureau of Statistics (Taylor 1986).

4.5.5. Official Plan

The City of Ottawa's Official Plan was adopted in 2003 and was the first plan for the new City of Ottawa, following the amalgamation of the former 11 urban and rural municipalities. This plan provided a vision for the future growth of Ottawa and a policy framework to guide its physical development to 2021. At the time of writing, Ottawa is reviewing the Official Plan (Ottawa, City of, 2012d). This plan set a policy framework for managing the City's growth in a way that fosters liveable communities, a green and open character and preserves the landmarks and landforms which distinguish Ottawa. This document addresses matters of provincial interest as defined by the Provincial Policy Statement under the *Ontario Planning Act* (Ottawa, City of, Official Plan).

CHAPTER 5: CASE STUDIES - OTTAWA'S MAJOR BROWNFIELD DEVELOPMENTS

5.1. Introduction

Six case studies were selected to showcase the diversity of Ottawa's ongoing brownfield development projects. These sites are Bayview Yards, CLC Rockcliffe Lands, LeBreton Flats, Lansdowne Park, 1357 Baseline Road and 300 West Hunt Club Road. Each site is unique due to their respective owners and developers, location, previous uses and intended uses. These sites are currently receiving considerable amounts of attention from local communities and media outlets. In addition, they are Ottawa's largest brownfield development projects and represent some of the last large tracts of vacant land remaining in the urban core available for development. These sites were selected due to their significance with regards to Brownfield policy. They are Ottawa's largest brownfield sites and in the case of 1357 Baseline Road, their application to the program has had a major impact in the evolution of the Brownfield CIP. In addition, sufficient data could be located pertaining to these sites as a number of brownfield sites lack documentation and their owners could not be reached for comment. Their variety in anticipated project scope and plans also serve to illustrate the wide array of potential uses for Ottawa's brownfield sites. Their relative locations in Ottawa can be seen in Figures 5.1 and 5.2 below.

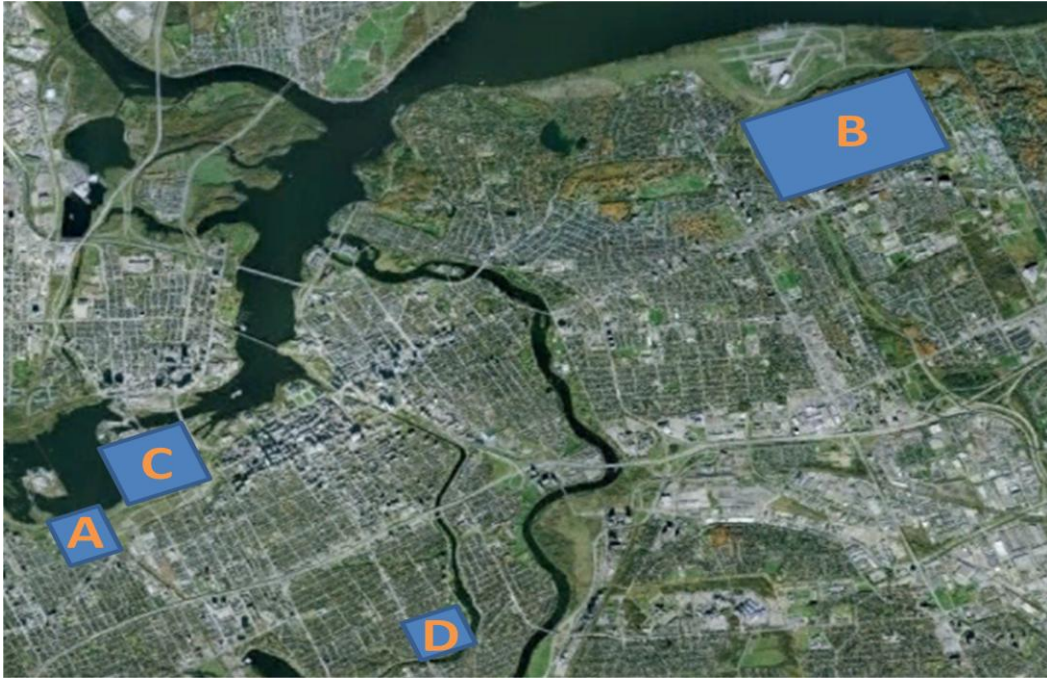


Figure 5.1: Case study sites, A - Bayview Yards, B - CLC Rockcliffe Lands, C - LeBreton Flats and D - Lansdowne Park (Google Earth, 2008)

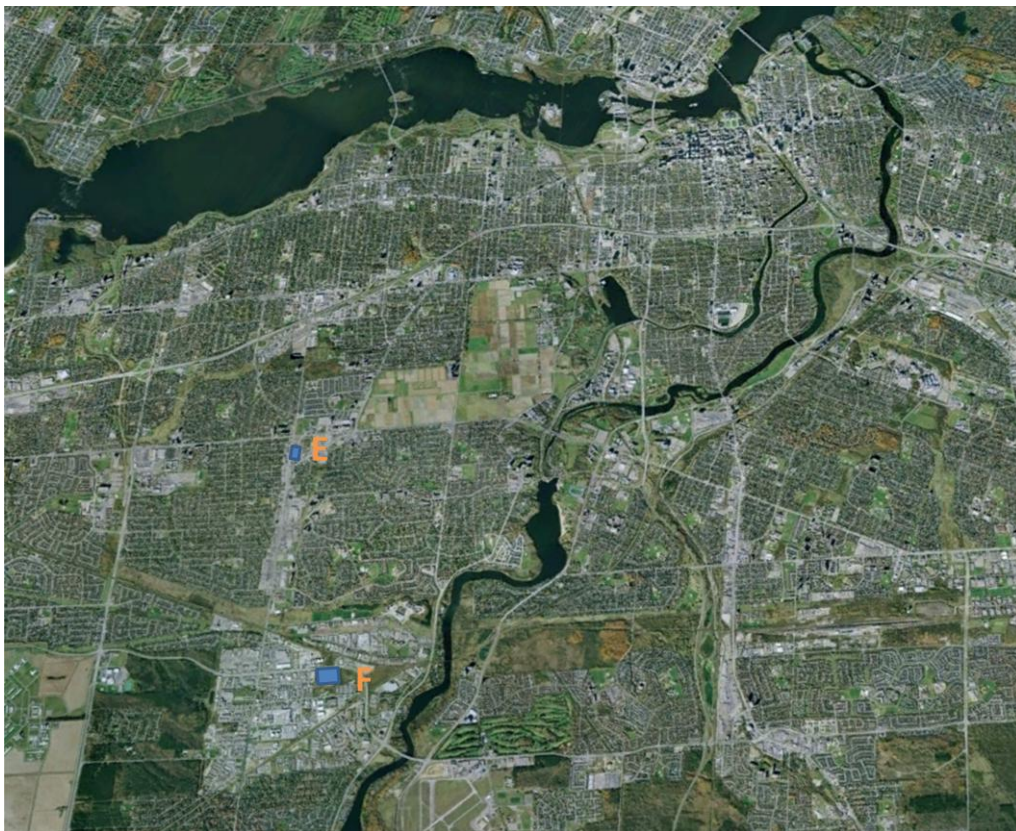


Figure 5.2: Case study sites, E - 1357 Baseline Road, F - 300 West Hunt Club road

Bayview Yards is a former City of Ottawa public works site and is currently owned by the City of Ottawa which intends to develop the site in partnership with Invest Ottawa, a local business development association. This site is located to the west of the City's central area between LeBreton Flats and Tunney's Pasture, a government office complex. The vision for the site is a mixed use development featuring a multi-use studio and an "innovation complex".

CLC Rockcliffe Lands consists of land formerly owned and used by the Department of National Defense as a military aviation base. The site is currently owned by the Canada Lands Company, a crown corporation, and is located to the east of Ottawa's urban centre, close to the established neighbourhoods of Rockcliffe Park, Vanier, Manor Park and Rothwell Heights. The vision for the site is to create a mixed use development while preserving and enhancing the environmental amenities of the site, providing connectivity to the surrounding community and ready access to public transit.

LeBreton Flats is a large swath of land located to the west of Parliament Hill that was formerly occupied by low income housing and a variety of industrial facilities. Currently owned by the NCC, the site has been cleared of its original occupants, all original structures on the site were demolished and the vacant land is currently undergoing active remediation. Following the expropriation and demolition of on-site structures by the NCC, the site remained idle for over 40 years pending concrete plans for its development. The Canadian War Museum currently resides on the site and a mixed use development for the site is planned by the NCC to be developed through partnerships with developers for individual land parcels.

Lansdowne Park is a former fairground and exhibition site located adjacent to the Rideau Canal. The site is located to the southeast of the City centre, close to the historic neighbourhood of the Glebe and had hosted the Ottawa Ex until 2010. Plans for the site include the preservation of existing heritage structures, while creating a mixed use development featuring retail, commercial and residential facilities.

1357 Baseline road is a site that was occupied by the former Laurentian High School. The site is located along two main arterial roads and near two residential neighborhoods. Plans for the site include a retail complex anchored by Wal-Mart and office space. This site is especially significant as it was the third applicant to the Brownfield CIP and triggered a moratorium of the program to allow for a peer-review and modification of the original terms of the program.

300 West Hunt Club Road is the highly contaminated site that was formerly occupied by a Texaco facility. This site has been dubbed one of the most contaminated brownfields in Ottawa. The site is surrounded by light industry and future plans include a retail complex anchored by a Lowe's home improvement store.

5.2. Bayview Yards

5.2.1. Site Description



Figure 5.1: Bayview Yards (Google Earth, 2004)

The area dubbed the Bayview Yards refers to a 6.73 acre parcel of land located at 7 Bayview Road which is currently occupied by a public works building and a City of Ottawa Bylaw and Regulatory Service facility (Invest Ottawa, 2013). The property is owned by the City of Ottawa (Jacques et al., 2011). The public works building is currently vacant but the lands surrounding the structure are used by the municipality for a variety of activities including snow dumping (Reevely, 2013b), vehicle parking and storage. The site is located close to the established neighborhoods of Hintonburg and Mechanicsville (Jacques et al., 2011). The property is bounded by the Sir John A. MacDonald Parkway to the North and an OC

Transpo Transitway to the south. The site is located to the west of the Parliament buildings and LeBreton Flats. Preliminary reports indicate that some environmental remediation will be required at the site in order to proceed with the development (Invest Ottawa, 2013).

5.2.2. Site History

The Public Works building was constructed in 1941 (Jacques et al., 2011). This structure is located on a former lumber yard site. This building is an example of industrial/functional modernist design. The site has sat empty since 2006 and, due to the neglect, suffers from moisture damage as a result of breaks in the building's envelope (Jacques et al., 2011).

5.2.3. Redevelopment Plans

The City of Ottawa's vision for the site includes a business incubation and acceleration space with complementary governmental, private sector and non-profit agency use in addition to a multi-purpose studio (Invest Ottawa, 2013). The plans also include a mixture of residential, recreation and commercial uses. The business incubation and acceleration space would aid entrepreneurs in Ottawa and will be modelled after the MaRS Discovery District in Toronto and the Communitech Hub in Kitchener-Waterloo (Kovessy, 2013). The project will receive \$15 million from the Province of Ontario for the establishment of the "innovation complex". The City will be donating 1.415 hectares of the property to the innovation complex, a 10 to 14 storey building to house

Ottawa's economic development agency Invest Ottawa (Reeveley, 2013). However, not all of the site will be developed simultaneously as a portion will be set aside as a staging area for Ottawa's ongoing light rail construction project (Willems, 2013). Recently, in an article published by the Ottawa Citizen on February 27, 2013, Cinespace Film Studio, the company chosen to develop a film and television studio at Bayview Yards has backed out of the project. The development of the multi-purpose studio will re-open the tendering process for the project and will likely extend the development horizon for the site as Invest Ottawa, the owner of the site, is forced to return to the drawing board (Lofaro, 2013).

5.3. CLC Rockcliffe Lands (Former Canadian Forces Base Rockcliffe)

5.3.1. Site Description



Figure 5.2: The CLC Rockcliffe Lands Property (Google Earth, 2008)

The area open to development is 310 acres of the former Canadian Forces Base Rockcliffe. The site is well situated and boasts a panoramic view of the Ottawa River, Gatineau hills and easy access to scenic pathways and greenways nearby. This area is bounded by the Rockcliffe Parkway to the north, National Research Council lands to the east, Montfort Hospital and various commercial and residential developments along Montreal Road to the south and the Aviation Parkway to the west (Canada Lands Company, 2012).



Figure 5.3: Aerial Photograph of CLC Lands Rockcliffe (Clark, 2012)

The Department of National Defence is currently proceeding with the demolition and remediation of the school building and further remediation work will be undertaken in areas which have been

contaminated with aviation fuel and other chemical contaminants. Both the DND and CLC do not qualify for Brownfield CIP grants due to their government and crown corporation status.

The site was closed to vehicle and pedestrian traffic on October 13, 2009. The land, formerly owned by the Department of National Defence, has been transferred to the Canada Lands Company (CLC) and CLC is spearheading the redevelopment project (Belanger, n.d.). The process of purchasing the lands originally began in 2005 but was complicated due to a settlement dispute with the Algonquins of Ontario (AOO) which lasted five years (Williams, 2012). CLC and AOO, in collaboration with the Government of Canada, finally reached a Participation Agreement for the Rockcliffe lands in 2010. This agreement set the stage for CLC to officially purchase the land in May 2011, following the settlement of the three-year land claim dispute with AOO (Nash, 2012). The Participation Agreement provides opportunities for cooperation between CLC and AOO, including the commemoration of the history and connection of the Algonquin people with the site, engagement in all stages of the concept development, maintaining a list of Algonquin companies which are well suited to become involved in the redevelopment of the site and the opportunity for the AOO to acquire a defined amount of lots or blocks, under the municipally-approved plan as development takes place (CLC, 2012).

5.3.2. Site History

Prior to the 17th century, this area was home to the Algonquin people. From 1802 to 1898, the land was owned and occupied by a series of

farmers and land speculators (CLC, 2012). In 1899, the Department of National Defence established the Rockcliffe Rifle Range. From 1920s onward, the Base's main vocation was military aviation and operated as a self contained community (CLC, 2012). During the First and Second World Wars, the site was a highly active air force base (Payne, 1999). The usage of the site for military aviation is one of the original sources of the contamination on the property which currently requires remediation. The property was declared surplus by the DND in 1984 and was officially closed in 2009 (CLC, 2012).

5.3.3. Redevelopment Plans

No formal design plan has been publicly released to date but the group is planning to develop a community design plan. The Rockcliffe Community Design Plan is forecasted to take approximately 18 months from the Fall of 2012 through to the Spring of 2014 (CLC, 2012). In early planning, the CLC development team had expressed a desire to create an urban hub of more than 15 000 residential units. However, because of changes in the market since that time, this is no longer an option and CLC will determine the number of units based on the real estate market and comments from the public consultation process (Nash, 2012). An open house was held in November 2012 to introduce the community to redevelopment plans and engage the public in the project through eliciting ideas, opinions and project participation.

