BROWNFIELD REMEDIATION IN KINGSTON AND HAMILTON, ONTARIO: A VIRTUOUS CYCLE OF CIVIL SOCIETY INVOLVEMENT

by

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Abstract

As the pressures of urban development progressively threaten the preservation of greenfields, it is increasingly understood that sustainable development and smart growth strategies must include the remediation and redevelopment of brownfields. As the support for brownfield redevelopment strengthens, and frameworks for brownfield planning become more prominent at municipal levels, it is important that municipalities not only ensure the proper remediation of old brownfield sites, but also identify a place for civil society within brownfield plans. The legal, financial, social, environmental, and health complexities of redevelopment, as well as the impact of brownfield sites on the community, make civil society involvement an essential component of a successful brownfield strategy.

This case-based thesis research examines the role of civil society in brownfield remediation and redevelopment through themes of social capital, social learning and risk perceptions. The two cases studies are former landfill sites; the Rennie Street landfill in Hamilton, Ontario and the Belle Park landfill in Kingston, Ontario. Both cases involved civil society using legal action as a reactive approach to contamination leaching from the respective sites into nearby water bodies. The research was conducted through participant observation, interviews with key stakeholders in the Belle Park and Rennie Street landfill cases, and a comprehensive review of written information. The literature review informed the development of a conceptual framework, which was used to guide the research and the evaluation of results.

The thesis reveals examples of civil society bringing awareness to brownfield issues through a reactive strategy, followed by proactive community involvement in brownfield programs. In both cases, civil society’s perceptions of the associated risks informed the reaction to the suspected contamination. The results of the study suggest that the establishment of networks and trust, as well as the reflective process that occurred throughout the legal action contributed to civil society’s ability to influence decision making. It is anticipated that the Rennie Street and Belle Park case studies will highlight for brownfield stakeholders the significance of engaging civil society in municipal brownfield planning.
Co-Authorship

I hereby declare that this thesis incorporates material that is a result of joint research, as follows:


Chapter four consists of three subsections, each written by one of the three authors listed above. Section 4.1, “Brownfield Redevelopment in Kingston: Defining a Community Strategy and Brownfield Plan”, was written by Dr. Harry Cleghorn, president of Cleghorn & Associates. Section 4.2, “The Civil Society Perspective: Theory and Concepts”, was written by Dr. Graham Whitelaw (supervisor). Section 4.3, “Brownfield Planning in Kingston: The Formation and Involvement of Environmental Movement Organizations” was written by Allison Roberts. The research, interviews, key ideas, and data analysis presented in section 4.3 were performed by Allison Roberts with guidance and support from Dr. Pamela Welbourn (supervisor), Dr. Graham Whitelaw, and Dr. Harry Cleghorn.


The key ideas, interviews, primary contributions, data analysis and interpretation presented in chapter five were performed by Allison Roberts. The contribution of Dr. Graham Whitelaw was primarily through the provision of supervision, guidance on research design, and the development of the conceptual framework. Through all stages of the project, Dr. Pamela Welbourn provided helpful discussions, guidance and support.

I have obtained written permission from each of the co-authors to include the above material in my thesis.

I certify that, with the above qualification, this thesis, and the research to which it refers, is the product of my own work.
Acknowledgements

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List of Abbreviations

AR About REMEDIATION
BARC Bay Area Restoration Council
CBN Canadian Brownfields Network
CBO Community Based Organization
CIP Community Improvement Plan
CLC Community Liaison Committee
EAC Environmental Advisory Committee
EBI Environmental Bureau of Investigation
EMO Environmental Movement Organizations
ENGO Environmental Non-governmental Organization
EPRF Energy Probe Research Foundation
FCM Federation of Canadian Municipalities
IEB Investigations and Enforcement Branch
IHG Inner Harbour Group
KEAF Kingston Environmental Advisory Forum
MMAH Ministry of Municipal Affairs and Housing
MOE Ministry of Environment
NGO Non-governmental Organization
NRTEE National Roundtable on the Environment and the Economy
OCETA Ontario Centre for Environmental Technology Advancement
OWRA Ontario Water Resources Act
PCBs Polychlorinated Biphenyls
RAP Remedial Action Plan
TOR Terms of Reference
TOSC Technical Outreach Services to Communities
USEPA United States Environmental Protection Agency
Chapter 1

Introduction

1.1 Framing the Issue

Since the 1990s\(^1\), the redevelopment of brownfields has garnered support from planners, community groups, financial institutions, government, and other stakeholders as a viable smart growth and sustainable development option (De Sousa, 2002b, 2003, 2006). Further, brownfield redevelopment has become recognized for its contribution to economic growth (Meyer & Van Landingham, 2000; Cunningham, 2002, 2003) and community and social well-being (Dixon, 2001; Greenberg, 2001; Dorsey, 2003; De Sousa, 2006). Accordingly, provincial legislation encouraging brownfield redevelopment has surfaced over the past several years and Canadian municipalities have begun promoting redevelopment within their Community Improvement Plans (CIPs). Due to the complexity of brownfield issues, community involvement is critical in determining whether remediation and redevelopment stimulate the community, or “drive wedges of division and disharmony right through them” (Bartsch, 2003, p. 1). As frameworks for brownfield redevelopment evolve, it becomes increasingly important for municipalities to ensure the proper remediation of former industrial sites and to identify a place for the involvement of civil society involvement within brownfield plans. Limited research on this role for civil society in brownfield redevelopment has occurred (see Section 1.3).

Meaningful\(^2\) civil society involvement has the potential for producing benefits to the community including community cohesion, a strengthened shared identity, an increase in access to information, and improved communication and trust (REVIT, 2007). These outcomes have implications particularly for the environmental and land use planning fields because of their potential to facilitate further local

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\(^1\) The first brownfield conferences were held in the United States in the early 1990s and the first accepted definition of brownfields was developed in 1995 by the United States Environmental Protection Agency (Yount, 2003).

\(^2\) See Section 2.3.1 for an overview of the degrees of public participation, including a description of meaningful participation.
developed networks of reciprocity, shared norms of behaviours and high levels of mutual trust are thought
to be more likely to achieve goals” (p. 429), including sustainable land use goals such as brownfield
remediation and redevelopment.

Over the past decade, the cities of Kingston and Hamilton, Ontario have seen a strong civil society
response to contaminated sites. Although the ideal community brownfield strategy is one that proactively
engages civil society, the two cases studied in this thesis offered examples of civil society bringing
awareness to brownfield issues, resulting in proactive community involvement in brownfield planning. This
research explored the involvement in terms of its contribution to social learning, social capital, and
ultimately its influence on decision making within the respective cities.

1.2 Research Background and Objectives

A component of this research contributed to the book, “The Story of Brownfields and Smart Growth in
Kingston, Ontario: From Contamination to Revitalization”, intended to document the history of brownfields
in Kingston including scientific, technical, social, planning and political aspects. The thesis topic emerged
when the opportunity arose to contribute a chapter to the book highlighting social aspects of brownfield
redevelopment. The objective was to explore this subject in the context of a brownfield case study in
Kingston, specifically the former Belle Park landfill. An initial investigation of the case history indicated a
strong civil society response to contamination concerns at the site and the formation and involvement of
three significant environmental organizations. A further in-depth study of these organizations and the events
at the site produced interesting results worth further exploration. The investigation also led to the use of a
“companion case” in which a similarly strong civil society response resulted from a former landfill site in
Hamilton, Ontario. Thus research objectives were developed to examine the influence and involvement of
civil society organizations through the Belle Park and Rennie Street landfill case studies. The research
objectives sought to examine:

• Civil Society’s influence on environmental governance;
• Private prosecutions as a catalyst for subsequent environmental work;
• The emerging benefits of social capital and social learning; and
• The role of risk perceptions in civil society’s reaction to contamination concerns.

1.3 Justification for the Research

An overview of literature on civil society engagement in brownfield redevelopment\(^3\) revealed mostly American case studies, specifically pertaining to United States Environmental Protection Agency (USEPA) programs that involve significant community involvement and/or government funding components.\(^4\) While these case studies are valuable for highlighting the successes and barriers of civil society involvement in brownfield projects, it would be beneficial to explore the topic from a Canadian perspective. Although frameworks for brownfield redevelopment have appeared more recently in community improvement plans, community involvement is not yet a central focus of Canadian remediation projects. Thus it is anticipated that this research will address the identified research gap on the role of civil society in Canadian brownfield redevelopment and substantiate meaningful community involvement as an important Canadian policy goal.

Another justification for this research flows from the City of Kingston’s goal of becoming the “most sustainable city in Canada”. An important movement towards this goal is the redevelopment of the City’s brownfields and the revitalization of the urban core. Kingston is already emerging as a leader in brownfield redevelopment; the City was the first city in Ontario to have a Community Improvement Plan approved under the province’s Brownfields Statutory Law Amendment Act (Davis, 2009). Consequently, other communities might begin to look to Kingston for examples of successful brownfield plans. It is important that in addition to technical and legislative information, communities have access to information on civil society involvement in brownfield planning.

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\(^3\) While this review may not be exhaustive, a thorough search revealed a limited number of articles on this topic. Examples of search terms included community, civil society, brownfields, and environmental organizations. See Chapter 2, Section 2.1.1 for an overview of literature.

\(^4\) Examples include Wernstedt, 2001; Ellerbusch, 2006; Gallagher and Jackson, 2008
1.4 Thesis Organization and Manuscript Format

This thesis consists of six chapters, inclusive of the introductory chapter, and is written in manuscript format. The two manuscripts are found in chapters four and five; Chapter Four is in press to be published in the book, “The Story of Brownfields and Smart Growth in Kingston, Ontario: From Contamination to Revitalization” and Chapter Five is being submitted for publication consideration to Environments Journal. Both of these chapters have been modified to coordinate with the formatting of the thesis as a whole and to ensure logical flow and consistency between chapters. The numbering as it appears in the book publication has been modified for Chapter Four of the thesis to reflect consistent numbering throughout the thesis. It is also worth noting that each section in Chapter Four was the responsibility of the respective authors and thus each author is accountable for his or her own work (please refer to the statement of co-authorship for more information). The nature of the manuscript thesis generates the probability of repetition. Where achievable, repetition has been kept to a minimum; however, there is some overlap between particular sections in chapters four and five. Similarity can also be seen between the literature review and conceptual framework presented in chapters two and five. References for the two manuscript chapters are included at the end of the respective chapters and a consolidated list of references appears at the end of the thesis. Figures and tables are numbered consecutively preceded by the chapter number in which they appear.