The current development strategy calls for a mixed use, sustainable community on the land which is integrated with the existing communities that surround it. The plans identify an intention to develop in accordance with the City of Ottawa's Official Plan through urban intensification (CLC, 2012).

5.4. Lansdowne Park

5.4.1. Site Description



Figure 5.4: Lansdowne Park (Google Earth, 2008).

Lansdowne Park is a municipally-owned 37-acre public space on the edge of the Rideau Canal, a UNESCO designated World Heritage site. The site forms a significant area of public space in Ottawa's historic Glebe community (Iacobelli, 2010). It contains two designated heritage buildings – the Aberdeen Pavilion National Historic Site and the Horticulture Building. Since 1868, the site has hosted major cultural, entertainment and sporting events (Heritage Canada Foundation, n.d.). The site had recently fallen

into disrepair which has sparked significant interest in its redevelopment. The southern section of the Frank Clair Stadium on the site was closed on September 6, 2007 due to the appearance of cracks in the concrete structure (CBC News, 2007).



Figure 5.5: Aerial view of Lansdowne Park and its proximity to the Rideau Canal (OSEG and the City of Ottawa, n.d.).

The site and its redevelopment have been dogged by controversy due to the partnership between the Ottawa Sports & Entertainment Group (OSEG) and the City of Ottawa. This partnership involves the transfer of approximately 25% of the public park space to OSEG for private redevelopment (Heritage Canada Foundation, n.d.). At issue is the 300 000 square feet planned development of mixed-use commercial retail and high density buildings which will infringe on the protected view planes to the Aberdeen Pavilion as identified in its heritage conservation easement (Heritage Canada Foundation, n.d.). The Horticulture Building was moved on November 2, 2012, a move which angered conservationists. Some buildings such as the Coliseum building have already been demolished

due to their low-to-moderate heritage significance ratings in order to make way for the new buildings planned for the site (Willing, 2012).

The Glebe Community Association (GCA) is highly vocal in challenging the proposed development which has involved significant legal battles. The GCA has lobbied to include Lansdowne Park on the Heritage Canada Foundation's annual list of "endangered places" with success (Iacobelli, 2010). Glebe residents and GCA have expressed concern surrounding the potential increase in traffic flow and the threats posed to existing small independent businesses which currently operate in the area (Iacobelli, 2010). In addition, a community group named "Friends of Lansdowne Park" filed a lawsuit against the City alleging the City broke municipal and provincial regulations by partnering with the Ottawa Sports and Entertainment Group without seeking other bids (CBC News, 2011a). The legal challenge was rejected when a judge ruled against the Friends of Lansdowne Park in his decision that the City had acted in good faith when it approved the deal and did not break its own rules (CBC News, 2011a).

In response to the City's partnership with OSEG, a non-profit corporation named the Lansdowne Park Conservancy (LPC) was formed to present an alternative vision and plan for the space (Lansdowne Park Conservancy, 2010). The City has rejected this alternative proposal on two occasions due to the prior approval of its original plans (CBC News, 2010). LPC launched a legal challenge against the OSEG, City of Ottawa project which was dismissed in April 2011 and its appeals to the Ontario Appeal Court and Supreme Court were both rejected (Reevelly, 2013a).

Environmental assessments of the site performed by the City and independent groups hired by an advocacy group named Friends of Lansdowne have confirmed the presence of significant contamination on

the site (Vanneste, 2010) which will require remediation prior to site redevelopment.

5.4.2. Site History

Lansdowne Park has played a significant role in Ottawa's history. In 1868, the property was acquired by the City to be used as a municipal fairground (OSEG and the City of Ottawa, n.d.). The site made history by hosting the first exhibition of the telephone for the public. The site was expanded in 1898 with the purchase of additional lands by the City. A Horticulture Hall and grandstand were constructed which prepared the site for larger events (OSEG and the City of Ottawa, n.d.). The historic Aberdeen Pavilion was constructed in 1898 and is Canada's last remaining example of 'exhibition style' design, popular in the 19th century. The grandstand was eventually replaced with the Frank Clair Stadium which hosted championship sports teams (OSEG and the City of Ottawa, n.d.). The site hosted the annual Central Canada Exhibition from 1888 to 2010. This popular exhibition used the majority of the site to offer agricultural and cultural exhibitions as well as various entertainment venues for a period of 10 days during the summer (Mazey, 2010).

5.4.3. Redevelopment Plans



Figure 5.8: Detailed Lansdowne Park Site Plans (Ottawa Business Journal, 2012)

Redevelopment plans for Lansdowne pay tribute to the site's historical roots and sense of place and seeks to integrate itself with the surrounding residential and commercial neighbourhoods (OSEG and the City of Ottawa, n.d.). The site will be transformed into a mixed-use district and will feature a retail village, thereby creating opportunities for shopping, dining and entertainment. 280 residential condominium units and over 100 000 sq. ft. of office space are planned for the design (OSEG and the City of Ottawa, n.d.). The two heritage structures on site will be preserved. The site will host an urban park, a farmers' market, public plazas, a cinema, restaurants and a mixed-use retail district with residential condominiums

and office space. The buildings will use Leadership in Energy and Environmental Design (LEED) standards as a benchmark for the design, construction and property management planning of Lansdowne in a manner that conserves energy, resources and protects the surrounding environment (OSEG and the City of Ottawa, n.d.). LEED standards refers to a rating system for assessing the sustainability of a building based on various criteria such as the nature of building materials and the inclusion of environmental amenities such as a green roof.

5.5. LeBreton Flats

5.5.1. Site Description



Figure 5.6: NCC LeBreton Flats Property (Google Earth, 2008)

LeBreton Flats is a 154 acre parcel of prime real estate located to the west of Parliament Hill. The site is currently owned by the National Capital Commission. The Parliament Buildings and Confederation Boulevard lie to the east of the site and the Ottawa River is to the north. The Flats is one of Ottawa's original industrial areas which accounts for the heavy on-site contamination. The National Capital Commission claims that the cleanup bill for ongoing work to the site, to date, is \$71 million (Willing, 2012). In the past, its use as a snow storage site compounded contamination issues due to the deposits of highly contaminated material at snow-dump sites (Droste and Johnston, 1992). Although owned by NCC, the development of this site is governed by the City of Ottawa's Official Plan.

5.5.2. Site History

LeBreton Flats is located close to Chaudiere Falls which powered a mixture of timber production and light industry. LeBreton was the site of rail yards and worker housing. It was devastated by a large fire which spread from Quebec in the 1900s but it was completely rebuilt (NCC Watch, n.d.). The site housed a rail line, station and yards which led to industrial and commercial developments and low-income housing for local workers (Ottawaliving.ca, 2009).

On April 19, 1962, the residents and property owners of LeBreton Flats received a notice that NCC would be expropriating their properties. By 1965, all of the buildings in the area were torn down at a cost of \$15 million (NCC Watch, n.d.). 53 acres of land were expropriated from 240 landowners of properties consisting of industrial plants, commercial

buildings and low-standard housing (Debanne, 2005). 2 800 people were relocated to other parts of the City in the process (Debanne, 2005). At that time, soot, dangerous fumes and toxic dumping were commonplace for the industries operating on the site which left a brownfields legacy. Some zones are too highly contaminated to be converted to residential uses and can only be capped with parkland (Midcentury Modernist, 2012). The plans were to construct 10 government buildings in the area working with 154 acres of land on the Flats (Ottawa Citizen, 1962). This expropriation was part of the beautification efforts of the Greber plan (NCC Watch, n.d.). Figure 5.7 depicts The Flats prior to and following the expropriation and demolition of structures by the NCC. The Federal Government's original intention was to build an office complex for the headquarters of the Department of National Defence which, at the time, was dubbed "Pentagon North" (Midcentury Modernist, 2012 and Debanne, 2005).



Figure 5.7: The left photo shows LeBreton Flats in its built up state, prior to the expropriation and demolition of the properties in 1965 (Debanne, 2005). The right panel illustrates the undeveloped state of the site which would persist for over 40 years following the demolition (NCC, 2004).

In 1988, workers performing work on the water and sewer infrastructure on the site stumbled across a forgotten train residing in a tunnel roughly 10m below ground (Macleod, 2012). Dubbed "the ghost train of LeBreton Flats", the train and tunnel served a brewery which resided on LeBreton Flats. It ran along a short track and shuttled beer produced at the brewery to a warehouse (Macleod, 2012). Despite the surge of interest sparked by the train and the "time tunnel" it resided in, reports of its whereabouts and current state have yet to surface.

In 1999, NCC acquired 100% of the land acquiring the road network from the City of Ottawa (NCC Watch, n.d.). In 2004, NCC moved forward with Phase 1 of the development of the Flats which was intended for a 4.4 hectare site to be filled with townhomes and office blocks. NCC refused to partition the site into smaller lots which excluded many developers from the project. Three bids for Phase 1 were submitted, the two highest rated submissions were by Minto and Prevel with the third by Claridge Homes. However, both Minto and Prevel withdrew due to the NCC's addition of more demands which left Claridge as the "winning" contract (NCC Watch, n.d. and Reevly, 2013d). In 2005, the Canadian War Museum opened on the site and was the first physical component of the site's redevelopment (Canadianliving.ca, 2009).

5.5.3. Redevelopment Plans



Figure 5.8: The NCC's concept master plan for LeBreton Flats (NCC, 2005)

The goal of the redevelopment vision for the site is to make the Flats an extension of the Capital's core area while developing a mixed use community which will feature varied housing types with 4-5 thousand residential units, up to 20 000 square metres of street-level retail businesses and between 80 000 and 90 000 square metres of office space (Capitale, n.d.). NCC plans on reserving 40% of the site for green spaces, including a festival park with an occupancy of 40 000 people, riverfront parkland and a municipal park to be developed in partnership with the City of Ottawa (Capitale, n.d.). LeBreton Flats is planned to be developed to become a complete community with goods and services within walking distance of residences and good connectivity to transit (NCC, 2005).

In 2012, NCC approved a \$4.9 million contract for the cleanup of 6.5 hectares of the property. The contaminated soil removed from the site will be used to reshape and cap a former landfill (Cockburn, 2012).

5.6. 1357 Baseline Road

5.6.1. Site Description



Figure 5.12: Aerial photograph of 1357 Baseline Road (SmartCentres, 2013)

1357 Baseline Road is occupied by SmartCentres Ottawa, a 307 071 square foot mixed use retail centre which is located in the West end of Ottawa. This property is located on two arterial streets, Clyde Avenue and Baseline Road (SmartCentres, 2013). As discussed later, this project was the third applicant to the Brownfield CIP in its original form. This application

and the grant amount offered under the original Brownfield CIP led to the declaration of a moratorium on the Brownfield CIP pending an external peer-review of the program.

5.6.2. Site History

This site is the location of the former Laurentian High School, owned by the Ottawa Carleton District School Board. The school was shut down in 2005 due to declining enrolment and was sold for \$21 million in 2007 to a private company, Clyde Baseline Development Inc., a subsidiary of Vaughan, Ont.-based Smartcentres, a company specializing in big-box developments, after efforts to find another educational owner failed (Ottawa Business Journal, July 19, 2007). Interviews with key informants and published news reports have revealed that the contamination on the site of the former high school was due to heating oil tanks that leaked into the soil and groundwater beneath the former school and to asbestos in some areas.

5.6.3. Redevelopment Plans



Figure 5.13: Development Plans for 1357 Baseline Road (SmartCentres, 2013)

The redevelopment was scheduled to take place in three phases. The first phase, now completed, included a large format retail store and two retail use buildings comprising approximately 15 189 square metres. The second phase, now complete comprises a retail and office component of approximately 8 488 square metres and the third and final phase is composed of an additional 4 848 square metres of retail and office uses (Ottawa, City of, 2010).

5.7. 300 West Hunt Club Road

5.7.1. Site Description



Figure 5.14: 300 West Hunt Club Road development site (Google Earth, 2008)

300 West Hunt Club Road is an 11.6-hectare site on West Hunt Club between Merivale and Prince of Wales. It is mostly surrounded by light industrial buildings and business park properties (Kovessy, 2011). Currently, this stretch of West Hunt Club Road is the home of luxury car dealerships. This site is considered to be among Ottawa's most polluted sites (CBC News, 2011c). Unfortunately, relative to the other case studies, there was a dearth of published information available for this site but an interview with the Councillor for this ward revealed useful information.

5.7.2. Site History

Since the early 1950s, this site was primarily a petroleum storage facility and is now vacant. It once served as a Texaco terminal and then a site for Coastal Canada Petroleum. The storage tanks on site leaked contaminants into the ground for decades (CBC News, 2011c).

Redevelopment Plans

Two Toronto developers, Triform Developments Inc. and Unitrim Developments Inc., now own the land and have plans to build a Lowe's home improvement store and other retail and entertainment buildings. Plans filed proposed 187 600 square feet of retail space with just under 900 parking spaces (Kovessy, 2011). The retail centre will be anchored by a Lowe's home-improvement outlet (CBC News, 2011c). The companies applied to the City for help to cover the costs of the clean-up under the Brownfield Property Tax Assistance/Rehabilitation Grant program, which would see the developers pay for the clean-up cost while the City pays 50 cents for every dollar spent in the form of forgiven tax revenue and development fees. The City's committee agreed to the proposal, and put a cap on the amount the City pays out in forgiven taxes and fees at \$4,579,511 (CBC News, 2012). At the time of writing, Lowe's Home Improvement Center is in full operation and has become a destination for neighbouring communities.

CHAPTER 6: FINDINGS AND ANALYSIS

6.1. Introduction

During the course of this research, interviews with key informants, site visits and the literature review process provided insight into the current state of Ottawa's brownfields, the creation, development and changes to the Brownfield CIP and avenues to potentially improve the Brownfield CIP. The research revealed the Brownfield CIP itself is a good policy for incentivizing brownfield development. However, there is room for the City of Ottawa to improve in supporting the policy itself and brownfield development which will be discussed in this section.

6.2. The Current State of Ottawa's Brownfields

At the time of writing, Ottawa's brownfield inventory consists of a mixture of sites, some of which are undergoing active redevelopment while others are currently sitting idle pending development decisions. This research revealed that the City's major brownfield sites such as Bayview Yards, CLC Rockcliffe Lands, Lansdowne Park and LeBreton Flats are currently undergoing active remediation processes to remove and remediate contamination and prepare the sites for development. These projects have garnered community interest and enthusiasm, as well as attracted extensive coverage in the major local news media. The active redevelopment of these sites by developers is encouraging news for both the City and its residents. These projects entail the containment and removal of subterranean pollutants. The transformation of these formerly

inactive sites to productive uses will serve to generate tax revenues, improve the local economy and create urban renewal for their surrounding communities.