Chapter Two first presents an overview of written information, outlining the benefits of brownfield redevelopment, relevant legislation and community involvement in brownfield planning. The chapter then reviews literature on theories related to environmental movements, planning and risk perceptions, the underlying themes of the research. The chapter concludes with the emergence of a conceptual framework that is used to guide the research and evaluation of results in chapters four and five. Chapter Three describes the research methodology including justification for the use of the case study approach, semi-structured interviews and participant observation, and discusses the limitations of these research tools. Chapter Four, which is the first of two manuscripts within the thesis, is divided into three subsections, written by different authors, but each included in the thesis for cohesion and clarity. The chapter addresses
the strong civil society response to brownfield issues in the City of Kingston. Section 4.1 discusses the history and planning process of the Kingston Community Strategic Plan and Brownfields Plan, which were developed to deal with brownfield redevelopment. Section 4.2 describes the theoretical and conceptual view of civil society’s ability to influence environmental decisions. Section 4.3, which is the original research of the thesis author, draws on case study research to discuss civil society and brownfield redevelopment in Kingston focusing on the role of three main civil society organizations. Chapter Five, the second manuscript, explores civil society involvement in brownfield remediation and redevelopment using a multiple case study design. This chapter supplements the findings from Chapter Four by drawing on similar events at the Rennie Street landfill in Hamilton, Ontario. Chapter Six, the concluding chapter presents a general discussion of the findings by revisiting each of the original research objectives and discusses implications of the case findings for practice and theory and concludes with suggestions for future research.
Chapter 2

Literature Review

2.1 Introduction

To address the existing gap in literature and justify the need for this research, this review first provides an overview of studies that have been written on community involvement and brownfield redevelopment. The review then summarizes background information including a comprehensive definition of the term brownfields, as well as an understanding of the numerous social, economic, and environmental benefits of brownfield redevelopment. Following this, it explores Canadian strategies for brownfield redevelopment on a national, provincial and municipal level. The chapter then reviews literature on the three main themes related to the research conducted in chapters three and four – public participation, planning theories and practice; environmental movements, theories and practice; and risk perceptions and theories. This chapter concludes with the development of a conceptual framework, which links the theories and is used to guide the research presented in chapters three and four.

2.1.1 Community Involvement and Brownfield Remediation and Redevelopment

An overview of literature on the topic of community engagement in brownfield redevelopment produced mostly American case studies, specifically relating to United States Environmental Protection Agency (USEPA) programs that involve significant community involvement and/or government funding components. For instance, Ellerbusch, Gute, Desmaris, and Woodin (2006) wrote about community involvement and brownfield redevelopment in terms of barriers to successful community engagement. The authors emphasized the USEPA funded Technical Outreach Services to Communities program (TOSC) as an essential factor in creating both sustainable communities and opportunities for community involvement. A significant lesson in the study was the opportunity for learning that came about for all participants, a finding with significant implications for other brownfield redevelopment projects. Wernstedt (2001) discussed the benefits of amending certain elements of Superfund projects to take into account the end-use
goals of brownfield sites. The author emphasized the potential that such amendments would have for enhancing local participation in decision making. While these case studies highlight the successes and barriers of American brownfield projects, it is anticipated that studying the topic from a Canadian perspective, in which community involvement is not a central focus of remediation projects, will substantiate meaningful community involvement as an important municipal goal.

Additional studies have outlined civil society’s role in brownfield redevelopment in terms of issues of environmental justice. For instance, Rowan and Fridgen (2003) discussed the proximity of brownfield sites to neighbourhoods and the effect that contaminated properties can have on the local community. Due to the direct impact on the community, the authors emphasized the importance of involving affected communities in brownfield redevelopment projects. The authors made policy recommendations for a coordinated effort to address environmental injustices faced by citizens living in affected neighbourhoods. Gallagher and Jackson (2008) referred to data from four case studies under the USEPA brownfield programs to demonstrate the positive outcomes of communication between community organizations and developers. Specifically, the authors sought to identify a link between the involvement of socio-economically disadvantaged neighbourhoods in brownfield redevelopment projects and community support of the projects. The study showed that partnerships between developers and community organizations could result in positive environmental justice and brownfield redevelopment outcomes by addressing the concerns of both parties (Gallagher & Jackson, 2008).

Other authors cite the more general role of stakeholders in brownfield redevelopment projects. Altherr, Blumer, Oldörp, and Nagel (2007) examined citizens as a component of influence on green space projects in Europe. The authors addressed the role of stakeholders and legislation in the allocation of green space on brownfield redevelopment sites, briefly discussing what citizens valued in green space projects. Similarly, Dair and Williams (2006) studied the extent to which different stakeholder groups affect sustainable brownfield redevelopment. The interests of individuals, and local groups were considered, but the authors were unable to determine their impact on sustainability.
Brachman (2003) investigated the barriers and successes of involving community-based organizations (CBO) in brownfield redevelopment. The author highlighted success factors that contributed to a positive engagement process, including the formation of partnerships and the CBOs’ ability to mediate, communicate and educate. Key barriers such as the reluctance of property owners to sell, the difficulty in gaining political support and a lack of demand for contaminated properties were cited as some of the barriers and challenges. However, Brachman concluded that CBOs play a significant role “positioning a property for its greatest potential for success” (p. 14). While the case studies used in Brachman’s research were useful for examining stakeholder importance, the groups involved were either economic or community development corporations and therefore not environmentally motivated.

Bartsch (2003) explored the components and benefits of effective citizen participation in brownfield redevelopment by examining the broader process of stakeholder involvement. The author emphasized the importance of a community vision and discussed how the vision can be developed to address brownfield challenges. The visioning process was seen as the foundation for building community support for brownfield projects. Stakeholder identification, brownfield frameworks, communication strategies, and periodic reviews were identified as four key components of successful community involvement. The study suggested that successful community involvement helped to identify strategies for alleviating common barriers to brownfield redevelopment. The findings also revealed the creation of links with other projects, and the design of new decision making processes as unexpected benefits of community involvement. Building on the study findings, Bartsch concluded with suggestions for establishing successful community engagement processes.

2.2 Contextual Background

2.2.1 Defining Brownfields

Literature focusing exclusively on defining brownfields does not appear frequently. However, in order to understand the origin of the term and accentuate why the landfill sites in the two case studies presented in this research constitute brownfield sites, it is important to review what does exist. Determining
an accepted definition of brownfields is also important for ensuring that sites have equal access to resources and policies that further their potential for development (Yount, 2003).

The first known use of the term brownfields appeared in the mid-to-late 1970s, specifically, in reference to the steel industry and the modernization of existing steel plants, and more generally, as a way for planners to refer to previously used properties (Yount, 2003). In an effort to move away from the negative connotations of defining land as contaminated, the adoption of alternative terms such as ‘brownfields’ in the United States and ‘derelict’ in the United Kingdom emerged (De Sousa, 2008). By the early 1990s the term was being used in the US during the first brownfields conferences (Yount, 2003).

In 1995 when the United States Environmental Protection Agency (USEPA) announced its Brownfields Action Agenda, brownfields were defined as, “…abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination” (in Yount, 2003, p. 27). This definition was the most commonly used until the 2001 US Small Business and Liability Relief and Brownfield Revitalization Act signed into law the slightly altered definition: “real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant” (United State Environmental Protection Agency, 2009).

Noting the development of the term brownfields, which originated in the US, is important for tracing the growing recognition of brownfield redevelopment over the past few decades. However, since the case studies that make up this thesis involve sites within Canada, it is also important to provide the most widely used definition in Canada, which comes from the National Round Table on the Environment and the Economy (NRTEE), an independent Canadian Agency. The NRTEE defined brownfields as, “Abandoned, idle, or underutilized commercial or industrial properties where past activities have caused known or suspected contamination, but where there is an active potential for redevelopment” (National Round Table on the Environment and the Economy, 2003, p.ix).

While the NRTEE definition remains the basis for defining brownfields within the brownfields industry, research on the NRTEE National Brownfield Strategy found that the definition is often modified
to, “meet the particular needs of various regions or sectors” (Loman-Jylha, 2008, p.8). The result is a divergent focus among sectors, which makes it difficult to create a comprehensive inventory of brownfield sites within Canada (Lomas-Jylha, 2008).

When definitions of brownfields have been discussed, the definition is often supplemented with examples of qualifying properties. Quite frequently, landfills are not included in this listing. One example of this exclusion is on the Ministry of Environment’s brownfields information webpage. The Ministry depicts brownfields as including; “old and abandoned refineries, former railway yards, old waterfronts, crumbling warehouses, abandoned gas stations, former drycleaners and other commercial properties where toxic substances may have been used or stored” (Ministry of the Environment, 2008). These types of properties are what usually come to mind when discussing brownfields. While the verity of abandoned landfills as brownfields has not been widely contested, the two are often referred to separately.

However, there are instances when brownfields are cited to include landfills. In Greenberg, Lowrie, Solitare, and Duncan (2000), the authors defined brownfields as, “… an abandoned or underused structure or property that is contaminated. It could be a landfill, a contaminated factory or warehouse….” (p. 720). The authors have used this definition to be inclusive of sites, such as landfills, that have the potential to have negative impacts on neighbourhoods (Greenberg et al., 2000).