However, with the exception of the above high profile extensive brownfield sites, other brownfields that are currently sitting idle for lack of development interest or incentives were more challenging to locate due to the lack of a comprehensive brownfields inventory and media interest. These sites are smaller and are registered to a variety of businesses, including many numbered Ontario corporations and the Federal Government. These sites are relatively small, empty pockets of land such as former gas stations and small industrial sites which blend into the urban backdrop. They were located through a search on the Ontario Ministry of Environment's Environmental Site Registry for records of site condition for properties in Ottawa's Municipal boundary. A search for RSCs submitted to the Ontario Ministry of the Environment for the City of Ottawa reveals 116 sites in a variety of locations across the City. A sample page from the registry is included in Appendix E. In addition, the Federal Contaminated Site Inventory (FCSI) lists 265 contaminated sites within the boundaries of the City of Ottawa. A sample page from the FCSI registry is included in Appendix F. The FCSI includes all known information pertaining to contaminated sites that are under the custodianship of departments, agencies and consolidated Crown corporations. This inventory includes contaminated sites for which the Government of Canada has accepted some or all financial responsibility. Fortunately, the Federal Government has recently pledged to ramp up its plans to clean up 1100 high-priority contaminated sites and has recognized that most of the sites reside in Ottawa (The Canadian Press, 2012 and Environment Canada, 2012). Unfortunately, the number of brownfield sites cannot be contextualized for Ottawa as no accurate inventory has been compiled to catalogue all of

the sites within the municipal boundary. Such an inventory could be used to determine statistics such as the percentage of Ottawa's total land area that is occupied by brownfields. The sites that have RSCs on record or are included in the FCSI include many active facilities which due to their ongoing occupancy will influence their classification as contaminated sites as opposed to brownfields which are idle and under-used in nature.

Key informant interviews revealed that smaller sites tend to sit idle due to the relatively high expenses associated with their cleanup versus the potential economic gains from developing such small sites. There is considerably less enthusiasm to develop these sites due to their small size and lack of community interest and attention. Larger sites experience the benefits of economy of scale for cleanup and development, thereby procuring a larger financial return for the developer. As of April 10, 2013, City Council was on the brink of freezing Ottawa's urban boundary which would prevent development outside of the defined city limits (Reevely, 2013e). This will increase development pressure on brownfield sites which will likely lead to more brownfield development.

Key informants PA-1, PC-1 and CO-1 also noted that, unlike municipalities with a more industrialized history, Ottawa's heritage is not one characterized by extensive industrial development and subsequent environmental contamination. This makes Ottawa's brownfield development climate different and unique, compared to that of more industrialized cities such as Cornwall, Hamilton, Kingston and Toronto. One interviewee explained that the low severity of contamination leads to a greater ease of site development, due to the higher chances of conducting on-site rehabilitation and leaving the majority of the contaminated substrate in place. This process is significantly cheaper than the more expensive and laborious extraction and removal of soil from the

site for the remediation processes. This is an important factor to consider when comparing Ottawa to more highly industrialized municipalities with higher concentration of brownfield sites. In addition, the relatively low levels of contamination on certain sites and the positive development climate have led to the development of some brownfield sites without applications to the Brownfield CIP. This is indicative of the strong business case for the development of certain brownfield sites.

6.3. Development and Changes in Ottawa's Brownfield Policy

Ottawa's primary brownfield development instrument is the Brownfield Community Improvement Program (CIP) which was first adopted by City Council on April 25, 2007 (Ottawa, City of, 2010). This program contains a number of grants which would provide funding in the form of a small grant or partial tax relief at various stages during the development process. Interviews with key informants revealed that at the outset of developing the CIP, the policymaking environment was characterized by a positive attitude and a good relationship between the City Staff developing the policy and the development community which provided feedback and advice with regard to the development of the CIP. This process was:

"very positive at the outset and people could very easily get behind the principles and the objectives but when it came to the nuts and bolts, particularly on the financial side, it started to get much more difficult from the public sector" CO-1

This transition from a positive attitude at the macro level of policy development became one that was more challenging and fraught with disagreements as the level of financial aid of the grants was being set. One interviewee who represented the collective interest of a group of developers in Ottawa noted:

“it has been discouraging because the measures the City were proposing initially in its document were positive and progressive and would have resulted in some fairly significant progress. Over the following months and years, many of the more progressive elements that had been included were dropped or reduced in magnitude. The City over time reduced its willingness to share the risk and transferred more of the risk onto the shoulders of the developers” PA-1

The program experienced further changes and a reduction in benefits, following a five and half month moratorium for a peer-review process and reinstatement on May 13, 2010. During this period, the City contracted Luciano Piccionni of RCI Consulting. Piccionni was an expert brownfield consultant having been involved in the brownfield policy of several municipalities. This moratorium was the result of the application in December 2009 by the SmartCentres Development that proposed to replace the vacant school at 1357 Baseline Road with retail and office complex (S. 5). This was the third applicant to the program since its creation and it put the Brownfield CIP in its initial form to the test. City Council was uncomfortable with the size of the grant which would have been awarded to the developer under the original terms specified by the

program and resulted in the withdrawal of the program, pending a peer review and modification process. During this period, as revealed by one interviewee, the program risked being cancelled entirely but, fortunately, it was revised and eligible on-site infrastructure costs were capped at 50% while off-site infrastructure costs such as road and utility upgrades were excluded from eligible costs (Kovessy, 2010 and Schepers, 2010). The review conducted by RCI Consulting examined and compared Ottawa's program to the brownfield grant policies for Niagara Falls, Hamilton, Chatham-Kent, Cornwall, Guelph, Kingston and Waterloo. The review identified a strong interest in the Brownfield CIP and recommended that a revision of the grants provided under the original CIP be modified in order that its terms be more acceptable to City Council. The revised program reduced the tax credit to the original Smart Centres application from \$ 6 884 368 to 3 442 184 based on the 50% cap and excluded off-site infrastructure from the costs eligible for reimbursement under the brownfield program (RCI Consulting, 2010).

The revisions and enhancements made to the grant program reflected the City's desire to optimize and tweak the amounts of grants provided to developers. Unfortunately, the review of the grant program and gradual reduction in grants provided by the program led to development firms losing interest in the program. The City was viewed as reneging on its original commitments under the program and resorting to *ad hoc* measures to reduce its benefits. As one interviewee representing an association of developers noted:

"A lot of our members lost interest when the City began to retrace its footsteps on grant programs and percentages." PA-1

Interviews with key informants indicated that the policy, following its revision is effective and appropriate for the City of Ottawa.

However, there is room for improvement in the City's approach to brownfield development and certain issues surrounding the program which will later be discussed.

6.4. Challenges with the Brownfield CIP and Development Process

6.4.1. Program Publicity

Interviews with key informants indicated a lack of publicity and promotion for the Brownfield CIP and its development incentive programs. As stated by one informant:

“One obstacle is the lack of publicity or marketing by the City of the available brownfields plans. They don't hide them but neither do they go out of their way to make them widely available” PC-1

In addition, informants noted that the brownfield development climate in cities such as Toronto, Hamilton and Cornwall are notably more aggressive and pro-active in encouraging brownfield development than the City of Ottawa. Cornwall, Hamilton, Niagara Falls, Guelph and Chatham-Kent offer rebates of up to 80% while Waterloo and Kingston offer 100% rebates (RCI Consulting, 2010). When interviewees were asked to compare the City of Ottawa's stance on brownfield development, a trend was noted that Ottawa is perceived to be:

“not as proactive as Hamilton and Toronto as Ottawa does not have as many brownfield sites due to its history and lack of a manufacturing and industrial base” PA-1

6.4.2. Liability Concerns

Key informants indicated a concern with regards to the long-term liabilities resulting from the sale or development of brownfield lands which could plague future owners of the site. The current liability concerns of brownfield development sites are not adequately addressed. One informant stated:

“There is only one serious problem facing brownfield developments in any city and that is future liability. It is an issue that has never been adequately dealt with by any level of government. Until some reasonable solution is found to that, unless government at some point is willing to ensure or backstop liability, brownfields are going to be continually difficult to pursue” PA-1

In the past, the Association of Municipalities of Ontario (AMO) has lobbied for increased federal and provincial assistance for brownfield development. AMO has expressed a need for changes to be made in order to limit the liability of brownfield sites for both the municipalities and for current and past property owners (Koroluk, 2006).

“With brownfield sites the liability is so high that it has to be evenly shared across as many people as possible. Unfortunately, I don’t think the City of Ottawa recognized this and appeared to deal with it” PA-1

The liability issue is a significant hurdle for brownfield developers who fear a potential lawsuit launched by the users of the remediated site. In addition, the potential for liability concerns emerging in the future increase the difficulty faced by the developer in obtaining financing for the

development. Although the RSC protects the developer to a certain extent, this does not prevent a party from attempting to sue the developer. Any publicity stemming from the lawsuit would likely showcase the developer in a negative light.

6.4.3. Political and Public Attitudes Towards Providing Grants to Developers

Interviews and the literature review revealed a problem with the perception of the Brownfield CIP's grant programs on the part of both City councillors and the general public. As stated by one informant:

"Many members of council feel there is no reason to provide an incentive because the value of the land itself when they originally purchased it reflects the fact that it is contaminated so it is already a level playing field" CO-1

This problematic perception of the grant program fosters reluctance within City Council to approve grants for brownfield development.

The general public has been observed to echo City Council's sentiment. There is a perception:

"That developers have deep pockets and should be able to fund their own development project" CC-1

This sentiment is especially evident in an article appearing in the Ottawa Sun written by Susan Sherring (Sherring, 2011). This article expresses a concern that the Brownfield CIP program is an unnecessary expense for taxpayers and that the "city coughs up half the costs for cleaning up contaminated lands" (Sherring, 2011). The article refers specifically to the brownfield development on 300 West Hunt Club Road where some large

big box stores are being constructed. The subsequent readers' comments pertaining to this article further reflect the public's negative perception of the program with one reviewer, Mark Boscarol declaring that the development "*sounds like subsidized sprawl*".

6.4.4. The Planning and Approvals Process

One key informant who has worked with a variety of clients on brownfield project applications revealed a shared sentiment among developers that:

"it (the City) is getting a little bit carried away in terms of using the brownfields and site plan control criteria to extract stuff from the developers that they are not entitled to" PC-1

This comment refers to the City's demand that developers be responsible for the cleanup of contaminated City land which has resulted from the spread of contaminants from the site. These demands by the City are facilitated by the developer's submission of environmental data obtained during the site assessment process which would detail the nature of contaminant migration offsite and other environmental concerns. These data are passed onto the City where the interviewee felt that:

"The city is taking advantage of its position as possessor of relevant environmental information to settle its own concerns" PC-1

6.5. Avenues for Improvement

6.5.1. Publicize Brownfield Grants and Programs

Despite Ottawa's less industrialized past in comparison with other Ontario municipalities, brownfields remain a persistent problem in Ottawa, as evidenced by the 116 entries on the Ontario's Records of Site Condition Database and the 256 registered sites on the Federal Government's Contaminated Site Inventory. However, the City has taken significant strides to address this problem by creating the Brownfield Community Improvement Program and refining it over the years, using experience gained through processing applications to a level that the City and its Council currently deem appropriate.

In the early stages of the Brownfield CIP, the brownfield development coordinator at the time was heavily involved in promoting the policy. Promotions occurred during public events and through outreach to potential developers. However, under the current program, the promotional element found during the program's infancy has petered out and the City has adopted a less pro-active approach.

It is in the City's best interest for the Planning and Approvals Department to promote the Brownfield CIP to the current owners of brownfield sites in an effort to accelerate their development. As one interviewee stated:

"Encouraging people to avail themselves of the brownfield programs is key" PC-1

Creating additional publicity and promotion for the program could potentially accelerate the development process for the various brownfield

sites and stimulate developer interest in sites which would otherwise have remained idle. Showcasing the program and the successful projects it has supported would generate interest and enthusiasm which could result in owner and development awareness of the existing incentive programs. Current brownfield developments could be used to showcase the benefits of the program and highlight the potential of Ottawa's remaining brownfields.

6.5.2. Improve Council and Public Perception of the Brownfield Community Improvement Plan

In tandem with promoting the Brownfield CIP, the program would benefit from a systematic effort to improve the public and City Council's understanding and perception of the grants provided through the Brownfield CIP program.

As revealed through a study of the program and interviewing key informants:

"The grant program itself does not give away money (from the City to developers), it is based on using a portion of the increased tax that will come from development on the site. It waives a portion of tax for the first five to ten years and this money is returned to them (the developers) through the grant program"

CO-1

This distinction is important to make in combating the misconception that the grant program entails providing developers with taxpayer funds. Detractors from the grant programs fail to realize that:

"As a tax credit, the program is not taking money from the taxpayer per se, it is giving the developer a tax credit on the increase in taxes" DI-1

Through coordinating the messages created in press releases and presentations by the City's planning department, it is essential that the true nature of the grant program be conveyed. City officials and councillors need to be fully appreciative of the mutual benefits of the program and communicate these effectively to the media. The community has to "buy into" the merits of turning unsightly and dangerous brownfield sites into useable neighbourhood assets.

Indeed, the failure to send a clear message to the public and local media outlets regarding the functional nature of the grant can lead to public backlash, as seen with the development on 300 West Hunt Club Road described in Susan Shearing's critical article. As stated by one developer:

"It is important that the City does not make it appear to the general public that the City is providing handouts to large developers" DI-1

In addition, Interviewees have stated that with regard to City Council, the program could benefit through an increase in the:

"Council's level of awareness to the value of the program so they can look at the grants more as an opportunity to add an area of development, particularly in support of intensification objectives as opposed to a give away to a developer who doesn't really deserve it" CO-1

This task should be pro-actively adopted by the Planning and Development department when presenting Brownfield CIP grant applications to City Council. This approach will ensure that information pertaining to the nature of the grant program mechanisms is communicated; this will also ensure that the grant application is processed in a manner compatible with the spirit of the grant to facilitate the expeditious return of the brownfield to active use.

6.5.3. The Provision of Liability Relief

Key informant interviews, in addition to the literature review, have revealed that liability concerns continue to persist as a major obstacle to brownfield development in Ottawa. The City of Ottawa should investigate policy tools for managing site liabilities and risk for developers. Mitchell Fasken, of Kimshaw Holdings Ltd. of Toronto has suggested the creation of an insurance fund or a similar instrument to limit the time a party can be sued for off-site impacts of the redevelopment (Koroluk, 2006).

One example of how a government body can provide some form of liability relief for a brownfield project is the NCC-led effort in the remediation of LeBreton Flats, prior to opening up individual parcels of land for development. NCC accepted the responsibility for initiating and overseeing the remediation project, as well as ensuring that the quality of the land is brought up to code prior to construction. This has the effect of reducing liability concerns and responsibilities for developers seeking a development project on the site. In addition, this opens up the development project to developers who would otherwise have overlooked

the property in its original state, due to insufficient funds for remediation, lack of expertise or caution for the legal ramifications of site development.