2.2.2 Benefits of Brownfield Remediation and Redevelopment

Recognition of the benefits of brownfield redevelopment has been increasing over the past few decades. Planners, financial institutions, government, community groups and other stakeholders are realizing the economic, social and environmental benefits that can materialize from the revitalization of contaminated properties (see Figure 2-1 for an overview of the benefits of brownfield redevelopment). A review of literature on revitalizing urban communities signifies the integral role that brownfield
redevelopment plays in the context of community and social well-being, economic growth, sustainability and smart growth.\(^5\)

![Diagram of Brownfield Redevelopment Benefits]

**Figure 2-1:** Benefits of Brownfield Redevelopment (Source: Regional Analytics, 2002, Figure 2, p. 7)

**Sustainability and Smart Growth**

One of the key environmental advantages of brownfields redevelopment is its potential to create sustainable development and smart growth. Substantiation of this benefit can be seen through the Ontario government’s support for brownfield redevelopment, as it relates to the potential that derelict properties have for encouraging smart growth in Ontario. The redevelopment of brownfields is essential for the implementation of smart growth principles, in which development is directed to already urbanized communities and away from greenfields (Calavita, Caves & Ferrier, 2005). In “Growing Strong Communities: The Ontario Liberal Plan for Clean, Safe Communities that Work” (2003), the significance of brownfield redevelopment is emphasized in the following statement: “Instead of subsidizing sprawl, we will develop our brownfields – thousands of acres of vacant industrial lots and derelict port lands in city

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\(^5\) Smart Growth is defined by Calavita, Caves, and Ferrier (2005) as, “attempts to rein in the tendencies of sprawl by limiting expansion at the metropolitan edges and redirecting development to the already urbanized communities” (p. 42).
centres. We will work with developers to get projects on these priority sites off the drawing board and into construction”. The Ontario government has since implemented brownfields legislation as well as legislative reforms to encourage the revitalization of contaminated sites as one of the province’s Smart Growth initiatives. The provincial government’s role in brownfield redevelopment will be reviewed further in Section 2.2.3.

A review of academic literature also revealed the importance of brownfield redevelopment in smart urban growth. De Sousa (2002a) referred to the Smart Growth Network organization, a non-profit and government organization in the United States, when he highlighted the ways in which brownfield redevelopment encourages smart urban development. De Sousa cited a reduction in public funds for new infrastructure, an improvement in the quality of the environment, desirability for development in urban centres and improvement to the social conditions of communities as reasons why supporters of smart growth recognize the potential of brownfield redevelopment.

Greenberg et al. (2001) conducted an assessment of brownfield redevelopment as a smart growth option in the United States. The study examined brownfields in comparison to five other smart growth options using six policy evaluation criteria. The study analyzed the smart growth options in terms of ecological and public health, short and long-term economic feasibility, government reaction, public and special interest reaction, moral imperative, and flexibility and time pressure. The analysis showed that brownfield redevelopment was the most sensible smart growth option not only due to the environmental and public health benefits in both the urban centre and periphery, but also because it met with the least resistance. The study, while recognizing gaps in information (at the time of the study) as far as economic feasibility, concluded that brownfield redevelopment offered environmental, political and moral benefits that could not be achieved through the other options. (Greenberg et al, 2001).

6 For more information on the Smart Growth Network, see http://www.smartgrowth.org/sgn/default.asp
Dorsey (2003) described brownfields as being central to smart growth and linked the societal interest and investment in brownfield redevelopment to the idea of sustainable development. The author asserted that in several ways, brownfields assist in the creation of sustainable communities. Namely, brownfield redevelopment enables cities to grow and evolve over time through growth changes (Dorsey, 2003). Furthermore, the author pointed to ecological growth and economic development as benefits emerging from smart growth, key elements of sustainable urban development.

Brownfield redevelopment was described by DePass (2006) as an exemplary illustration of the practice of sustainable development. Given that brownfield redevelopment is a complex issue spanning several government ministries, industries and organizations, it is a multi-stakeholder concern. Therefore, redevelopment strategies create an opportunity for the formation of partnerships and more holistic approaches to neighbourhood improvement (DePass, 2006). As a result, community economic development goals are often achieved, while also meeting the environmental and social needs of the community.

**Ecological and Environmental Benefits**

In addition to addressing smart growth objectives, brownfield redevelopment also creates ecological benefits. ‘Brownfield to green space projects’ produce opportunities for ecological restoration through the creation of ecological habitats. De Sousa (2003) examined brownfield to green space projects exploring the benefits, obstacles and processes of ten case studies. Ecological aspects of brownfield redevelopment were recognized as a key project benefit as revealed through personal interviews with twelve primary stakeholders. The creation and/or expansion of ecological habitat spaces was cited as a key project benefit by nine of the stakeholders. In several of the brownfield to green space projects, local community groups monitored the ecological benefits after redevelopment. The monitoring showed significant increases in biodiversity at the sites. The author also noted that habitat creation was often

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7 Brownfield to green space projects are those in which stakeholders have recognized the potential for brownfields to become locations for green spaces; see De Sousa, 2003, 2004, and 2006a for a more detailed description of brownfield to green space projects.
coupled with ecological education through the use of educational signs that highlighted the importance of urban habitat (De Sousa, 2003).

In Greenberg et al. (2001), ecological health was included as one of the six evaluation criteria used for assessing brownfield redevelopment as a viable smart growth initiative. The study looked at ecosystems in terms of the benefits achieved through brownfield redevelopment. The authors concluded that since brownfield redevelopment concentrates development away from greenfields, defined as, “parklands, underdeveloped open spaces, or agricultural land, located near the outskirts of towns, cities and larger metropolitan areas” (Great Lakes Commission, 2009), there is less disruption to existing ecosystems. Consequently, ecosystem services performed by greenfields such as flood plains functions and runoff absorptions remain intact (Greenberg et al., 2001).

In addition to the environmental and ecological benefits seen in brownfield to green space projects, and the preservation of greenfields, benefits can also be seen through the restoration of contaminated sites. Dorsey (2003) referred to this restoration as a form of ecological or environmental stewardship and asserted that by revitalizing derelict sites, ecosystems can be revived (Dorsey, 2003). Furthermore, a study done by De Sousa (2002b), in which the public costs and benefits of brownfield versus greenfield redevelopment were measured, concluded that the remediation of contaminated sites brought about a reduction in risks to both environmental and human health through improvements to air, soil and groundwater quality.

Environmental benefits of brownfield redevelopment can also be seen through a reduction in negative environmental externalities. Externalities were defined in the Energy Information Administration glossary as: "Benefits or costs, generated as a byproduct of an economic activity, that do not accrue to the parties involved in the activity. Environmental externalities are benefits or costs that manifest themselves through changes in the physical-biological environment" (Energy Information Administration, 2003). De Sousa (2002b) analyzed externalities associated with transportation by examining the social and environmental externalities of commuter travel. Because intensification, supported by brownfield redevelopment, locates people closer to the services of everyday life, it therefore reduces reliability on automobiles (Greenberg et al., 2001). Consequently, it was anticipated that a reduction would be seen in air
and noise pollution, and energy use in the urban core. By utilizing a control-cost approach (obtained from a study done by the IBI Group) to assess the costs of the above-mentioned externalities, De Sousa was able to determine that the transportation externalities of greenfield scenarios were significantly higher than in brownfield scenarios (De Sousa, 2002b).

**Social Benefits**

While the social benefits of brownfield redevelopment are not the primary motivators behind redevelopment projects (Heberle & Wernstedt, 2006), these benefits often become apparent throughout the brownfield redevelopment process. Urban revitalization improvements are often cited in literature as benefits emerging from a broad range of brownfield redevelopment projects. However, further social benefits of brownfield redevelopment can vary depending on the end use of the redevelopment site.

In brownfield to green space projects, unique benefits occur as a result of the creation of recreational and/or natural areas. Literature examining community and quality of life benefits of these projects has been limited; however, De Sousa explored these benefits using several case studies. De Sousa (2006a) cited the social benefits of three brownfield to green space projects based on the perceptions of the communities who were using the spaces. The surveys revealed that the users of the sites noted personal benefits such as increased physical activity, scenic beauty, access to nature and social interaction. Benefits to community quality of life were similar and corresponded with Dorsey (2003) who emphasized that vibrant and active spaces were essential for returning vitality to livable cities.

De Sousa’s findings on the importance of access to nature were in line with a study done by Matsuoka and Kaplan (2007) who conducted a review of literature pertaining to how humans interact with outdoor urban environments. A review of ninety studies written over the past sixteen years emphasized the importance of urban landscape on the well-being of community and individual users. Some of the themes that the authors reviewed included social interaction and nature needs, which were described as, “ways in which human needs are met by the natural environment” (p. 9). The studies showed that contact with nature was important across a variety of natural urban settings, from urban forests and parks to revitalized
derelict lands (Matsuoka & Kaplan, 2007). A significant amount of literature reviewed also referred to the influence of urban outdoor environments on human interaction needs. Specifically, authors were hopeful that social interaction would be increased in communities with properly designed natural urban spaces. Owens (1997) in Matsuoka & Kaplan (2007) emphasized an increase in interactions among adolescents, while Gobster (1998) cited interactions between different racial and ethnic groups as illustrations of improvements to human interaction. Likewise, interactions were improved between urban and neighbourhood residents in general (Matsuoka & Kaplan, 2007).

Because the location of derelict sites often corresponds with the location of low-income neighbourhoods, these areas often see the most benefits from the creation of employment opportunities. Restored economic activity and income for the community can result in improved living conditions for residents (Dixon, 2001). Job creation throughout different levels of the brownfield redevelopment process (from remediation to reuse) presents employment opportunities for a variety of skilled workers (Dixon, 2001) and further develops the skills of workers. Provided that employment is available to those living within the community, new employees can feel a sense of community belonging (Dixon, 2001). Improvements to community development can also be seen in some redevelopment projects as Dixon suggested that residents gain the opportunity to participate in revitalization plans and therefore attain a sense of community participation (Dixon, 2001).

While there have been concerns about building housing on brownfield sites, several pieces of academic literature emphasized the benefits to individuals and communities. In a study of affordable housing on remediated brownfield sites in New Jersey, Greenberg et al. (2001) recognized the need to consider the implications to environmental and social justice of providing housing for poorer people on formerly polluted sites. However, in many affordable housing experiences, the end product is a restored, aesthetically pleasing, and high-quality housing complex. Furthermore, the building of affordable housing on remediated land was recognized as a component in the overall revitalization of urban areas (Greenberg et al., 2001). The provision of recreational areas, closer proximity to services and other amenities highlighted
the development of housing on brownfield sites as, “being in line with land use goals that address both environmental and social justice issues” (p. 535).