6.5.4. Foster a Streamlined and Supportive Brownfields Development Approval Process

The development community pointed out that brownfield development projects can pose considerable challenges during the site preparation phase. The Province of Ontario and its regulatory bodies provide guidelines to the developer with regard to remediation standards and the City of Ottawa plays a crucial role in the municipal-level development and approvals process. It is in the City's best interest that the development of the site be facilitated to prevent the further spread of contamination and to begin the process of revenue generation from an otherwise unproductive site. Therefore, it is in the interest of the project that:

"City staff have to be enthusiastic and help developers through the process to develop their property" DI-1

The City has to carefully balance encouraging the developer with being unnecessarily strict and imposing stringent demands on the developer. One interviewee stated:

"If the City gives the developer a hard time, it is conceivable that the project could be delayed" DI-1

With regard to the Brownfield CIP, interviewees have expressed that the review and approvals process can be further simplified from its current state to require:

“less paperwork, as it requires a large amount of documentation on spending and the number of times you should have to go to a standing committee of council is too much. The program should allow you to get approval of the principal of the grant and the financial incentives by going to the planning committee once and after that it should be managed by staff without the need for it to return to Council “ CO-1

6.5.5. Ensure Public Participation in the Brownfield Remediation and Redevelopment Process

As seen with the negative community response, lawsuits and backlash against the Lansdowne development project, the active involvement of community associations, citizens and the general public is critical to ensuring a development project that is sensitive to the needs of its existing surroundings. As brownfields, unlike suburban greenfield developments, often entail the creation of a new project within established communities, it is essential to engage surrounding communities in the development process, at an early stage, to build support and address concerns to ensure the long-term viability of the project.

The CLC Rockcliffe Lands and its development team serve as an excellent example of a brownfield development project that engaged the general public early in the development stage. In November, 2012, the CLC hosted an open house at the Canadian Aviation and Space Museum, a site with sufficient parking facilities, access to public transit and seating space to accommodate a large audience. At the event, the CLC not only presented background and current visioning plans for the site but offered

many opportunities for the public to become engaged in the planning and development process. During the event an ideas board was made available where participants could add post-it notes on a map of the site with their ideas. In addition, a recording corner was established with a video camera for attendees to digitally record their project input. The open house presentation was followed by an open-floor question period which fostered a healthy interaction between the presenters of the project and the audience. In closing, the audience was directed to the project's website and provided with email contact information and opportunities to remain involved and to voice their opinions electronically.

In addition to CLC hosting its open house event, the organization has been very forthcoming with local media outlets. Tours have been given of the site to interest groups and interviews have been held with local reporters outlining the vision for the site and providing updates on the development progress. Meetings were also held with residents' associations on an ongoing basis to secure input. The CLC's interaction with local media ensures the public is informed of the progress of the project which fosters an open and collegial relationship with the surrounding community and its residents.

As noted above, CLC's handling of its first open house recognizes that public engagement is a key component of ensuring the success of a brownfield development. It is in the developers' best interest to hold such events and foster public participation. The neglect of this key component during the planning and development stage can lead to nasty surprises and lengthy delays for the developers at a later stage, as seen with Lansdowne Park project. The City and its Planning Department would be well advised to encourage developers to hold such open houses and public engagement events. Indeed, the City itself must be instrumental in

suggesting and providing readily accessible public venues to ensure the success of such events. In the current climate of consumer awareness and the need for public accountability and transparency, the City must be vigilant in ensuring that both developers and communities work in harmony to ensure successful brownfield developments in accordance with sound planning principles.

CHAPTER 7: CONCLUSIONS

7.1. Introduction

Municipalities in Ontario such as Hamilton, Kingston, Toronto and Cornwall with histories of industrialization are riddled with brownfield sites which have led to aggressive brownfield development policy and study. However, Ottawa is unique due to its less-industrialized status and due to the presence and influence of all three levels of government as Canada's Capital. This made Ottawa a unique city for study of brownfield policy to supplement the dearth in existing academic literature due to the lack of scholarly research on the brownfield development climate of the City. Cities such as Toronto, Hamilton, Kingston and Kitchener-Waterloo have been the subject of more intensive academic study due to their industrial legacies and the presence of Universities with planning programs. Ottawa lacks the presence of planning schools and programs at the University of Ottawa and Carleton University and, as a result, seems to suffer from a research vacuum on the subject. Ottawa's complicated planning history, or lack thereof, as a result of its status as Canada's Capital, provided interesting research challenges.

This thesis endeavoured to fill the void of brownfield research for the City of Ottawa and investigated the planning policy surrounding brownfield development in Ottawa. It studied current brownfield development trends in a historical context and examined impediments and opportunities for future development. The research was guided by the following four goals:

1. Develop a comprehensive understanding of brownfields in Ottawa, Ontario

2. Investigate the planning policies and processes in place at a Federal, Provincial and Municipal level for tackling brownfield redevelopment
3. Conduct case studies of major brownfield sites in Ottawa
4. Determine deficiencies in current planning policies and provide recommendations for policy streamlining and improvement

This thesis addressed these goals through the use of applied research, literature review and direct interviews with key informants.

7.2. Findings

The research for this thesis has revealed that there are over 116 records of site condition filed for the City of Ottawa and 256 contaminated sites for which the Federal Government has accepted responsibility. Ottawa's largest brownfield sites, Bayview Yards, CLC Rockcliffe Lands, Lansdowne Park, LeBreton Flats, 1357 Baseline Road and 300 West Hunt Club Road are the last remaining large parcels of undeveloped land and are currently undergoing active redevelopment. Ottawa's development of a brownfield incentive program through the Brownfield Community Improvement Plan represents a positive step by the City to encourage the active redevelopment of its brownfield inventory. The policy itself has been received positively by the development community and certain stakeholders in brownfield redevelopment as revealed through interviews with key informants. However, interviews with key informants have revealed concerns with regard to the need for increasing the visibility of the program, negative perception towards the program by City Council and the public, the need for some mechanism of liability relief and the

frustration of developers with issues raised by the Planning and Approvals department with regard to the cleanup of public lands.

This research has contributed to the overall body of brownfield research by helping to fill the brownfield research void for the City of Ottawa which has not been subject to the same level of academic study as Toronto, Kitchener and Hamilton due to the absence of Planning programs at the University of Ottawa and Carleton University. Furthermore, due to the relatively less industrialized heritage of Ottawa, this work serves as a case study of brownfield policy for cities with only a moderate heritage of industrial development. Also, this work has revealed avenues for further research created by the lack of a brownfield classification tool and the absence of brownfield inventories for Ontario's municipalities.

7.3. Recommendations

Despite the ongoing development of Ottawa's largest brownfield sites, avenues exist for the City's planning department and Council to accelerate and improve the brownfield development process. Large strides could be made if the City pursues the following objectives to improve the application of the Brownfield CIP:

1. Publicize the success of its Brownfield CIP and showcase successful and ongoing brownfield development projects
2. Address public and City Council concerns with regard to the nature of program grants for developers
3. Investigating and adopting policies to limit liability and explore options to reduce the liability concerns of developers

4. Foster a streamlined planning and approval process that is supportive of brownfield development
5. Ensure public participation in the brownfield redevelopment processes and development projects

7.4. Addressing Each Research Questions

The research questions were crafted to guide the research towards achieving the research goals. This section summarizes how each research question was addressed during the course of this research:

1. Genesis and Description

a. What are the characteristics of Canada's brownfields?

This work identified the NRTEE's classification of Canada's brownfields into three categories: the bottom, middle and top tier based on the development potential of each site. Top tier sites represent the greatest potential whereas bottom tier represent the lowest. Canada's brownfield inventory consists of a mixture of all three properties spread geographically across the country. Examples of bottom tier sites include the abandoned DEW line radar stations in Canada's North whereas LeBreton Flats represents a top tier property. It is estimated that there are 30 000 brownfield sites in Canada (NRTEE, 2003) but due to the absence of federal monitoring and cataloguing, there is no concrete figure on the exact number of sites.

b. What are the factors that have led to their creation?

Brownfields are a widespread problem in industrialized cities. Their genesis was driven by the migration of industries out of central cities since the mid-1970s leaving vast tracts of vacant and often contaminated industrial land (De Sousa, 2006). The migration was driven by the pursuit of cheaper land and improved infrastructure on the urban periphery that was better suited to manufacturing (Alonso, 1960). Recently, the urban exodus of manufacturers has been connected to the increasing globalization of production and the need for businesses to locate themselves where skilled workers have moved (De Sousa, 2006).

2. Policy and Processes

a. What barriers to development do these sites face?

Brownfield development faces multiple obstacles that similar developments of greenfield sites would not face. These obstacles include: financial barriers, liability concerns, regulatory barriers, planning barriers and stigma, and lack of education and awareness.

b. Which levels of government are responsible for these brownfields and what policies and incentives have they adopted to encourage the cleanup and development of brownfields?

The municipal government is immediately responsible for encouraging the development of brownfield sites within their municipal boundaries. This is achieved through implementing Brownfield Community Improvement Plans which feature an array of grants to support brownfield

development projects at various stages during their assessment and development.

The role of the provincial government is primarily regulatory although the Province of Ontario supports the municipalities in their pursuit of brownfield development. The Province is responsible for environmental policy-making and works cooperatively with the Federal government through the Canadian Council of Ministers for the Environment (De Sousa, 2001). The primary policy tool governing brownfield development is the *Brownfields Statute Law Amendment Act* which has created a regime for addressing regulatory liability (NRTEE, 2006). This document has paved a way for municipalities to address the province's brownfield sites and has opened the door for municipalities to offer financial incentives for brownfield development.

The Federal role in brownfields redevelopment consists largely of information gathering with little or no direct intervention and support (De Sousa, 2006). The only exception is where the Federal Government is conducting development projects on federally owned land such as LeBreton Flats which is owned by the National Capital Commission. NRTEE had taken a leading role in this process through data collection and document creation. Information gathering and processing is accomplished by three Federal bodies: the Canadian Council of Ministers of the Environment which is concerned with environmental risk management and stakeholder perspectives, NRTEE which addressed policy concerns, and Canada Mortgage and Housing Corporation which addresses housing opportunities (De Sousa, 2006). However, no single Federal agency is responsible for maintaining a comprehensive inventory of brownfield sites, making it difficult to estimate the total number of such sites in Canada (Wigle, 1998).

3. Ottawa's Brownfields

a. What is the current status of brownfield redevelopment in the City of Ottawa?

Ottawa's brownfield inventory consists of a mixture of sites, some of which are undergoing active redevelopment while other sites sit idle pending development decisions. The City's major sites such as Bayview Yards, CLC Rockcliffe Lands, Lansdowne Park, LeBreton Flats, 1357 Baseline Road and 300 West Hunt Club Road are currently undergoing active remediation processes to prepare these sites for development. However, many smaller sites are sitting idle for lack of development interest and insufficient incentives to stimulate their development.

b. How many brownfield sites exist and what factors have led to their creation?

No inventory exists which systematically catalogues and inventories Ottawa's brownfield sites. However, Ottawa possesses 116 sites listed in Ontario's Environmental Site Registry and 265 sites that are listed on the Federal Contaminated Sites Inventory. Not all of these sites can be considered brownfields and some are registrations of contaminations of properties which are still undergoing active use and do not suffer from abandonment. Determining the context of these sites, such as the percentage of the total land area occupied, is challenging due to the lack of an inventory of Ottawa's brownfields. Creating such an inventory would be extremely difficult due to the reluctance of private landowners to label their properties as brownfields because of the potential stigma and

concern this could raise for their surrounding community. Unfortunately, it seems that in the interest of secrecy, any comprehensive listing of Ottawa's brownfield could remain "buried" pending a comprehensive research effort.

c. What are the barriers to brownfield development in Ottawa?

The barriers to brownfield development in Ottawa are similar to those found in any other municipality grappling with similar concerns. The barriers identified during this research include:

1. The lack of program publicity for the Brownfield CIP
2. Liability concerns
3. Problematic political and public attitudes towards providing grants to developers
4. The planning approvals process

d. How effective are the City of Ottawa's policies and programs at incentivizing brownfield development?

Interviews with key informants have revealed that Ottawa's Brownfield CIP program is a successful policy for stimulating brownfield development. This is especially evident in the case of some sites which would not have been developed without the grant program. In some cases, development of brownfield sites has occurred without the developer tapping into the brownfield program which is indicative of a

suitable real estate market which creates ample financial returns for developing the site. However, not all sites possess the same level of market incentive for development so the existence of the grant is necessary to ensure the continual development of Ottawa's brownfields. In terms of the City's overall approach to brownfield and handling of the grant program, improvements which could be made include:

1. Publicizing brownfield grants and the Brownfield CIP
2. Improving Council and public perception regarding the Brownfield Community Improvement Plan
3. The provision of liability relief
4. Foster a streamlined and supportive brownfields development approvals process
5. Ensuring public participation in the brownfield remediation and redevelopment process

e. What approaches has the municipality adopted with regard to these sites?

With regards to privately held brownfield sites, Ottawa's Brownfield Community Improvement Program provides grants to support the project at various stages during the development process. In the early stage of the project, the Building Permit Fee Grant program provides a grant equivalent to 30% of the building permit fee in addition to aid provided through the Project Feasibility Study Grant Program and the Environmental Site Assessment Grant Program. At various stages during the development process, after the developer has met conditions set by the City, the site

becomes eligible for the remaining grants including the Property Tax Assistance Program and the Rehabilitation Grant Program.

7.5. Guidelines for Further Research

While this research has expanded the limited pool of scholarly work on brownfield development in the City of Ottawa, there is still much work to be done on brownfield development in the Province of Ontario and in Canada. In comparison with our American neighbours to the South and as continually emphasized by De Souza in his various works, the state of our brownfield research body is limited and our knowledge of our nation's brownfields is relatively sporadic.

Over the course of this research, a new set of questions were developed in response to gaps identified in Canada's brownfield research during the literature review:

- What is the Federal Government's approach to the development of its brownfield sites? Where is the greatest number of concentration of these sites? Are these projects best developed by the Federal Government or should they be developed by an "arms length" crown corporation or through a public private partnership?
- What brownfield development policies exist for small to mid-size municipalities with a population of 300 000 or less? How are these municipalities addressing the problems posed by their brownfield sites?
- What policies could the Provincial and Federal Government enact to overcome the liability obstacles faced by municipal brownfields? Can Federal, Provincial and State governments in other countries

provide case studies for potential legislation to be enacted in Canada?

- Would the development of a comprehensive brownfield inventory by provincial governments and federal governments be a useful tool for Canada's brownfield development?
- What are the challenges of brownfield development in remote or isolated communities? What approaches can these communities use to stimulate brownfield development, given their unique economic climate?
- Development of a tool for systematically identifying municipal brownfield sites and classifying these sites as high, medium and low priority for development. Such a tool could be useful in aiding a municipality in aggressively pursuing the development of its high priority sites while ensuring a longer term plan for lower-priority locations.
- The need for comparative studies among various municipalities, their brownfield incentive programs and quantification of the effects of these programs.
- Create a brownfield cataloguing tool. This tool would enable an individual to approach a site, determine the properties of that site and based on these properties determine if the site can be classified as a brownfield. This tool could assist in differentiating between municipal brownfield sites from contaminated and grey field sites

7.6. Concluding Statements

The City of Ottawa has progressed significantly from its humble roots as a lumber town of 10 000 to the vibrant urban metropolis it is today. Ottawa's historic achievement and growth as the National Capital is a legacy in which its residents and Canadians can take pride. However, the legacy left by industry in the form of brownfields is a part of Ottawa's history that developers and planners must work to erase.

Ottawa possesses a diverse inventory of brownfield sites with huge potential for redevelopment. Its largest sites, i.e. Bayview Yards, CLC Rockcliffe Lands, Lansdowne Park, Lebreton Flats, 1357 Baseline Road and 300 West Hunt Club Road are actively undergoing development. However, many smaller sites that are currently in need of development dot the City, such as the 116 sites listed in Ontario's Environmental Site Registry and the 265 sites listed on the Federal Contaminated Sites Inventory.

Through the creation and refinement of Ottawa's Brownfield Community Improvement Plan, the City has created a tool which is being actively used to aid developers in replacing under-utilized urban lands with productive development projects. The program has proved itself to be successful in stimulating the development of some of Ottawa's largest and most contaminated brownfield sites but many of its smaller sites owned by a variety of businesses and the Federal Government remain. It is essential that the City and its Planning department recognize brownfields as a valuable resource to meet intensification and environmental objectives. Therefore, the City must work to improve its brownfield program and reduce the obstacles to development to transform these idle and potentially contaminated sites to active uses. The creation of the Brownfield Community Improvement Program and its provision of a number

of grant programs was a significant step for the City to take for incentivizing brownfield development. However, to maximize the effectiveness of this program, it is imperative that the City improve its approach regarding its implementation regarding the challenges identified by interviewees. These include the lack of publicity/awareness of brownfield grant programs, the need to improve the public's and City Council's perception/understanding of the grant programs, the ongoing concerns of liability for developers, and an overbearing planning and approvals approach mired in bureaucracy.

Despite the challenges posed by these sites, these brownfields present an opportunity for the City, its residents and developers. They are some of the last remaining blank canvases in the urban core. These brownfields offer the opportunity to correct past mistakes and establish an enduring legacy to transform Ottawa into a world Capital that reflects visionary and innovative urban planning design.

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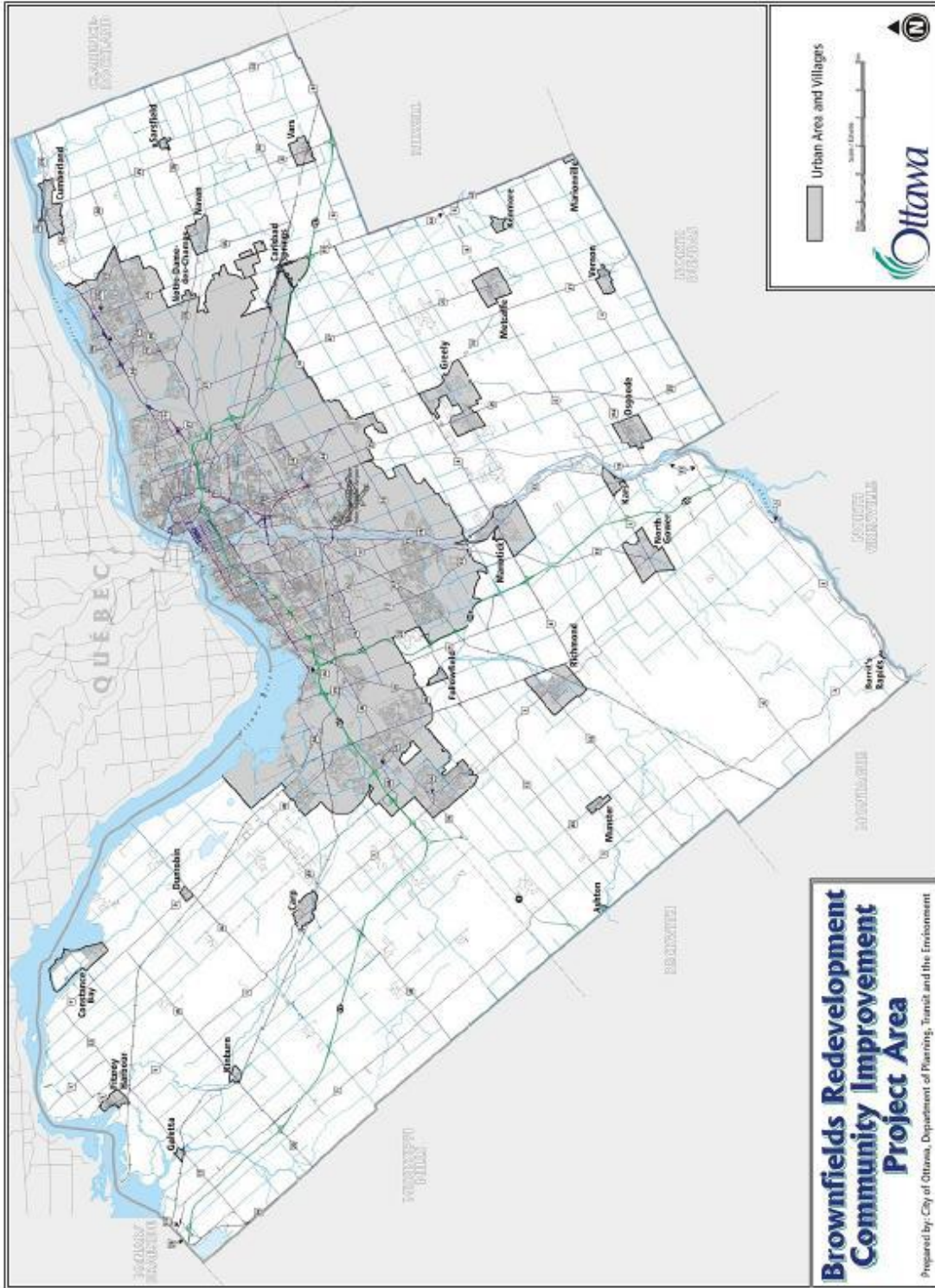
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Appendix A: Ottawa's Wards

Ottawa's Wards	
Ward Number	Ward Name
1	Orléans
2	Innes
3	Barrhaven
4	Kanata North
5	West Carleton-March
6	Stittsville-Kanata West
7	Bay
8	College
9	Knoxdale Merivale
10	Gloucester-Southgate
11	Beacon Hill-Cyrville
12	Rideau-Vanier
13	Rideau-Rockcliffe
14	Somerset
15	Kitchissippi
16	River
17	Capital
18	Alta Vista
19	Cumberland
20	Osgoode
21	Rideau-Goulbourn
22	Gloucester-South Nepean
23	Kanata South

Source: City of Ottawa, New Ward Structure and Ward Maps

Appendix B: Brownfields Redevelopment Community Improvement Project Area



Appendix C: Interview Transcript

The following transcript served as a guide during the interviews of key informants. Interviews were conducted in person or over the phone following a contact via email. Deviations from the following script occurred depending on the interviewee's experience or field of work and their expertise of Brownfield development policy in the city of Ottawa.

This study is an integral component of my Master's degree for the School of Planning at the University of Waterloo under the supervision of Professor Geoff Lewis. Thank you for taking the time to participate in this research project. Your background and expertise will be of great use in this research offering valuable insight into existing strategies.

Prior to conducting this interview, could I obtain the following information for my records?

- Full name
- Company
- Position
- Brownfield projects you have been involved with
- Length of time working on Brownfield related matters
- Level of familiarity with Brownfield redevelopment policy, (scale from highly familiar – involved with multiple projects, remotely familiar – some contact with projects)

The purpose of this study is to evaluate the City of Ottawa's brownfield redevelopment programs. It endeavours to assess which initiatives and policies have been met with success and identify areas for improvement.

A. General Questions

1. In what way have you been involved with brownfield redevelopment?
2. If you were to generalize, what is the current state of brownfields in the city of Ottawa? Prompt about large versus small, e.g. sitting idle due to prohibitive costs or undergoing active redevelopment due to a positive development environment
3. What is unique about Ottawa's brownfield development climate?
4. What are the major advantages of brownfield development (in Ottawa). NCC owned stocks of land which would reduce capital investment required.
5. What are obstacles to brownfield development in Ottawa?
6. In your professional opinion, what are some of the forces encouraging brownfield development in Ottawa?
7. What are some of the groups involved in Ottawa's brownfield redevelopment?
8. What are some of the brownfield projects and initiatives that you have been involved in?
 - i. How exactly were you involved in these initiatives?

B. Current Initiatives

1. On a scale of one to ten, one being the least effective and ten being the most, how effective is the City overall at incentivizing brownfield development? Please comment on why you would give it this rating.
2. What municipal brownfield development policies or guidelines exist that you are aware of?

3. How would you rate the current policies in terms of effectiveness on a scale of zero to ten, zero being the lowest score (least effective) and ten being the highest (most effective)? Why are you giving this score to this policy/program?
 - i. Please rate the following planning policy approaches to brownfield development
 - a) Official Plan
 - b) Brownfield Community Improvement Plan
 - c) Ottawa 20/20
 - ii. Please rate the following financial incentive approaches to brownfield development
 - a) Project Feasibility Study Grant Program
 - b) Environmental Site Assessment Grant Program
 - c) Property Tax Assistance Program
 - d) Rehabilitation Grant Program
 - e) Building Permit Fee Grant Program
4. How do the City of Ottawa's policies and development climate compare to those of other pro-active cities such as Toronto and Hamilton?
5. Is the City's support and processing of brownfield projects improving with time or remaining constant? Why do you think this is the case?
6. Please describe your experiences when dealing with the City of Ottawa for a Brownfield Project. Please describe your experiences when dealing with Brownfield developers. Are these experiences positive or challenging?
7. What is the current role of the Province of Ontario and the Federal Government in brownfield development? How can

their involvement in the brownfield development process be improved?

C. Avenues for Improvement

1. What aspects of the City of Ottawa's approach to brownfield development are problematic and need improvement?
2. How would you recommend the City of Ottawa improve its policies, programs or processes?

D. Concluding Questions

1. Do you mind if I contact you for additional comment or questions during my research process?
2. This concludes my formal questions, do you have any additional comments or guidance you would like to provide with regards to brownfield development in Ottawa?

This concludes the interview. Thank you for taking the time to answer my questions and provide valuable insight on this topic. The results of this work will inform planning studies at the University of Waterloo and will be shared with the City of Ottawa's planning staff with the intent of improving upon current brownfield redevelopment policies.

Appendix D: Extended History of Planning in the National Capital Region

Federal Planning History

Since being named as Canada's Capital, Ottawa has had to respond to two development forces: the sheer growth of government with its employees and its buildings and its corresponding needs for services, and the perceived need to create a national and even international showpiece (Taylor, 1986). Ottawa, originally founded as Bytown in 1826, was not the first choice for the seat of government for the United Canada (Gordon, 2001a). Bytown was named after Colonel John By who arrived in 1826 and established a military canal with 47 locks connecting Kingston to the Ottawa River (NCC, 1999). Canada's capital was first located at Kingston, then Montreal and after 1849 moved between Toronto and Quebec City. Canadian politicians were unable to decide on a fixed site for the seat of government and asked Queen Victoria in England to make the decision for them. On the direction of her advisors, Queen Victoria chose Ottawa, which at the time was a lumber town on the border between Quebec and Ontario (Gordon, 2006). Over the past 150 years, Ottawa has evolved from a remote and rudimentary industrial town into a vibrant urban capital. Ottawa's industrial roots and lax environmental standards at the time would set the stage for the creation of its current brownfield sites. Ottawa was chosen by Queen Victoria to become the seat of the Federal Government in 1857. At this time, Ottawa was inhabited by roughly 10 000 people and was considered a dreadful place due to the presence of ugly wooden buildings and the presence of the industrial esthetic as a result of the local lumber industry, which was the major employer in the Ottawa-Hull area. (Gordon, 2002). The lumber

industry owed its strength to the Ottawa Valley's rich red and white pine forests (Bond, 1984). The city's natural amenities were marred by the lumber and pulp industries in the late 19th century (Gordon, 2001a). In addition, the soon-to-be capital lacked the utilities of a modern city at the time with no paved streets, sewers, gaslights and piped water (Taylor 1979). As a result of this dreary urban fabric, Ottawa was considered:

“... one of the roughest, booziest least law-abiding towns in North America”. (Gwyne, 1984),

Ottawa suffered from neglect from legislators who dragged their heels on projects such as the construction of the parliament buildings (Young, 1995). Few legislators cared for Ottawa; it was certainly not the first choice of most politicians and officials, either as a capital or as a place to live (Gordon, 2006). Politicians and governor-generals paid little attention to the capital during its early years as they spent only one third of the year in Ottawa and fled the place as soon as parliamentary sessions ended (Gordon, 2001a).

Planning literature divides the Federal planning periods of Ottawa into six major phases (Gordon, 2006):

7. The Ottawa Improvement Commission (OIC)	1899-1913
8. The Federal Plan Commission (FPC)	1913-1916
9. The Federal District Commission (FDC)	1927-1939
10. The immediate post-war period	1945-1958
11. The National Capital Commission (NCC)	1959-1971
12. The transition to regional government	1971-2001

The Ottawa Improvement Commission and Frederick Todd's Preliminary Report, 1899-1913

The neglect of Ottawa by legislators began to change in the 1890s when Canada was under the leadership of Prime Minister Wilfrid Laurier. Laurier promised in 1893:

“I am sure to make the City of Ottawa as attractive as possibly could be; to make it the centre of the intellectual development of this country and above all the Washington of the north” (Laurier, 1989).

Source: The Washington of the North. (1893, June 19). *The Ottawa Evening Journal*, 3.June 19, 1893 p3

To make good on his promise, Laurier established the Ottawa Improvement Commission (OIC) in 1899. This commission was granted \$60 000 per year to improve the capital's appearance. The OIC reported directly to the Minister of Finance, W.S. Fielding, but Laurier took a personal interest in its work. A board of volunteer commissioners were appointed by the federal government to the OIC. It had no legislative mandate to plan the capital city and no authority over the local government. Its initial agenda was to beautify Ottawa and it employed a small staff for park maintenance and construction supervision (Gordon, 2002a).

At first, the OIC received general acclaim. It worked to clear industries from the west bank of the Rideau Canal and constructed a parkway to improve the view when entering Ottawa by train. In 1903, the OIC commissioned Frederick Todd to prepare a preliminary plan for Ottawa's parks and parkways. Todd, who had trained in the office of Frederick Law Olmstead, was one of Canada's first landscape architects and town planners (Jacobs, 1983). At the time, the profession of planning and landscape architecture was in its infancy in Canada (Gordon, 2002a). Todd prepared a report detailing inter-connected parks system, regional

approach and admiration for natural systems, reflecting the best of the Olmsted tradition and current ecological planning principles. In his report, Todd calls for a range of both small and large-scale improvements such as large natural parks or reserves, suburban parks, boulevards and parkways, waterway parks and city parks, squares and playgrounds. The parks and pathways proposed by Todd's preliminary report are seen below.