**Economic Benefits**

The reported economic benefits of brownfield redevelopment are often contested in literature given the uncertainty of economic return on brownfield projects. While opportunities for long-term economic benefits are foreseen, developers, government and other stakeholders remain concerned about the uncertainty of short-term benefits (Greenberg et al., 2001). Furthermore, the economic potential of brownfield sites is often not fully realized due to concerns over the risks of redevelopment (Meyer & VanLandingham, 2000) that prevent development from proceeding. Lastly, assessment and cleanup costs associated with the remediation of brownfield sites often acts as a barrier to redevelopment (Meyer & VanLandingham, 2000). However, identifying the economic benefits of brownfield redevelopment is a key element in countering the above-mentioned economic barriers (De Sousa, 2003). A significant amount of the existing literature addressed the economic factors of brownfield redevelopment through a brownfield versus greenfield development approach. However, the benefits of brownfield redevelopment that have emerged from these comparisons are valid for the majority of redevelopment projects.

One of the main economic arguments for development on brownfield sites is the reutilization of existing infrastructure and land. Through the comparison of brownfield and greenfield cases in the United States, Greenberg et al. (2001) determined economic advantages including reduced development costs and lower operating costs associated with building on previously developed land. In a study by De Sousa (2002b), which compared brownfield and greenfield redevelopment in Toronto, Canada, a similar conclusion was reached. An analysis of industrial greenfield and brownfield projects concluded that because of lower infrastructure costs, more profit would be achieved through the brownfield projects.

More direct economic benefits for the community and public sector have also been linked to brownfield redevelopment projects including improvements to community economic development through job creation, increased property values and tax revenue (Meyer & VanLandingham, 2000). Once
Contaminated sites are remediated and redeveloped, surrounding areas are more likely to attract business because the negative stigma of the neighbourhood is removed. Adjacent properties are also likely to see an increase in property value once contamination at nearby sites is cleaned up (Meyer & VanLandingham, 2000). Further to that, the tax base of a contaminated site is marginal and once a site is remediated, the tax base of that site is restored (De Sousa, 2002b). Dorsey (2003) referred to a US Conference of Mayor’s survey of cities for evidence on the potential for tax revenue and job creation. The survey results showed that, “199 cities estimate that total tax revenues could reach between $955 million and $2.7 billion a year, while 168 cities estimated that 675,000 jobs could be created” (p.72) through brownfield redevelopment.

The reutilization of developed land for the purpose of new development has been referred to as restorative development. More specifically, the term, which is most associated with the writing and ideas of Storm Cunningham, a speaker and author on revitalization, is defined as, “socio-economic revitalization based on the restoration of our natural and built environments” (Cunningham, July-August 2003, p. 23).

Cunningham suggested the presence of eight restoration industries within the restoration economy, one of which was brownfield remediation and redevelopment, an industry that the author claimed is growing far faster than new development (Cunningham, August 2003). For example, brownfield redevelopment, an industry that is still growing in recognition, now accounts for “billions of dollars annually in the US” (Cunningham, September/October, 2002, p. 30). Cunningham also emphasized the implications that restorative development has for small business opportunities; namely, a growing consulting sector and the creation of new technological opportunities (Cunningham, September/October, 2002).

The existing body of literature outlining the benefits of brownfield redevelopment is indicative of the significance of this growing industry. The literature has provided substantial evidence of the environmental, social and economic benefits of the remediation and redevelopment of brownfields.

2.2.3 Canadian Strategies for Brownfield Remediation and Redevelopment

Canada has increasingly recognized the benefits noted in the previous sections over the past several years and, as a result, strategies for encouraging brownfield redevelopment and overcoming barriers
to redevelopment have been implemented across municipal, provincial and federal levels of government. De Sousa (2006b) dissected the role of each level of government stating that policies for brownfield redevelopment within Canada occur primarily at the provincial and federal levels, while regulations are mostly the responsibility of the provincial and municipal governments. This was thought to result in a gap in policy making since the majority of development occurs at the municipal level.

The federal government’s role thus far has been seen through the provision of financial assistance (De Sousa, 2006b) from the Federation of Canadian Municipalities’ (FCM) Green Municipal Fund, an initiative that provides financial incentives to municipalities to encourage sustainable community development (Federation of Canadian Municipalities, 2009). Additionally, the federal government has had a role in consulting with a variety of organizations to obtain information on such matters as environmental risk management, housing opportunities, and stakeholder perspectives as they relate to the NRTEE Brownfields Strategy (De Sousa, 2006b). A review of literature outlining the role of the NRTEE and provincial and municipal governments will be presented in the following sections.

National Round Table on the Environment and the Economy (NRTEE)

The role of the National Round Table on the Environment and the Economy (NRTEE) is to act as a multi-stakeholder advisory agency to the federal government regarding sustainable development in Canada (National Round Table on the Environment and the Economy, 2008). In 2001, recognizing the benefits of brownfield redevelopment, the Canadian Government mandated the NRTEE to create a strategy for Canada that would encourage brownfield redevelopment. The NRTEE established a multi-stakeholder task force to lead this strategy and through consultations with stakeholders, the 2003 report, “Cleaning up the Past, Building the Future: A National Brownfield Strategy for Canada”, was developed. Building on initiatives in place within provinces and communities in Canada, the strategy focused on a national approach to brownfield redevelopment through three strategic directions:

1. Applying strategic public investments to address upfront costs.

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2. Establishing an effective public policy regime for environmental liability and risk management.

3. Building capacity for and community awareness of brownfield redevelopment (p. 18).

The strategy has been at the heart of several federal, provincial/territorial, and municipal initiatives. Furthermore, the definition used by NRTEE in the 2003 Strategy has become the most widely accepted within the redevelopment industry (with modifications as discussed in Section 2.2.1) (OCETA, 2008). In 2008, the Ontario Centre for Environmental Technology Advancement (OCETA), in partnership with NRTEE, undertook a study for the Canadian Brownfields Network (CBN) to determine initiatives and activities that had been developed in response to the 2003 Strategy. Within each of the three strategic directions, incentives and programs were implemented. For example, under strategic direction 1.5, which recommended the provision of grants for qualifying brownfield sites, the federal government established the Building Canada Fund and The Canada-Ontario Affordable Housing Program and on a national level, the Green Municipal Fund was established (OCETA, 2008). Several additional programs and initiatives were implemented, but will not be discussed in order to limit the scope of the review. The impact of the Strategy can be summarized in a statement taken from the OCETA progress report, which affirmed that the strategy acted as, “a catalyst in identifying, explaining and promoting in all sectors of Canadian society and in all regions of Canada, principles and practices of sustainable development” (p. 20).

**Provincial Government**

Within Ontario, the provincial government has a significant role in brownfield redevelopment. De Sousa (2006b) referred to the role of the provincial government as regulatory in nature. The Ministry of Environment is the main player in terms of policy development, and implementation of regulatory and legislative amendments. Prior to the release of the NRTEE Brownfields Redevelopment Strategy, the Province of Ontario had already amended legislation and regulations in an effort to remove barriers to redevelopment and make the redevelopment of brownfield sites attractive to developers (OCETA, 2008). The *Brownfields Statute Law Amendment Act* was passed in 2001 as part of the Ontario Government’s
Smart Growth strategy and the province’s goal of utilizing brownfield sites as an alternative to greenfield development (Peter J. Smith & Company, Inc., 2001). Through the Brownfields Statute Law Amendment Act, legislative and regulatory amendments were made to a number of Acts including the Environmental Protection Act, Ontario Water Resources Act and Municipal Act. In 2005 the Brownfields Statute Law Amendment Act was fully implemented in O.Reg. 153/04. In May 2007, Bill 187, Budget Measures and Interim Appropriation Act, introduced significant brownfields legislative reforms. Through an extensive stakeholder consultation process, the Ministry of Municipal Affairs and Housing (MMAH) and Ministry of Environment (MOE) continue to address concerns of liability and regulatory delays (OCETA, 2008) and are seeking comments on proposed amendments that will facilitate brownfield redevelopment. These amendments included changes to the following: the record of site condition process, off site liability protection, environmental site assessment requirements, revised standards and streamlined risk assessments.

The MMAH is also a key government agency in the progress of brownfield redevelopment in Ontario. It plays a supportive role, acting as a coordinator and providing education and training to stakeholders. In December 2005, the Office of Brownfields Coordinator was introduced within the MMAH. Shortly after, the MMAH established the Brownfields Stakeholder Group (Ministry of Municipal Affairs and Housing, 2008) made up of representatives from a variety of sectors and organizations; this group has been important for the regulatory and legislative reform process. Subsequently, the MMAH has been involved in providing funding for brownfield redevelopment programs including the Canada-Ontario Affordable Housing Program and administering the Brownfields Financial Tax Incentive Program. They have also been involved in delivering several brownfield training workshops to a variety of stakeholders (Ministry of Municipal Affairs and Housing, 2008).

**Municipal Government**

In the MMAH brownfield redevelopment guide (2007), the municipality was referred to as a facilitator, which corresponded with De Sousa (2006b) and the description of the municipality as being responsible for, “attracting, guiding, and managing most of the brownfields redevelopment activities” (p. 
Since the majority of development occurs at the municipal level, the municipality itself plays a lead role in ensuring that development is in line with the sustainable development goals of the community (Ministry of Municipal Affairs and Housing, 2007). Some of the suggested areas where municipalities play a lead role include the development of affordable housing on remediated sites, creating value in redevelopment, creating open space, protecting cultural assets, addressing abandoned properties and utilizing land-use planning tools (Ministry of Municipal Affairs and Housing, 2007).

Several municipalities in Canada have established brownfields programs, task forces and/or working groups and have integrated brownfield redevelopment into community strategic plans. Environmental Advisory Committees (EACs) continue to play a large role within Ontario with municipalities being granted greater control under the Planning Act (Pim, 1998). Strategic approaches such as the Ontario Municipal Brownfields Redevelopment Toolbox developed by aboutREMEDIATION (AR), “Canada’s leading information resource on site remediation and brownfields redevelopment” (aboutRemediation, 2008) have been helpful in guiding municipalities.

While municipalities across Canada continue to see positive results in brownfield redevelopment projects, De Sousa (2006b) emphasized the need for a more consistent approach to help municipalities track success. Additionally, the author emphasized that successful brownfield redevelopment at the municipal level is dependent on further assistance from upper levels of government. It was suggested that a standardized approach and additional government support would help move the practice of brownfield redevelopment in Canada forward.

2.3 Theories

2.3.1 Public Participation, Planning Theories and Practice

Brownfield stakeholders have emphasized stakeholder engagement in large and complex projects as an approach that should be at the centre of all sustainable development projects including brownfield
redevelopment. In a report by REVIT\(^8\) (2007), the inclusion of stakeholder engagement was said to determine the long-term success of projects because upfront engagement produces several benefits and reduces the risk of conflict further on. A meaningful stakeholder engagement process has the potential for producing benefits that include: community cohesion and a strengthened shared identity, an increase in access to information, and improved communication and trust (REVIT, 2007). Citizen participation as it relates to this research has materialized through a number of approaches, but is best characterized by an examination of planning theories.

According to Walker, Senecah, and Daniels (2006), the interest in stakeholder engagement that has emerged over the past several years has been due in part to frustration in traditional public participation methods. The conventional focus has been agency based or government directed, an approach that the authors stated does not always result in meaningful, shared decision making (Walker et al., 2006). Conversely, Moore and Koontz (2003) discussed the typologies of agency-based and citizen-based consultation as studied by Steelman and Carmin (2002) and suggested that the type of participation varies depending on the community context and complexity of the issue.

Literature on public participation emphasized the need for a ‘meaningful’ component to the stakeholder engagement process and distinguished participation and nonparticipation models. Arnstein (1969) outlined eight levels of citizen participation, which were identified as nonparticipation, degrees of tokenism or degrees of citizen power. Manipulation and therapy fell under the label of nonparticipation and were described as tools used to “educate” or “cure” participants (p. 217). The levels of citizen engagement that were classified as degrees of tokenism included informing, consultation, and placation. In these levels, citizens are heard, but their ideas are not always followed through on as the main decision making still lies with the ‘powerholders’ (p.217). Meaningful citizen engagement occurs at the levels of partnership,

\(^8\)REVIT is an organization based in Europe that “strives to achieve a higher acceptance and better image for revitalized brownfield sites by testing their own models and tools on the local project areas of each partner and reporting best practice examples in this context to other cities and regions in Europe” (http://www.revitnweurope.org/about.php).
delegated power and citizen control, each of which qualifies as a degree of citizen power. However, as previously discussed the type of participation may vary depending on the community context and complexity of the issue. These typologies are, “useful building blocks for theory” (Moore & Koontz, 2003, p.452) and create a common framework for examining the ideas of planning theory (Allmendinger, 2002).

Planning Theories

The characterization of planning that is most relevant to the themes presented in chapters four and five builds on Friedmann (1987) who referred to planning as, “deliberate transfer of knowledge to action in the public domain for the purposes of moving towards a shared vision of the ‘good society’” (as cited in Beard, 2003, p.15). By defining planning in these terms, Friedmann elicited a more inclusive vision in which planning went beyond the professional planner to include civil society (Beard, 2003).

Planning theories are significant for exploring how planning, “can or should help us understand the world, organize facts and experiences, and improve practice” (Whitelaw, 2005, p. 9). Healey (2000) suggested that the role of planning theory is to provide conceptual means for defining how to make, “places more just, livable and sustainable” (p. 920). Planning theory was thought to assist in evaluating what has been done as a means for moving forward (Healey, 2000). The planning theory most relevant to the case studies in chapters four and five, and which helped framed the research in these case studies is collaborative planning.

Collaborative planning is often used in policy-making process such as preparing legislation and when a long-term, face-to-face strategy is appropriate (Innes et al., 1994 in Margerum, 2002). Shared decision making is at the core of each of the three phases that constitute collaborative planning; problem setting, direction setting and implementation (Margerum, 2002). Collaborative planning theory is most closely linked to the work of Habermas and his theory of communicative rationality (Tewdwr-Jones & Allmendinger, 1998). “The role of language and the search for undistorted communication as a basis for consensus and action” (Tewdwr-Jones & Allmendinger, 1998, p.1976) are at the centre of communicative
rationality. Habermas was concerned with finding ways of ‘knowing and thinking’ that went beyond instrumental rationality (Allmendinger, 2002).

Further to Habermas’ ideas, Healey’s (1998, 2003) work on collaborative planning, which was based on the theories of Giddens’ (1984) “conception of the continual interaction between, and mutual constitution of, ‘structure and agency” (as cited in Healey, 2003, p. 106) was also very influential to the concept of collaborative planning. Healey credited Giddens’ ideas on interaction relations as providing a framework through which both planning practices and land and property development processes could be examined (Healey, 2003). For Healey, the importance of finding a framework for examining these interactive processes was strongly correlated with a shift in environmental governance, in which participation in government decision making has increased.9 Five elements of an effective approach to collaborative planning emerged from Healey (1998): “integrative place making, collaboration in policymaking, inclusive stakeholder involvement, use of ‘local’ knowledge and building ‘relational’ resources (p. 1536). Healey discussed the collaborative approach in terms of its ability to foster institutional capacity and notably the way in which it “helps create arenas which can act as learning environments through which stakeholders learn new ways of relating to each other” (p.1542).

2.3.2 Environmental Movements, Theories and Practice

The environmental movement consists of “broad networks of people and organizations engaged in collective action in the pursuit of environmental benefits” (Rootes, 1999, p. 2). Within Canada, these networks comprise, “a sprawling collection of national, regional, and local organizations” (Wilson, 2002, p. 46). While the emergence of the environmental movement itself can be traced back to an earlier date, theories of the environmental movement can be linked to methods such as the resource mobilization approach that emerged in the 1970s as a way of examining social movements (Buechler, 1993). Resource

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9 See section 2.3.2 for a brief description of shifts in environmental governance. See Savan, Gore & Morgan, 2004 and Bingham, Nabatchi & O’Leary, 2005 for a more detailed account of environmental governance shifts.
mobilization theory, as described by Buechler (1993), “views social movements as normal, rational, institutionally rooted, political challenges by aggrieved groups” (p. 218).

**Environmental Governance Shifts**

A shift from government to governance over the past several years has resulted in a changing relationship between government and society. Governance is distinguished from government in the sense that it is thought to be inclusive of stakeholders (Savan, Gore & Morgan, 2004). Additionally, “governance refers to the development of governing styles in which boundaries between and within the public and private sectors have become blurred” (Stoker, 1998, p.17). More specifically, this refers to the processes in which a collective group of stakeholders make decisions about environmental issues (Dorcey & McDaniels, 2001). The shift has been seen through increases in participation of stakeholders in government decision making, government-NGO partnerships and the inclusion of environmental citizen groups in environmental monitoring activities (Howlett, 2001; Savan, Morgan, & Gore, 2003).

**Non-Governmental Organization Influence**

Civil society has seen a rise in the formation of ENGOs since the 1970s (Peters, Covello, & McCallum, 1997), a trend that Laird (1989) attributed to a decline in public confidence in traditional institutions. The increase can also be ascribed to shifts in environmental governance as previously discussed. Gemmill and Bamidele-Izu (2002) emphasized the role of NGOs as central to environmental governance and described said groups to be, “highly diverse, including local, national, regional, and international groups with various missions dedicated to environmental protection, sustainable development, poverty alleviation, animal welfare, and other issues” (p. 3). Consequently, environmental non-governmental organizations (ENGOs) are an important component of environmental movements (Rootes, 1999).

Kober (1998) described the key function of non-governmental organizations (NGOs) as, “providing an environment in which it is possible for those out of power to influence those in power” (p. 3).
However, the author maintained that NGOs also serve a purpose outside of government. Edwards and Fowler (2003) emphasized a shift in the role of NGOs to intermediaries, “working between the grassroots or community level and other levels and sectors of society” (p. 2). Today, NGOs have an integral function as negotiators (Enge & Malkenes, 1993 in Raustiala, 1997) and they are increasingly becoming active on a much greater scale (Raustiala, 1997).

Gemmill and Bamidele-Izu (2002) discussed this impact in terms of the specific roles that NGOs and civil society play in influencing environmental governance. The authors saw five opportunities for influencing governance: “information collection and spreading, policy development consultation, policy implementation, assessment and monitoring, and advocacy for environmental justice” (p. 78).

Simmons (1998) also discussed four ways in which NGOs affect decision makers. As a result of setting agendas, negotiating outcomes, conferring legitimacy and making solutions work, NGOs have been successful at influencing national governments, multilateral institutions, and national and multilateral corporations. NGOs help set agendas by using a variety of campaigns that have forced “leaders and policymakers to pay attention” (p. 84). With regard to negotiating outcomes, NGOs are influential not only in providing an understanding of the science behind certain issues, but also in building trust and breaking deadlocks that can occur between stakeholders. NGOs help confer the legitimacy of projects and play a role in determining whether to “promote or withhold public and political support” (p. 86). Lastly, NGOs are successful at making solutions work by carrying out activities that governments cannot. This tactic was particularly significant for the case studies in chapters four and five in which citizen groups carried out environmental monitoring and prosecutions and pushed the potential risks of contaminated sites forward on the local government agenda.

However, Simmons (1998) also discussed the challenges of working with NGOs. The author recognized that NGOs “have the potential to do as much harm as good” and can “lapse into old-fashioned interest group politics that produces gridlock on a global scale” (p. 83). Consequently, it is essential for NGOs to be engaged in influencing decision making with governments, corporations and institutions through means that consider “their diversity and scope, their various strengths and weaknesses, and their
capacity to disrupt as well as to create” (p. 83).