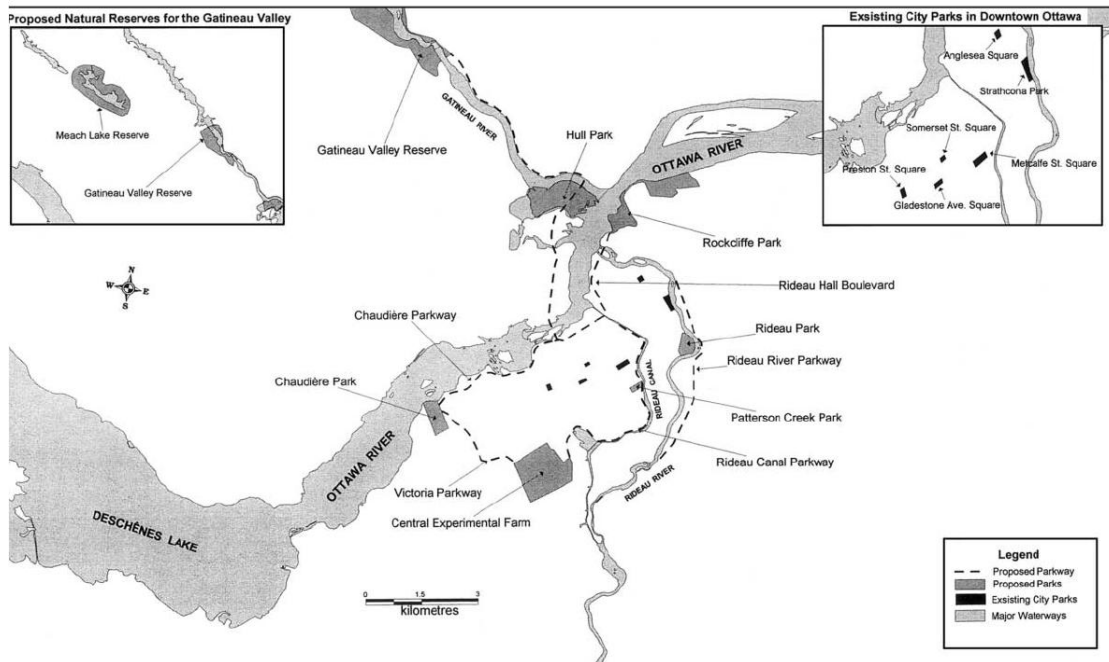


Figure D-1: The parks and pathways proposed in Todd's preliminary report (Gordon, 2002a)

Although the report was well received at first by the OIC, the relationship soon began to deteriorate and Todd was treated quite poorly by the OIC. There was a dispute over Todd's professional fees and the cost of printing additional copies of the report. The OIC became increasingly unwilling to pay for Todd's services which were perceived to be expensive compared to using their own staff. In practice, the OIC created its own

plans and began to largely ignore Todd's report (Gordon, 2002a). Despite Todd's reports falling into disfavour with the OIC, his parks proposals would be later incorporated in plans for the region. Jacques Gréber's 1950 Plan for the National Capital praised Todd's support for a long-range, comprehensive plan and criticized the actions of the OIC in dismissing Todd's vision (Gordon, 2002a). The parks and open space provisions of this plan drew heavily from Todd's 1903 *Preliminary Report*.

However, the OIC ignored Todd's report and proceeded with the incremental additions to the Ottawa parks without the guidance of architects, planners or landscape architects (Gordon, 2006). The new greenery sprouting throughout the city delighted its citizens and the Laurier administration. The plan implementation during this period was characterized by an adequate financial strategy and a good political champion in Laurier but it lacked design skills and administrative expertise (Gordon, 2006).

The Federal Plan Commission and the Report of the Federal Plan Commission on a General Plan for the Cities of Ottawa and Hull, 1913-1916.

Criticism of planning in Ottawa grew in the first decade of the 20th century. The new Conservative Prime Minister, Sir Robert Borden, proceeded cautiously with regards to planning in the National Capital. Borden desired a planning process that was under his direct political control instead of an independent panel of expert professionals. He also wanted a plan which would cover both Ottawa and Hull. In September 1913, his administration appointed the Federal Plan Commission (FPC) to:

“ ... draw up and perfect a comprehensive scheme or plan looking to the future growth and development of the City of Ottawa and the City of Hull, and their environs, and particularly providing for the location, laying out and beautification of parks and connecting boulevards, the location and architectural character of public buildings and adequate and convenient arrangements for traffic and transportation within the area in question.”

Source: *Federal Plan Commission, 1915 from Gordon, 1998.*

The Federal Planning Commission (FPC) was assembled by Borden's senior staff from a group of prominent Conservative businessmen. The FPC was chaired by Herbert Holt, president of the Royal Bank, prominent Montreal railway executive and Conservative Party activist (Gordon, 1998). The Federal Government also attempted to co-opt the local governments for the region by appointing the mayors of both Ottawa and Hull as ex-officio members of the FPC. The addition of Hull to the FPC's mandate was an astute political move as the Quebec side of the Ottawa River had received little attention from the OIC and had received few benefits from Ottawa's designation as the National Capital (Gordon, 2006).

The FPC retained Edward H. Bennett of Chicago as its consulting architect and urban planner. Bennett was once a prominent City Beautiful planner and one of the foremost American planners of the time (Gordon, 1998). He prepared a plan for Ottawa in the City Beautiful style, as seen below, with comprehensive technical planning for infrastructure and zoning. The first draft of *the Report of the Federal Plan Commission on*

a *General Plan for the Cities of Ottawa and Hull* was completed in early 1915 and was commonly referred to as the 'Holt Commission report' due to the FPC's Conservative composition.

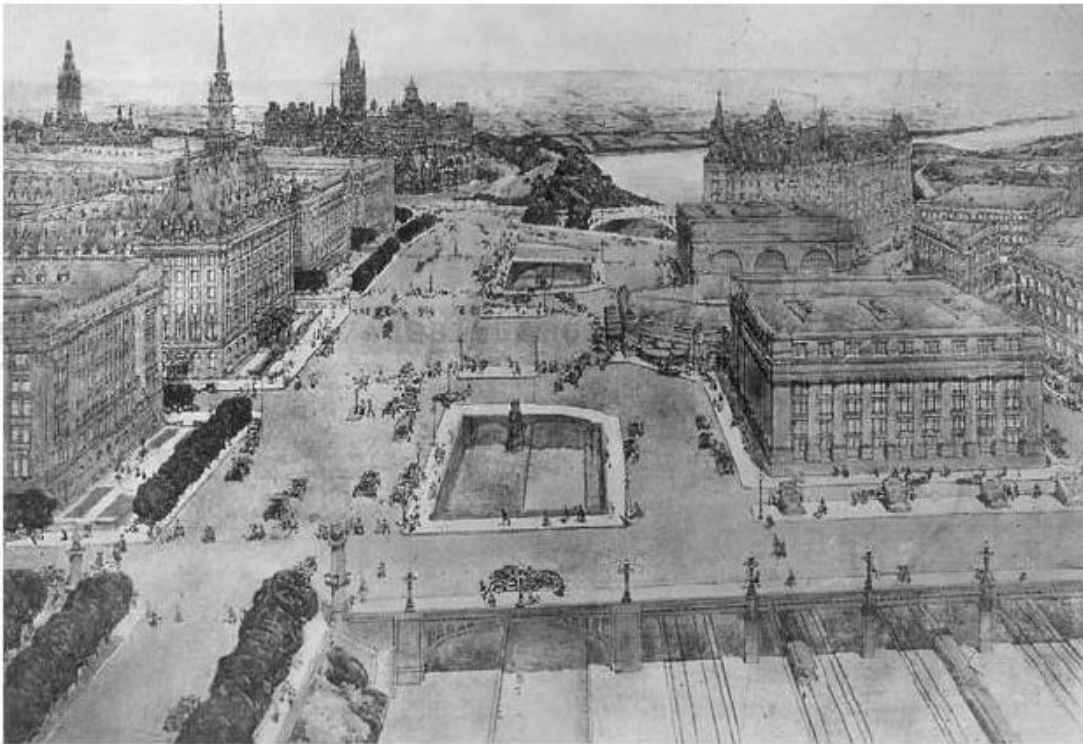


Figure D-2: Edward Bennett's plan for a municipal plaza above the Rideau Canal in the City Beautiful Style. Note the parliament buildings in the upper left.

This plan was one of Canada's first comprehensive plans and included a regional park and forest preserve system, a parkway and playground plan, street layouts for future suburban expansion, regional passenger and freight railway plans, regional highway plans, new plans for street railway lines, utility analysis, waterway and flood analysis, plans for federal and

municipal government buildings, central business district plan and a preliminary zoning scheme as seen below (Gordon, 1998). As seen below, this plan proposed a circular form of urban development in Ottawa and Hull. The innermost circle was a central business district; the next ring was central residential development.

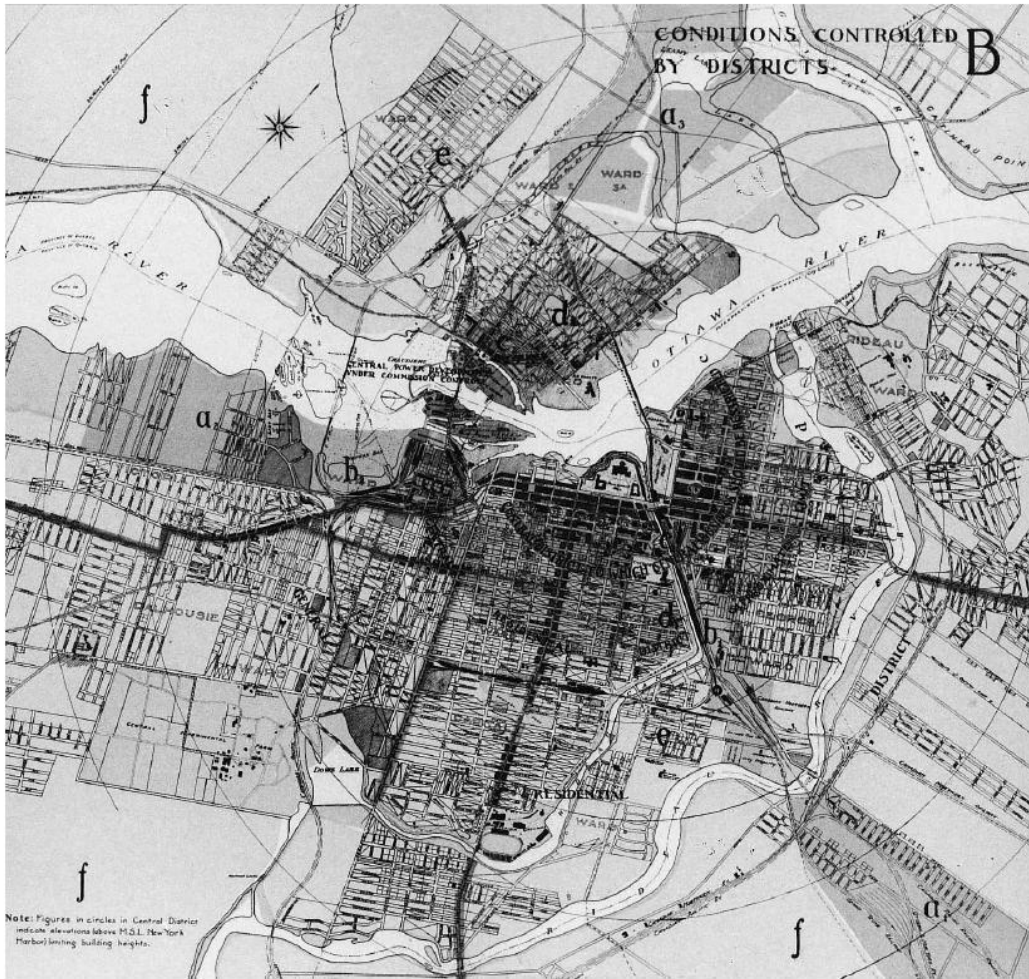


Figure D-3: Bennett's proposed zoning scheme for Ottawa-Hull (Gordon, 1998).

Bennett's zoning scheme separated Ottawa-Hull into six distinct districts (Gordon, 1998):

- 1 industrial areas
- 2 general railway and transport areas
- 3 central business district including retail, wholesale and light industry
- 4 central residential district
- 5 outer or general residential district
- 6 suburban residential district

Additionally, the FPC's first and foremost recommendation was the establishment of a Federal District similar to that established for the District of Columbia in the United States:

"We are of the firm opinion that the future improvements in the area about the Capital of Ottawa and Hull should not be attempted without first establishing a Federal district and securing for the Federal authority some control of local Government"

Although the Borden administration brought the FPC report to Parliament in March 1916, the plan was overlooked due to issues of timing, political issues and criticism of the City Beautiful movement. The First World War preoccupied the government agenda and the destruction of Parliament's Centre Block by fire would absorb any funds the government could use towards Ottawa outside of the war effort (Gordon, 2006). In addition, the FPC was disbanded and its staff dispersed following the printing of the report and having completed its mandate (Gordon, 1998). The FPC caused conflict with representatives from Hull as meetings were conducted in English without an interpreter (Gordon, 1998). In addition, a French translation of the report was not immediately printed which incensed the Hull City Council. The proposal for a Federal District was a

major point of conflict with the City of Hull and the Province of Quebec who feared the loss of their territorial sovereignty. The plan was strongly partisan due to the FPC being entirely composed of prominent Conservatives. The FPC's Tory commissioners moved on to other concerns during the wartime years and they lacked access to the Prime Minister's office, following the 1921 election of the Liberal Party. In addition, due to the frequent changes in mayors, the plan lacked powerful local advocates following its release. The City Beautiful movement and Bennett's plan garnered criticism because its 'aesthetic approach' was perceived to ignore both technical and social concerns (Wilson, 1989). The planning approach of the City Beautiful movement was beginning to become supplanted by the City Scientific movement. These developments serve to illustrate a classic scenario of good planning with poor implementation. The FPC's consultant team's technical expertise was wasted due to the lack of political support, funding or administrative capacity. The plan's dramatic, large-scale proposals were inappropriate when the nation was focused on war, and its financial requirements were too large during the weak economic recovery from 1919 to 1929 (Gordon, 2006).

The Federal District Commission, 1927-1939

The next phase of planning was overseen by William Lyon Mackenzie King, Canada's longest-serving prime minister who held office for most of the period from 1921-1948. King had a strong personal interest in town planning and regarded town planning as an integral component of an overall program for social reform. King's interest in planning was complemented by a growing personal commitment to Ottawa's development as a capital worthy of a growing nation. He personally

oversaw almost every planning and design proposal of the Federal Government over the next thirty years (Gordon, 2002b). King was observant of world cities in his travels abroad and Wilfred Laurier, founder of the OIC was his personal mentor. King took control of the OIC during his first term in office from 1921-1930 and recruited Ottawa utilities tycoon Thomas Ahern as the new chairman. In 1927, he dissolved the OIC and established the Federal District Commission (FDC) which was endowed with a wider mandate and larger budget. The FDC became a parks agency operating on both the Ontario and Quebec side of the river but with no local government powers and a limited planning capacity (Gordon, 2006).

During the improving economy of the 1920's, King and Ahern planned an ambitious urban renewal scheme to create a major public plaza between Elgin Street, the Rideau Canal and Wellington Street. To date, this area was characterized by a complicated tangle of bridges, streetcars, streets and a canal and had resisted the efforts of a generation of planners to design an elegant solution. This urban renewal scheme was loosely based on Edward Bennett's proposal in 1915 for a civic plaza in Ottawa as seen in Figure 2.2. King's Federal Government was determined to remake the historic downtown core of Ottawa in its own image (Taylor, 1989). King was determined that the new plan would be able to make a breakthrough which had eluded his predecessors and their shelved plans for the previous half century (Gordon, 2001c). King named the project Confederation Square and proposed it as the site for the national war memorial. Although the project lost momentum when King lost the 1930 election, when he returned to power in 1935, he vigorously pursued plans for the Square.

King found a planner to execute his vision in Jacques Gréber, a renowned Parisian planner-architect, at the 1937 Paris World Fair. He was invited to come to Ottawa to prepare plans for Ottawa's core and

untangle the tangled mess that was the urban core at the time. Gréber designed the new square in time for the War Memorial to be unveiled during the 1939 Royal Visit but the remainder of Gréber's plans for downtown Ottawa were put on hold during World War II (Gordon, 2006).

During the inter-war years, there was a limited implementation of Federal plans for Ottawa due to King's lack of political support and the FDC suffered from poor funding and limited project management capacity. In addition, both the economic and political environment for the implementation of capital plans was weak in the 1920s and outright hostile in the 1930s.

The Immediate Post-war Years and Jacques Gréber's National Capital Plan, 1945-1957

Following the war, Mackenzie King intended that the construction of a national capital for Canadians would be the principal memorial for Canada's fallen during World War II. He established a National Capital Planning Committee (NCPC) which was independent of FDC and composed of representatives from across the nation. NCPC's task was to simultaneously prepare a regional land use plan for both the Ontario and Quebec sides of the river, urban plans for Ottawa and Hull, a regional infrastructure plan and urban design for the downtown area (Gordon, 2001c). He chaired the Committee's early meetings and followed its every move. Gréber was installed as head of the National Capital Planning Service (NCPS) which was endowed with a significant budget, numerous staff and a wide mandate. NCPC consulted with local and provincial governments on both the Ontario and Quebec side and worked to build

public support with news stories, radio interviews, newspaper inserts and exhibits featuring a large model of the future capital that was held in cities across Canada (Gordon, 2006).

Following five years of research and consultation, the Gréber National Capital Plan was published in 1950 which built upon the previous plans and reports of Todd, Bennett and Noulan Cauchon (discussed in Pre 1945 Local and Regional Planning History) and was published in both French and English. NCPC was meticulous in promoting this plan and prepared brochures and press kits which resulted in news coverage of the plan across the country (Gordon, 2001c). A rendering of the National Capital Plan is seen in Figure 6.3 below.



Figure D-4: A watercolor rendering of the National Capital Plan by Jacques Gréber. A Greenbelt surrounds Ottawa on the south side of the Ottawa River which was eventually created.

The National Capital Plan included the following components (Gordon, 2001c, Gordon, 2006 and NCC 1999):

- relocation of the railway system and industries from the inner city to the suburbs
- the construction of new cross-town boulevards and bridges
- slum clearance and urban renewal in the LeBreton Flats district

- decentralize government offices to suburban satellite locations such as Tunney's Pasture and Confederation Heights
- expansion of the urban area from 250 000 to 500 000 in neighbourhood units
- surrounding the future built-up area with a Greenbelt four kilometers in width to control the outer limits of urbanization
- a wilderness park in the Gatineau hills and a parks system along the canal and rivers

Railway relocation was a key element integral to the plan as a whole. There was a pressing need to accommodate intensified automobile traffic and Gréber saw the removal of railways from the urban core as essential to this (Taylor, 1986). Removing the Canadian National line running from east to west and its adjacent industry would reconnect the road grid and separate noxious industries from residential areas. A sample panel below depicts the effects of removing the rail lines. Relocating the two downtown rail stations freed up land for a convention centre, shopping and a hotel and the rail lines were replaced by new boulevards and an expressway (Gordon, 2006).



Figure D-5: The downtown core prior and post rail removal (NCC, 1999)

The 1950 National Capital Plan became a landmark in Canadian planning history and set the standard for the comprehensive plans that

followed in the decades to come (Gordon, 2002b). The plan was beleaguered by a slow start due to weak provincial legislation and the lack of consensus among municipal governments (Gordon, 2001a). Both Ottawa and Hull were granted strong links to the plan as both mayors were appointed to FDC and councillors and senior staff to NCPC (Gordon, 2006).

The implementation of the 1950 plan was slowed due to suburban opposition but FDC built its capacity for project management to overcome the hurdles it encountered. FDC hired expert landscape architects, planners, engineers and project managers, developing a reputation for good fiscal management. As FDC's competence as an organization increased, it was awarded increasing responsibility for landscaping federal buildings and managing infrastructure and land-use planning approval for federal properties.

By the 1950s, FDC enjoyed the benefits of heavy funding and strong support by successive Prime Ministers King, St. Laurent, and Diefenbaker. It launched a major program of property acquisition including the Greenbelt in 1958 (Taylor, 1986).

The National Capital Commission, 1959-1970.

The Federal District Commission was renamed the National Capital Commission (NCC) / La Commission de la Capitale National in 1959 in an effort to smooth over political contentions on the Quebec side. The major political issue was the spectre of a Federal district similar to that of Washington or Canberra which would detach Ottawa, Hull and their environs from their municipal and provincial governments. The idea of a Federal district was unacceptable to Quebec politicians at all levels of

government. This was due to their unwillingness to relinquish the protection afforded by their local and provincial governments for language, education, law and culture. Because of this protectionism, the “Federal district” issue poisoned all attempts at regional planning (Gordon, 2006).

NCC absorbed NCPC and Gréber’s staff. It was granted the power to expropriate land, build infrastructure and create parks. These powers were utilized to expropriate the land for the Greenbelt.

NCC’s excellent reputation for management enabled them to implement elements of the National Capital Plan. By 1970, when the majority of the plan had been implemented, NCC had spent \$243 million (Gordon, 2002b). Much of the work on the plan was carried out following the rise of John Diefenbaker’s Conservative party to power from 1957 to 1963. Mackenzie King had given the project sufficient political momentum to endure for almost two decades. NCC was virtually unstoppable as an agency for implementation for twenty years following the end of World War II. The elements for NCC’s strength included political support, long-term finance, good economic conditions due to the post-war economic boom, skilled planning staff and strong project management. Large-scale planning had become an accepted strategy and Ottawa-Hull was transformed from a blue-collar to white-collar population due to the decline of the lumber industry and due to the increase in civil servants during the two World Wars.

The transition to regional government, 1971-2001

Although a powerful NCC may have been needed in the early stages of planning and development of Ottawa, it became less relevant as the municipality became established. The large magnitude of power vested in such an agency was more challenging to justify once the principal activity of the organization shifted from rapid physical development to more routine local governance. NCC relinquished control of Federal planning initiatives in the mid 1960s (Gordon, 2006).

Following the election of Liberal Pierre Elliot Trudeau in 1968, changes occurred rapidly as a response to rising Quebec nationalism. The National Capital Region of Ottawa-Hull was officially declared Canada's Capital and 18 000 federal employees were moved to buildings on the Quebec side of the Ottawa River in an effort to ensure that 25% of the civil service were in the Quebec portion of the region (Gordon, 2006). Trudeau sought a fairer balance of Federal buildings between Ottawa and Hull and charged NCC with the establishment of more government offices across the river in Hull (Bond, 1984).

NCC's planning capacity was reduced while it was given the added responsibility for programming the National Capital to ensure a bilingual image. NCC now produces major public festivals which promote national unity, including Canada Day and Winterlude (Gordon, 2006).

NCC did not withdraw entirely from planning in the 1970s. It became refocused on the portfolio of federally-owned property in the region and prepared large-scale master plans based on ecological principles for the Greenbelt and Gatineau Park. NCC was given urban design projects which improved public spaces such as the Parliamentary Precinct and the Confederation Boulevard which created a ceremonial route that linked Ottawa and Hull. The absence of co-ordination across the Ottawa River

enabled NCC to play a role as a facilitator in regional transportation and land-use concerns.

NCC later produced two key documents for planning in the National Capital Region. These documents were the *Federal Land Use Plan* of 1988 and the *Plan for Canada's Capital* in 1999 which was intended as an update to the 1988 document. Gréber's Plan remained the federal government's vision for the Capital until the 1988 *Federal Land Use Plan* was released. This plan sought to transform the Capital into a national symbol for all Canadians by recognizing the importance of Confederation Boulevard, focusing on the political, judicial and cultural functions of the Capital, advocating for the presence of the provinces and territories in the Capital as well as the presence of the international community, and preserving the Capital's green spaces (NCC, 1999).

The *Plan for Canada's Capital* was designed to accomplish the following (NCC, 1999):

- a) communicate the Federal Government's vision for the Capital
- b) provide principles, goals, a concept and policies to guide land use decisions in support of the key functions of the Capital
- c) identify the lands and land uses required for the Capital's future needs
- d) guide accommodation decisions for Federal departments
- e) reinforce the relationships between Gatineau Park, the Greenbelt and lands in the Urban Area
- f) guide more detailed land use planning of Federal lands in the Capital
- g) direct the Federal government's land and investment strategy in the Capital

However, these plans differed from previous Federal planning initiatives as they were concerned specifically with the uses of the Federal land base in the National Capital Region, as opposed to region-wide planning visions which were falling under the jurisdictions of the Cities of Ottawa's and Gatineau's planning departments (NCC, 1999).

Summary of Federal Planning History

Since being named as Canada's Capital, the Federal Government has played an active and key role in transforming Ottawa from its early urban form as a small lumber-based industrial town to today's modern metropolis. Federal interventions has been directed by a series of prime ministers which resulted in radical planning intervention in Ottawa's urban core. In the absence of a strong municipal planning body, the Federal Government and the National Capital Commission and its early predecessors would become the primary planning bodies which shaped the urban core. The Federal Government also played a role in brownfield creation in the forced removal of industries from the urban core and the expropriation and demolition of the buildings on LeBreton Flats, discussed in the main thesis.

Municipal and Regional Planning History

Pre 1945

The Federal government's modest planning activity far surpassed that of most local efforts in the first half of the 20th century. The Ontario provincial government passed permissive town planning legislation in 1917 due to the encouragement of Federal advisor Thomas Adams. The City of Ottawa established the Ottawa Town Planning Commission (OTPC) in 1921 which was chaired by Noulan Cauchon, a local activist, railway engineer and founder of the Town Planning Institute of Canada. However, OTPC was purely advisory, under-funded and, as a result, had little impact. Cauchon and his aide John Kitchen prepared several schemes for traffic improvements in the City Scientific mode, and a zoning bylaw for part of the City.

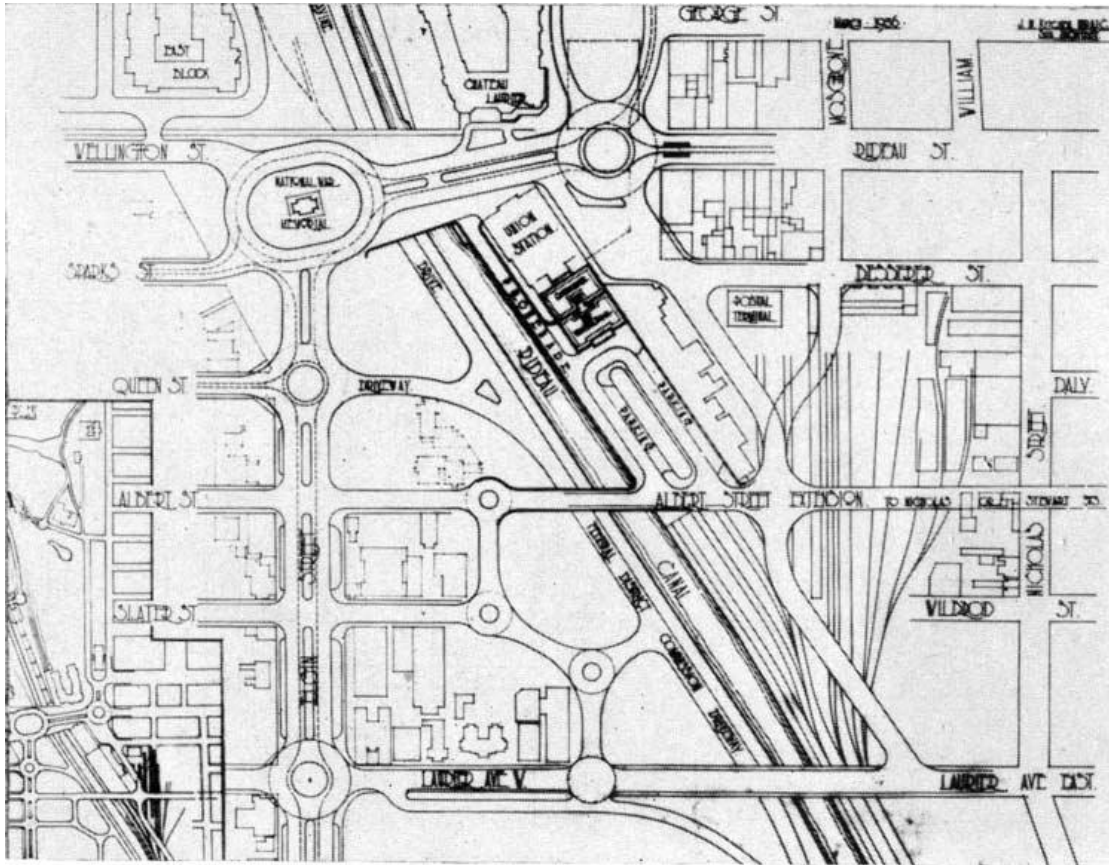


Figure D-6: OTC's 1928 plan for the Confederation Square area shows a clear City Scientific focus on traffic engineering (Greber, 1950).

Mackenzie King who disapproved of Cauchon's esoteric designs and penchant for publicity subsequently ignored him and negotiated directly with the mayor with regards to Confederation Square and the replacement of Ottawa City Hall (Gordon, 2006). Despite being overlooked by King, the 1950 *Plan for the National Capital* credits Cauchon as a general influence on its recommendations (Gordon, 2008).