**Influence through Private Prosecution**

The right to private prosecution within Canada allows citizens and environmental groups the opportunity to be involved in the protection of common resources and the enforcement of environmental law. Proctor (1991) discussed private prosecution as one of two options available to a citizen who believes that an environmental law has been breached. Proctor stated that a citizen can either, “persuade the appropriate government authority to investigate the allegation and proceed with the matter or lay a private information and thereby personally compel the accused to stand trial in a court of law” (p. 112).

While environmental private prosecutions have not been used frequently by citizen groups, nor widely accepted by regulatory agencies, Mossop (1993) emphasized their importance in bringing, “regulatory behaviour into the public arena and hence opening it up to public scrutiny” (p. 6). Private prosecutions also play a large role not only in “drawing attention to gaps in enforcement”, but also in lessening the gap between “public perception and the reality of government regulation” (Mossop, 1993, p. 6; Bendickson, 1997, p. 125).

Mossop (1993) discussed reasons for the hesitation in the acceptance of citizen suits, emphasizing that the public benefits from an enforcement of public rights that private interests do not. This divergence in interests results in an obvious conflict. Furthermore, private prosecutions create government accountability and “empower ordinary citizens to enforce the law”, making environmental decision making “government by the rule of law and not the rule of bureaucrats and Ministers” (p.6).

While the majority of environmental Acts within Canada do not contain provisions that entitle private prosecutors to compensation, opponents have criticized environmental private prosecutions maintaining that citizens and environmental groups use this method as a means of acquiring financial restitution (Environmental Bureau of Investigation, 2000). However, within Canada only the Federal Fisheries Act contains a bounty provision that allows for the awarding of fines to private informants (see Appendix A). Further, Proctor (1991) highlighted the challenges of individually enforcing environmental
laws in Canada and concluded that “the weak-spirited” need not even try” (p. 132).

**Social Capital**

A review of the literature on social capital was pertinent for understanding the influence of environmental organizations given that a community’s ability to work together has been referred to as, “one of the core “transactions” of civil society” (Saxton & Benson, 2005, p. 17). This connectedness is a component of social capital that Coleman (1988, 1990) defined as, “a structure of relations that occurs between and among actors which encourages productive activities” (as cited in Pretty & Ward, 2001, p.211). Fundamental to a civil society perspective is the description of social capital as, “connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 2000, p. 19).

High levels of social capital have been associated with numerous community benefits including improved health, school performance (Saxton & Benson, 2005) and organizational benefits such as increased levels of productivity and production networks (Rudd, 2000; Saxton & Benson, 2005). This association is consistent with the interpretation of Putnam’s (1993, 1995, 2000) idea of social capital as, “a measurable aspect of life with clear political, economic, and social implications” found in Saxton and Benson (2005, p. 16).

Pretty & Ward (2001) categorized social capital into four central aspects: relations of trust; reciprocity and exchanges; common rules, norms and sanctions; and connectedness in institutions. Of particular significance are connectedness, networks and groups, and the nature of relationships since networks of civic engagement are thought of as a key location where social capital is generated (Maloney, Smith & Stoker, 2000).

Putnam (2000) made two important distinctions within the realm of social capital: bridging social capital (inclusive) versus bonding social capital (exclusive). A third distinction, bracing social capital, proposed by Rydin and Holman (2004) is simply an effective mix of the two. Bonding social capital is good for supporting relationships and mobilization within a community or group, while bridging social
capital is better for building external links and spreading information (Putnam, 2000). Each form of social
capital results in a distinct type of network and thus varies depending on the type of work (Rydin &
Holman, 2004).

While Putnam’s conceptions of social capital have contributed significantly to the literature on
social capital, some social theorists have critiqued his theories for being used loosely (Healey et al., 1999 in
Rydin & Holman, 2004). One critique concerned Putnam’s idea that attributes such as trust can both
contribute to, and result from, social capital, a concept that some theorists referred to as ‘tautological’.
However, others have posited that the concept simply suggests the, “existence of strong positive feedback
loops” (Wakefield et al., 2007, p. 431). The idea that the accumulation of social capital can be seen as self
reinforcing (Pretty & Ward, 2001) and a ‘virtuous cycle’ (Putnam, 2000) is significant to the case studies in
chapters four and five of this research in particular because the formation of networks in the Cities of
Hamilton and Kingston both resulted from and contributed to social capital.

Building on the ideas of Wakefield et al. (2007), social capital has implications particularly for the
environmental and land use planning fields because of its potential to facilitate local environmental action.
The authors posited that, “communities with strongly developed networks of reciprocity, shared norms of
behaviours and high levels of mutual trust are thought to be more likely to achieve goals” (p. 429),
including environmental goals such as community revitalization.

Social Learning

Social learning can be thought of as a combination of action and reflection emerging among
groups and individuals in civil society as a result of citizens working together on a common problem
(Webler, Kastenholz, & Renn, 1995; Keen Brown & Dyball, 2005). Social learning theory has its roots in
the work of 19th century social theorist Tarde’s imitation theory (Lanier & Henry, 2004). Bandura (1977)
described social learning theory as approaching, “the explanation of human behaviour in terms of a
continuous reciprocal interaction between cognitive, behavioral, and environmental determinants” (p. vii).
Several models of social learning have since been explored including Argyris and Schön’s (1996) theory of
action perspective (as cited in Maarleveld & Dangbégnon, 1999; Hayward, Diduck & Mitchell, 2007), and Keen et al.’s (2005) five braided strands theory.

The action perspective theory described learning as a process of identifying and correcting errors (Hayward et al., 2007) in which learning is identified as either single or double loop, and in some instances, triple loop learning (Maarleveld & Dangbégnon, 1999). Single loop learning occurs when outcomes of decision making and action are evaluated in terms of how they fit within the current set of goals, expectations (Maarleveld & Dangbégnon, 1999), or governing variables (Sinclair, Diduck & Fitzpatrick, 2008). Double loop learning occurs when a difference in intention and outcome is discovered (Hayward et al., 2007) and in response there is a “change in the set of assumptions on which practices had been based” (Maarleveld & Dangbégnon, 1999, p.269). Maarleveld and Dangbégnon (1999) described triple loop learning as, “learning to learn” (p. 270), a process that allows for the changing of fundamental values and norms (Keen et al., 2005).

Nelson and Serafin (1995) outlined the civics approach as a holistic way of examining the connections between social and natural systems. Placing understanding at the core of the model, the civics approach utilized an integrative decision making process, which included traditional, scientific and local knowledge. This is particularly pertinent for complex environmental issues that require a transdisciplinary approach to decision making. It “recognizes cultural differences in how knowledge is validated and in how reality is understood and investigated” (Diduck, 2004, p. 506).

Keen et al. (2005) identified social learning as a “process of iterative reflection that occurs when we share our experiences, ideas and environments with others” (p. 9). The authors described social learning in the context of environmental management by conceptualizing the five overlapping strands of social learning – reflection, systems orientation, integration, negotiation, and participation. Each strand represents an important process of social learning in which participants:

- Reflect on learning which in turn leads to more learning;
- reflect on links within a system and the multiple processes that can affect the learning process;
- remain open to the integration of new ideas from a variety of sources;
- recognize the need for negotiation for elements to come together successfully; and
• employ a variety of participation typologies (pp. 9-15).

Social learning theory has implications for the cases presented in chapters four and five in which the formation of social networks was an outcome of both the action taken by civil society and the reflection process that followed.

2.3.3 Risk Perception Theories

While quantitative risk assessments are often required for brownfield remediation projects, Wandersman and Hallman (1993) emphasized the importance of also assessing risk perceptions. The authors suggested that, “…resolving questions about environmental threats goes beyond simply trying to convince the public of the validity of numbers derived through quantitative methods” (p. 681). Sjöberg (1980) has cited risk assessments as uncertain (as cited in Wandersman & Hallman, 1993) due to their complex nature and the difficulty in determining accurate exposure levels and chemical presence. Further, because of conflicting expert opinions and the potential for bias, identifying risk solely through quantifiable methods was thought to do, “little to calm the fears of potentially affected residents” (Wandersman & Hallman, 1993, p. 682).

Over the past four decades or more, several theories for identifying determinants of risk perceptions and reactions have appeared in risk related literature. Sjöberg (2000) traced the roots of risk perception research back to the 1960s with the surfacing of nuclear debates. During this time, Sowby (1965) wrote about risks of radiation and methods for measuring other risks in society in order to undertake comparative analyses. However, Starr’s (1969) literature, which made a connection between risk perceptions and subjective factors, was seminal in furthering social research on risk perceptions (as cited in Sjöberg, 2000). Reviewing risk perception and reaction literature is significant to this research since differences in perceived risks were identified as critical factors governing the reactions presented in the cases in chapters four and five.

Environmental Stress and Coping theory, as discussed by Wakefield, Elliot, Cole, and Eyles (2001), is a socially constructed approach to environmental risk. Based on coping theories of Lazarus and
Folkman (1984), the theory strived to explain individual reactions to environmental events and classify them as either active coping or emotion-focused coping. Active coping often materializes in the form of civic or collective action (Wakefield et al., 2001), but can be seen through other reactions including, “actions to mitigate the impacts of exposure” (Wakefield et al., 2001, p. 165). Alternatively, emotion-focused coping is perceived as an individual’s choice to do nothing more than wish for the environmental risk to disappear (Wakefield et al., 2001). While the authors recognized the multiplicity of coping strategies that an individual might undertake and the role that additional factors may play in this response, they suggested that environmental stress and coping theories can, “help contextualize individual and community environmental (re) action” (p. 165).