The municipality of Ottawa focused on improving private property which constituted the primary tax base in the early 20th century. Mayors changed frequently and they rarely supported urban planning initiatives

(Gordon, 2006). Powerful Federal politicians, such as Laurier and Mackenzie King, had sufficient funds and staying power to pursue their own agendas, often overriding local officials (Taylor, 1989). The Federal government appropriated most of the planning initiatives in Ottawa which served to weaken local groups such as civic improvement leagues and town planning commissions which were more active in other Canadian cities where the Federal influence was less prevalent.

The Canadian community planning movement collapsed during the Depression and the Town Planning Institute suspended operations from 1932 to 1952. Across Canada, only a few municipalities had planners and the Federal government almost had a full monopoly in the Ottawa-Hull region. Mackenzie King and the Federal government made community planning a central element of its national post-war reconstruction programme (Gordon, 2002a). King also launched a major planning initiative in the National Capital which became a pilot project for the slow reconstruction of the planning profession (Gordon, 2006).

Post 1945

The Federal District Commission was supported by the City of Ottawa by establishing the Ottawa Area Planning Board (OAPB) in 1946 in an effort to control unregulated suburban expansion. However, suburban townships continued to approve low-density subdivisions which lacked municipal services. The City reacted to this in 1948 by attempting to annex all the land inside the proposed boundary of the Greenbelt. Rural townships opposed the annexation but lost. These townships also fought the Greenbelt by refusing to incorporate it into their zoning bylaws and approving subdivisions (Gordon, 2001c).

While the planning expertise of FDC was growing in addition to its authority, that of the City of Ottawa was weakening. This was due to the failure to develop a strong planning department and also as a result of the more general loss of local autonomy in the 1940s and 1950s (Taylor, 1986).

FDC/NCC's relations with the City of Ottawa were pragmatic in nature. Ottawa tended to accept Gréber's plan and there was a significant level of interplay between the City and NCC at a technical and engineering level. FDC/NCC's broad policies included a "degree of interest" clause enabling NCC to finance local works according to the "degree of interest" that the FDC/NCC had in them. This interest was considerable in the 50s and 60s and many basic city works such as major roads, bridges and water treatment works were heavily underwritten by FDC/NCC for the purpose of Capital beautification. Some examples of such collaboration was the construction of sewers for the City periphery, the removal of rail-lines from the core and replacement with a freeway, the removal of the streetcar system and replacement with buses (Taylor, 1986).

In the 1960s, the City of Ottawa had developed a greater degree of maturity in its engineering, planning and other civic departments. The improved and expanded local bureaucracy enabled the City to hold its own with Federal operatives. With the arrival of this political nerve came a new batch of local politicians who were neighbourhood-based (Taylor, 1986). Most of the planning done by the City in the 50s and 60s was oriented towards the demands of expansion and development in the City's suburbs (Taylor, 1986).

NCC's primacy in regional planning began to disappear in the 1970s. The local governments on either side of the Ottawa River developed their own complement of planning staff and planning ideas. Ontario and Quebec both established regional governments with sweeping planning

powers (Gordon, 2001a). The Province of Ontario established the Regional Municipality of Ottawa Carleton (RMOC) in 1968. The RMOC completed a regional land-use plan in the mid 1970s which coordinated suburban township plans prepared by local professional staff. The plan called for extensive low-density, automobile-serviced suburban development on land held by private developers at the periphery of the metropolitan area. NCC responded to this with the 1974 plan entitled *Tomorrow's Capital: An Invitation to Dialogue*. This plan included a vision for a higher density growth corridor served by public transit. The plan, developed in secret, outraged local and regional governments and community groups when it was released at the end of a five-year regional planning process. They refused to consider it and lobbied the Federal government to remove NCC from all land-use planning activity (Gordon, 2006).

Jacques Gréber's National Capital Plan guided the growth of the Ottawa-Hull region from 1946 to 1966 which saw the population of the region double from 250 000 to 500 000, filling the area inside of the Greenbelt. The local and regional plans guided growth as the region doubled its population once again to 1.1 million by 2001. During the 1990s, Ottawa improved its planning agencies and began to question the decentralized suburban model with the RMOC developing an advanced bus transitway system that was co-ordinated with nodes of Federal employment (Gordon, 2006).

However, due to little co-ordination of transportation and land use across the border of the Ottawa River, true regional planning was almost non-existent. Quebec and Ontario did not cooperate and the Federal government built all of the inter-provincial bridges. Urban development in the Ottawa-Hull region was becoming unmanageable due to the overlap and conflict between numerous local, regional, provincial and federal

planning agencies. Both provincial governments of Ontario and Quebec took action early in the 21st century. Under an extensive province wide initiative to amalgamate municipalities, Ontario dissolved all the local governments and the Regional Municipality of Ottawa-Carleton to create a new City of Ottawa. The new City of Ottawa encompassed almost all of the National Capital Region south of the Ottawa River. On the other side, Quebec consolidated most of the urban municipalities into the City of Gatineau. As a result of these developments, there were three major actors at the table in planning in the National Capital Region: Ottawa, Gatineau and NCC (Gordon, 2006).

Appendix E: Site Photographs



Figure E - 1: Site photo of ongoing site demolition and preparatory work at Lansdowne Park. Site access is limited due to perimeter fencing.



Figure E - 2: Site photo taken from Claridge development with camera angled to the west. Cranes visible in the distance are involved in soil extraction for the ongoing remediation process. The Canadian War Museum is visible to the far right.



Figure E - 3: Site photo of Bayview Yards of the front facade of the former Ottawa Public Works building. The open space behind this structure is used as parking for city vehicles and snow removal equipment



Figure E-4: Site photo of CLC Rockcliffe Lands viewing the former school building that is currently undergoing demolition. The roadway



Figure E-5: 1375 Baseline Road's primary retail anchor is a Wal-Mart Supercentre



Figure E-6: 300 West Hunt Club Road viewed facing south. The completed Lowe's is visible to the right and land still undergoing remediation is visible to the left.

Appendix F: Sample Page of the Ontario Ministry of the Environment's Records of Site Condition Online Database


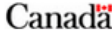
The screenshot shows the Ontario Ministry of the Environment's website interface. At the top, there is the Ontario logo and the text "Ministry of the Environment" with navigation links for "ministry", "feedback", "brownfields", "français", and "help". Below this is a dark red banner with the text "Brownfields Environmental Site Registry". A breadcrumb trail indicates the current location: "Location: Ministry > Brownfields > General Search".


The main content area is titled "Search Records of Site Condition and Transition Notices". It includes a search bar with the criteria "Site Municipality is OTTAWA." and a "Change" button. Below the search bar, there is a prompt: "Press 'Number', 'Filing Date' or 'Municipality' to sort search results by that criterion." The search results are displayed in a table with columns for "Number", "Filing Owner", "RSC Property Address", "Filing Date", and "Municipality". The table shows 18 records, all for the Municipality of Ottawa, with filing dates ranging from 2004 to 2006. The records are sorted by filing date in descending order.

Number	Filing Owner	RSC Property Address	Filing Date	Municipality
2768	RSC Ottawa Salus Corporation	309 ATHLONE AVE, OTTAWA, ON, K1Z 5M3	Jan 06, 2006	OTTAWA
2736	RSC 1592541 Ontario Inc.	1233 WELLINGTON ST, OTTAWA, ON, K1Y 2Z9	Dec 30, 2005	OTTAWA
2599	RSC Richard Raymond	3105 Hawthorne Road, Ottawa	Dec 19, 2005	OTTAWA
2575	RSC Larco (West Village) Corporation and Tamarack (West Village) Corporation	1900 Scott Street, Ottawa, Ontario, 146, 148, 150, 152, 154, 156, 158, 160, 162 and 164 West Village Private, Ottawa, Ontario	Dec 13, 2005	OTTAWA
1916	RSC The Palisades Club Inc.	100 ISABELLA ST, OTTAWA, ON, K1S 1V5	Nov 22, 2005	OTTAWA
2091	RSC Youth Services Bureau of Ottawa	433 COOPER ST/366 LISGAR STREET, OTTAWA	Nov 14, 2005	OTTAWA
2151	RSC McArthur Plaza Shopping Centre Ltd.	320 MCARTHUR AVE, VANIER, ON, K1L 5G2	Oct 14, 2005	OTTAWA
2304	RSC Dwell by Domicile Inc.	486 GLADSTONE AVE, OTTAWA, ON, K1R 5N8	Sep 29, 2005	OTTAWA
2261	RSC The Exchange Inc.	396 BERKLEY AVE, OTTAWA, ON, K2A 2G6	Sep 19, 2005	OTTAWA
2191	RSC 6176666 Canada Ltee. (Eco Cite)	1014 BANK ST, OTTAWA, ON, K1S 3W8	Sep 15, 2005	OTTAWA
2181	RSC Reno Realty Holdings Limited	1460 Merivale Road, Ottawa, Ontario, K2E 5P2	Sep 06, 2005	OTTAWA
2127	RSC Carp Self Storage Ltd.	2405 March Road, Carp (Ottawa), Ontario, K0A 1L0	Aug 12, 2005	OTTAWA
2080	RSC Charlesfort Developments Limited	88 BELLWOOD AVE, OTTAWA, ON, K1S 1T1	Jul 26, 2005	OTTAWA
1777	RSC Minto Land Development Corporation	22 STEEL ST, OTTAWA, ON, K1J 6R3	Apr 22, 2005	OTTAWA
1739	RSC National Capital Commission	90 Booth Street	Apr 13, 2005	OTTAWA
1008	RSC 131 Queen Street Limited and Morguard Corporation	131 QUEEN ST, OTTAWA, ON, K1P 5C7	Nov 10, 2004	OTTAWA

Ontario Ministry of the Environment. (2013). Search Records of site Condition and Transition Notices for the City of Ottawa. Retrieved from <http://www.environet.ene.gov.on.ca/besr-public/generalSearch.do?action=page&pageSort=D&postalCodeR=&municipalityCode=2200&pageNumber=2&fromDate=&moeDistrictCode=&postalCodeL=&toDate=&filingOwnerName=&streetName=&lotNumber=&pageSize=50&assessmentNumber=&propertyNumber=&pageTotal=3&pageSortDir=d&concessionNumber=> Accessed on March 8, 2013.

Appendix G: Sample Page of the Federal Contaminated Sites Inventory


 Treasury Board of Canada Secretariat / Secrétariat du Conseil du Trésor du Canada
 



Treasury Board of Canada Secretariat

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[Home](#) > [FCSI](#) > Query Results

Federal Contaminated Sites Inventory

Background

Introduction

Official Contacts

Search

Search All Sites By

Classification

Contaminants or Media

DFRP Property Number

Federal Site Identifier

Highest Step Completed

Internal Identifier

Keyword

Location

Reason For Federal Involvement

Reporting Organization

Site Status

Map Navigator

Reports

Expenditure

Query Results

QUERY RESULT SUMMARY

Criteria:

- Located in the National Capital Region
- Census Subdivision : Ottawa

[Select Additional Criteria...](#)

Sort Key: Federal Site Identifier (ascending)

Sites Found: **265**

ALTERNATE VIEWS

Choose an alternate view: [Map](#) | [XML](#) | [Financials Report](#)

REPORT OPTIONS

Colourize by:

None Selected

PICK DETAIL VIEW:

[Name and Location](#) |
 [Contaminants & Media](#) |
 [Site Impact](#)

FCSI Identifier	Municipality & Province, or Country	Reporting Organization (Legend)
00000002 Stanley Park	Ottawa, ON	NCC
00000004 LeBreton Flats	Ottawa, ON	NCC
00000006 LeBreton Flats	Ottawa, ON	NCC
00000007 LeBreton Flats	Ottawa, ON	NCC
00000008 LeBreton Flats	Ottawa, ON	NCC
00000009 LeBreton Flats	Ottawa, ON	NCC
00000010 LeBreton Flats	Ottawa, ON	NCC
00000011 LeBreton Flats	Ottawa, ON	NCC
00000012 LeBreton Flats	Ottawa, ON	NCC
00000013 LeBreton Flats	Ottawa, ON	NCC
00000014 LeBreton Flats	Ottawa, ON	NCC
00000015 LeBreton Flats - Nepean Bay	Ottawa, ON	NCC
00000016 Riverfront Park	Ottawa, ON	NCC
00000912 Former Disposal Area, South of Water Tower, Shirleys Bay	Ottawa, ON	DND

Treasury Board of Canada Secretariat. (2013). Federal Contaminated Sites Inventory Search Results for Ottawa, Ontario. Retrieved from <http://www.tbs-sct.gc.ca/fcsi-rscf/numbers-numeros-eng.aspx?qid=896592> Accessed March 8, 2013.

Appendix H: Additional Large Brownfield Sites Identified During the Research Process

Project Name	Location	Developer
Attika	435 Gladstone Ave.	Tega Homes
	300 Greenbank Rd.	Greenbank Self Storage Corp
	350 Montgomery St.	Sonia by the River Inc
	347-357 Booth St.	345 Booth St. Ltd.
	300 West Hunt Club	Trinity Development Group
	10 Beechwood Ave	Claridge Homes
	568 Booth St.	Canada Lands Company
	800 Montreal Rd.	Canada Lands Company
University of Ottawa Lees Campus	200 Lees	University of Ottawa
Beaver Barracks	464 Metcalfe St.	Centretown Citizens Ottawa Corporation
St. Denis	Granville St. & St. Denis St.	Redevelopment Group

Appendix I: Sample Emails sent to Key Informants

Initial Contact Email:

Dear _____,

I am a Master's candidate in the environmental studies program at the University of Waterloo's Planning Department. As part of my Master's thesis, I am conducting research on brownfield development in Ottawa under the supervision of Professor Geoff Lewis. During my research, I came across your name on the Ottawa Brownfields Advisory Committee. Interviews with expert informants are an essential part of this research and your comments/opinion will provide significant insight on improving Ottawa's current brownfield development policies.

I would be very grateful if you would consent to participate in a short 30-minute telephone interview with me at a time of your convenience. Alternatively, I can send you an electronic copy of the survey if this format would be more convenient for you. Your responses will be non-attributed which will maintain your confidentiality. If you are able to and willing to participate, I will forward more information, including a formal information consent letter. I would also be happy to provide you with a copy of the set of questions I have prepared prior to the interview.

Please feel free to contact me at mark.ouseley@gmail.com, or if you prefer, by telephone at 613-842-9649. Thank you for your time and consideration.

Sincerely,

Mark Ouseley
MES candidate, University of Waterloo

Reminder Email:

Dear ,

This is a follow up to the previous email I sent you regarding my thesis research project on brownfields in the City of Ottawa.

Interviews with knowledgeable individuals such as yourself are a key component to my research and your input would be invaluable to me.

Please let me know whether or not you can participate in my research.

Thank you for your consideration,

Mark Ouseley
MES Candidate, University of Waterloo