Hance, Chess, and Sandman (1988) were influential in highlighting the role of ‘outrage factors’ in risk perception and communication. Building on the work of several influential authors who demonstrated the influence of hazard characteristics on people’s perceptions, Hance et al. argued that rather than disregard scientific information provided by risk agencies, individuals should account for both non-technical, or ‘outrage’ factors, and quantitative risk data when making decisions (Hance et al., 1988; Wandersman & Hallman, 1993). Hance et al. (1988) hypothesized that, “the greater the number and seriousness of these factors, the greater the likelihood of public concern about the risk, regardless of the data” (p. 7). By measuring risk in these terms, the authors were able to draw several conclusions about community perceptions of risk. Some of the most significant findings that had implications for risk agencies were:

- Voluntary risks are accepted more readily than those that are imposed;
- Risks under individual control are accepted more readily than those under government control;
- Risks that seem fair are more acceptable than those that seem unfair;
- Risk information that comes from trustworthy sources is more readily believed than information from untrustworthy sources (Hance et al., 1988, p.6).
2.4 Emergence of Conceptual Framework

The themes explored in the literature review helped frame the conceptual framework, which was used to guide the research conducted in chapters four and five. Conceptual frameworks are useful for explaining the main things to be studied – “the key factors, constructs or variable – and the presumed relationships among them” (Miles & Huberman, 1994, p.18). The framework illustrates a reactive approach to contaminated land issues by civil society, one in which citizens and/or environmental groups are not proactively engaged in brownfield remediation and redevelopment issues, but where positive outcomes are still attained. At the core of the diagram is the (re)action taken by civil society, be it NGOs, private citizens, EACs, or community groups. This action is spurred by civil society’s perception of a risk, specifically the perceived risks of contaminated brownfield sites. Civil society’s choice to react raises awareness of the issue through a variety of methods, which in turn influences governance through brownfield remediation and/or redevelopment and government accountability. Throughout the process citizen groups establish social networks based on the four concepts of social capital discussed under Section 2.3.2. They also reflect on the process all the while identifying and correcting errors contributing to the learning process, also discussed in Section 2.3.2. The accumulation of social capital and social learning feed back into the reaction and perception process in a virtuous cycle. The framework is shown in Figure 2-2.
2.5 Summary

The literature review has described the benefits of brownfield redevelopment and reviewed the strategies of the municipal, provincial, and federal governments. The background information attested to the significance of the community in brownfield issues. Accordingly, the review progressed to explore theories of relevance to community engagement practices; environmental movements, public participation, and risk perceptions. Through the conceptual framework, these theories were reduced to four emerging trends; social capital, social learning, risk perception and NGO influence. These trends were particularly relevant to the Belle Park and Rennie Street Landfills, as will be discussed in chapters four and five.
Chapter 3

Methodology

This research utilized a qualitative case study approach drawing on events at two former landfill sites in Ontario to illustrate the significance of civil society involvement in brownfield remediation. The following section presents an overview of the case study approach, including the rationale for using case studies as the primary research tool. The section then reviews the research methods used including semi-structured interviews, literature reviews and participant observation techniques.

3.1 Case Study Approach

A case study approach was employed as the main research strategy to explore the role of civil society involvement in brownfield remediation. Case studies are often the chosen approach when the underlying research focuses mainly on “how” and “why” questions (Yin, 2009). In order to distinguish the case study from other research strategies, Yin (1981 as cited in Yin, 1984) formulated a definition of the approach in which the case study is defined as an empirical inquiry that: “investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 23).

The case study approach was most appropriate for this particular research given that the underlying research questions were focused on determining how civil society influences decision making as it relates to brownfield remediation, and ultimately why it is important to engage civil society in a proactive manner. Further, the case study approach provided the opportunity to examine how social capital and social learning furthered civil society action and how perceptions of risk acted as a catalyst for civil society (re)action. In order to understand why and how civil society was successful in the two specific cases, both explanatory questions, (Yin, 2009), it was important to use an approach that supported the use of multiple sources of data. The research relied on participant observations and interviews as well as primary and secondary documents as the sources of evidence.
During the preliminary stages of the research, the approach was only intended to follow a single case study design drawing on unique experiences at the Belle Park landfill in Kingston, Ontario. However, an overview of secondary research uncovered a second analogous case, the Rennie Street landfill in Hamilton, Ontario, which I predicted would produce similar results. In order to produce more compelling evidence (Yin, 2009), the experiences at the Rennie Street landfill were incorporated into the research design and a multiple case study design was employed.

A framework was designed to guide the case study research, but it remained open for revisiting once the primary data collection and fieldwork were completed. The framework, which was conceptual in nature, was informed by an overview of relevant literature and a preliminary exploration of the two cases. This type of framework is useful for, “generalizing to new cases” (Yin, 2009, p.54), thus addressing concerns about a lack of “external validity” (Yin, 2009, p. 43). Although the cases were representative of unique incidents, the findings of the study have the potential to be applied beyond Hamilton and Kingston.

3.2 Research Methods
3.2.1 Semi-structured Interviews

Semi-structured interviews were conducted with ten stakeholders who were either directly involved in one or both of the cases, or could provide valuable insight based on their profession and knowledge of the subject area. The semi-structured interview method was chosen based on the freedom that it provided both the interviewer and the respondent. This type of interview is particularly useful when the interviewer wishes to explore a predetermined set of themes, but remain open to additional themes that may emerge throughout the interview (Corbetta, 2003). Having this flexibility was especially important given the wide representation and varying roles of each respondent, and the likelihood that certain issues would only be relevant to some of the respondents. Interview questions were based on a review of the grey literature, which highlighted the role of each stakeholder in the respective cases, thus ensuring the validity of the questions to the respective respondents. However, the semi-structured nature of the questions still allowed for exploration of other issues that arose during the interviews. The interview data was triangulated
back to the grey literature to confirm the interpretation. The interviewees included five environmental non-governmental (ENGO) representatives, one Remedial Action Plan (RAP) member, one environmental advisory committee (EAC) member as well as representatives from the public sector, environmental consulting field, and legal profession. The information generated from the interviews contributed background information on the cases, helped formulate the underlying themes, and contributed to the evaluation of the results.

Four of the ten interviews were conducted face-to-face while the remaining six were conducted by telephone. The decision to conduct telephone interviews was based on two factors: the inability of the researcher to travel to the interviewee’s location and/or the personal preference of the interviewee based on convenience and time constraints. Most in-person interviews were conducted at the interviewee’s place of business with only one interview being held outside of the office setting, in a nearby coffee shop. The length of the interviews ranged from 20 to 55 minutes, with the average interview lasting 30 minutes. The interviews were recorded using a digital recorder and fully transcribed; however one follow-up meeting involved note taking in lieu of being digitally recorded. The follow-up meeting was necessary to obtain clarification on one of the cases.

The interviews required approval from the General Ethics Research Board of Queen’s University; approval was received January 24, 2008 and renewal approval was received November 21, 2008 (see Appendix B). Interviewees were given a combined information and consent form prior to the interviews, which provided an overview of the project and outlined interview details, information collection and availability (see Appendix B). Interviewees indicated on the forms whether they permitted the recording of the interviews and whether quotes could be attributed to their names. Because some interviewees preferred not to be identified in the research, a coding system was used for all interviewees (see Table 3-1). This ensured consistencies across the research and confidentiality for those who requested anonymity. For the purpose of anonymity, interview respondents were identified in the research findings according to their affiliation and their involvement in one or both of the cases; Belle Park (BP) or Rennie Street (RS). The following codes were used to identify the affiliations of the respondents:
i. Environmental non-governmental organization (ENGO)  
ii. Environmental advisory committee (EAC)  
iii. Private sector (PS)  
iv. Legal (L)  
v. Government (GOV)

Table 3-1  Interview Data and Affiliation for Belle Park (BS) and Rennie Street (RS) respondents from environmental non-governmental organizations (ENGOs), environmental advisory committees (EACs), the private sector (PS), the legal profession (L), and government (GOV)

<table>
<thead>
<tr>
<th>Interview #</th>
<th>Type of Data</th>
<th>Date</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transcription</td>
<td>February 24, 2008</td>
<td>BP, RS ENGO</td>
</tr>
<tr>
<td>2</td>
<td>Transcription</td>
<td>February 24, 2008</td>
<td>BP EAC</td>
</tr>
<tr>
<td>3</td>
<td>Transcription, notes</td>
<td>February 26, 2008, September 9, 2008</td>
<td>BP RS ENGO</td>
</tr>
<tr>
<td>4</td>
<td>Transcription</td>
<td>March 17, 2008</td>
<td>BP GOV</td>
</tr>
<tr>
<td>5</td>
<td>Transcription</td>
<td>May 12, 2008</td>
<td>BP LEGAL</td>
</tr>
<tr>
<td>6</td>
<td>Transcription</td>
<td>May 22, 2008</td>
<td>BP PS</td>
</tr>
<tr>
<td>7</td>
<td>Transcription, notes</td>
<td>Numerous Conversations between June 2 2008 – February 18, 2009</td>
<td>RS ENGO/EAC</td>
</tr>
<tr>
<td>8</td>
<td>Transcription</td>
<td>June 16, 2008</td>
<td>BP ENGO</td>
</tr>
<tr>
<td>9</td>
<td>Transcription</td>
<td>August 18, 2008</td>
<td>ENGO</td>
</tr>
<tr>
<td>10</td>
<td>Transcription</td>
<td>November 6, 2008</td>
<td>RS, RAP</td>
</tr>
</tbody>
</table>

Each stakeholder was asked an average of ten questions, which were adapted to their individual role in the brownfield remediation cases. Questions were designed to identify: 1) the role of civil society in a brownfield remediation; 2) the perceived success of civil society involvement; 3) the value of the finder’s fee (see Appendix A) as a tool for civil society involvement; 4) how perceived risks affected the reaction of the stakeholders; and 5) lessons learned from the cases. Although the questions guided the interview, the semi-structured nature allowed for the areas under discussion to develop throughout the interview (see Appendix C for a sample of interview questions).

The data were analyzed using a coding system in which information was categorized by key themes from the original research objectives; risk perceptions, lessons learned, social capital, success and
methods of involvement. The questions also sought to understand the respondent’s role, if any, in one or both of the cases and background information on the events leading up to the legal cases. Due to the nature of the semi-structured interview and the tendency of the interviewees to speak about issues outside of the research objectives, not all of the information collected was relevant and was therefore not included in the analysis of the data. The coding system made it easier to identify pertinent information when the interview data was revisited throughout the writing of chapters four and five.

3.2.2 Literature Review

The literature review is an important component of the case study research method. A thorough literature review is the first step in establishing a “methodological path” (Yin, 2009, p. 3). An overview of grey literature contributed significantly to the case study analyses and contextual background information. Examples of grey literature consulted for this study included EAC progress reports, committee meeting minutes, consulting reports, court transcripts and community improvement plans. Grey literature was pertinent for gaining insight into the mandates and objectives of the involved groups and committees as well as the individual municipalities’ brownfield objectives. The court transcripts were valuable for tracing the events of the legal cases against the respective cities. The consulting reports contributed significantly as far as understanding contaminants of concern, quantitative risk assessments and remediation strategies.

The grey literature, in conjunction with a review of academic literature outlining community involvement in brownfield planning, was used to both justify the need for this study and to identify the themes for the research. The literature review was intended to first familiarize the researcher with background information on brownfield redevelopment and relevant legislation. The review also summarized relevant theories central to the community brownfield planning process; public participation, collaborative planning, and radical planning. The final stage involved a review of relevant academic literature as it pertained to the underlying themes of the research; social capital, social learning, risk perceptions and ENGO influence on decision making. The literature review was an imperative component
of the research and informed the development of the conceptual framework used to guide the research in chapters four and five (see Section 2.4).

Examples of search terms used for the academic literature review included terms relevant to brownfield redevelopment (smart growth, urban revitalization, urban planning, greenfields, brownfields), planning theories (public participation, partnerships, collaborative planning) as well as the themes of social learning, social capital, perceptions of risk, and NGO influence. Examples of databases searched include ENVIROnet BASE, EBSCOhost, Web of Science, Google Scholar, Scholars Portal, and JSTOR. Examples of specific journals reviewed for literature included Local Environment, Environmental Planning and Management, Planning Theory, Land Use Policy, Environmental Practice, The Environmentalist, Journal of the American Planning Association, Environments, and Environment and Planning A, and B.

3.2.3 Participant Observation

Participant observation was also used as a research technique for this study. Participant observation is appropriate when the researcher is exploring certain types of issues, for example, when “little is known about the phenomenon (a newly formed group or movement)” (Jorgensen, 1989, p. 12 as cited in Corbetta, 2003, p. 238). Spradley (1980) outlined two purposes of this qualitative research method; to engage in activities appropriate to the situation; and to observe the activities, people, and physical aspects of the situation (p. 54). The author examined different degrees of participant observation; nonparticipation, passive, moderate, active and complete (p. 58). The degree of involvement in this study falls between passive and moderate participation levels. Spradley described passive participation as involving “being present at the scene of action” but not “participating or interacting with the players to any great extent” (p.58), whereas moderate participation involves seeking a balance between observing and participating.

Participant observation was used as a research tool for the purposes of networking and acquiring an understanding of the inner workings of one of the key stakeholder groups in the Belle Park case. By attending meetings of the Kingston Environmental Advisory Forum, I was familiarized with the structure of the group as a whole and the working groups within. Prior to the first meeting I attended, I was asked to
submit a letter outlining my project and declaring my intentions for attendance, which was added to the meeting agenda. This level of involvement provided the opportunity to briefly speak to the group about my research and invite participants to share knowledge and resources. During the meetings I kept notes on issues that were relevant to both brownfield strategies and public communication, and as a result became aware of additional resources and reports that I followed up with subsequent research. The participant observation was also useful for furthering my understanding of KEAF’s role in education (see Chapter 4, Section 4.3.3 and Chapter 5, Section 5.5.5) since the period in which I was attending KEAF meetings led up to the unveiling of a series of educational depots. I had the opportunity to attend the unveiling and hear about partnerships between KEAF and the City of Kingston. Using participant observation as a research tool added to my understanding of KEAF’s dynamics and paved the way for discovering the norms and values underlying their strategies; findings that may not have been possible with other research methods.

3.2.4 Site Visits

Visits to the Belle Park and Rennie Street landfills occurred on November 13, 2007 and February 18, 2009 respectively. The purpose of the site visits was to experience first hand observation of the site locations and their proximity to nearby water bodies and neighbourhoods; photographs were taken of both sites. A secondary purpose of the visit to the Belle Park site was to become familiar with the educational component of the remediation. Observation of the educational depots erected by the Kingston Environmental Advisory Forum (KEAF) added further understanding of an important element of the case.

3.3 Limitations of Research Methods

Using the case study approach contributed valuable knowledge on the events at the Belle Park and Rennie Street landfills; however there were also limitations to using case study research, primarily with the stakeholder interviews and participant observation.

10 The first series of educational depots were unveiled at Belle Park in 2006 as discussed in Section 4.3.3; however, KEAF also unveiled depots regarding sewers and sanitation/water quality on Earth Day 2008 at Emma Martin Park in Kingston, Ontario.
While an equal distribution of stakeholder representation for each case was intended, interviews with Belle Park stakeholders represented a wider range of backgrounds than interviews with Rennie Street stakeholders. This was due in part to the structure of the City of Hamilton government, which had changed since the case, making it difficult to locate key government stakeholders. Consequently, I relied on secondary sources and grey literature to fill the gaps on this particular stakeholder group’s involvement.

A further limitation was the inability to interview one of the key civil society stakeholders, the private citizen who brought forth the charges in the Belle Park landfill case. The citizen’s desire to remain out of the public eye meant interviews were only conducted with one of the two private informants from the respective cases. Consequently, data concerning the citizen’s involvement were collected through an analysis of newspaper articles and accounts from the citizen’s legal representation. Accordingly, the interviews were not representative of a comprehensive evaluation of each of the key players in the case, but rather, were chosen based on an individual’s willingness to participate and their availability.

While the nature of the research adequately allowed for the application of participant observation, time constraints were a limitation to complete observation. Corbetta (2003) defined participant observation as a process in which the researcher “enters for a relatively long period of time into a given social group” (p. 236). Consequently, the authors emphasized large investments in time and psychological resources as potential difficulties of successful participant observation.

As previously mentioned, the case study approach has the potential to be limiting in its ability to generalize to new cases. This limitation was addressed through the development of a conceptual framework and the use of a multiple case design, resulting in more robust evidence. The rationale for choosing a “companion case” (Yin, 2009, p. 62) to the Belle Park landfill case was also to supplement the case findings and respond to gaps where appropriate; for instance the City of Kingston case allowed for interviews with government stakeholders, but not the central civil society stakeholder and vice versa for the City of Hamilton case. While the two cases were unique in their use of the legal process, it is anticipated that the information emerging from the framework related to civil society involvement in brownfield remediation can be extended to civil society participation in brownfield planning outside the legal process.
Chapter 4

The Role of Civil Society in Kingston Brownfield Redevelopment

4.0 Introduction and Context

Good civic governance is the result of a civic community that is marked by active, public-spirited citizenry with egalitarian political relations and a social fabric of trust and cooperation. The social fabric of such a community not only encourages cooperation, it also serves as a crucial actor in understanding the effective management of public resources (Jeffrey et al., 2006)

Over the past decade the City of Kingston, Ontario has developed a strong civil society response to local brownfield issues. A web of social networks has materialized from local controversy and concern over the City’s former industrial lands, bringing with it increased social learning for the community. This response has emerged in the form of collaboration and partnering among citizen groups and environmental movement organizations, and the formation of an environmental advisory committee known as the Kingston Environmental Advisory Forum (KEAF). There are more than 39 environmental advisory committees in the province of Ontario that act in an advisory role to their respective City Councils and KEAF is one such example. KEAF’s formation in 2000 was closely tied with the City’s need for a strategy to deal with its contaminated land sites. Other environmental movement organizations also played an integral role in bringing about social learning with brownfield issues in the City. For example, Ecojustice (formerly Sierra Legal Defence Fund) became actively involved in the brownfields process in Kingston and the citizen’s group, the Environmental Bureau of Investigation, was formed in direct response to concerns that arose over a local contaminated site. The emergence of social networks including citizen groups and an

The advisory committee was a positive result that served to influence decision making in brownfields remediation and redevelopment in the City.

The Chapter explores the role of civil society organizations in the redevelopment of brownfields in Kingston. The Chapter is presented in 3 sections. Section 8.1 presents the governance processes for brownfield redevelopment in Kingston including civic governance, municipal strategic planning, community strategic planning and brownfield redevelopment planning. Section 8.2 discusses the theoretical and conceptual aspects of civil society and governance. Section 8.3 presents results from case study research on the role of civil society organization in Brownfield redevelopment in Kingston including the roles played by KEAF, The Environmental Bureau of Investigation, and Ecojustice. The chapter concludes with a series of lessons learned that could prove useful to other communities in Ontario and Canada involved in brownfield remediation and redevelopment.

4.1 Brownfield Redevelopment in Kingston: Defining a Community Strategy and Brownfield Plan

As the first capital of Upper Canada, the City of Kingston has a long history of civic governance at both the municipal and regional levels. Many of its citizens have a long history of public and community service at all levels of government and also with volunteer organizations.

In 1998, the City was amalgamated with the neighbouring Townships of Kingston and Pittsburgh and the new City inherited three Official Plans, each of which was adopted at different times; City of Kingston (1995), Kingston Township of Kingston (1997) and Pittsburgh Township (2004) and each with its own land use policy approach. Amalgamation set into process the development of an updated Official Plan and Zoning By-Laws, with direct input coming from community organizations that would assist City Council in setting priorities that would be included in the Official Plan.

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12 The 1974 consolidated Official Plan was amended in 1997 and finally approved by the Ministry of Municipal Affairs and Housing in 2004.
4.1.1 Municipal Strategic Planning

Corporate strategic planning for municipalities in Ontario is legislated under the Planning Act, which sets the ground rules for land use planning and provides the basis for various tools such as Official Plans, Zoning By-Laws, Secondary Plans, Public Consultation and Participation. Under the Act, recognition is given to the role of municipal councils in local planning and its terms facilitate the integration of provincial interests into land use planning decisions.

The new City of Kingston inherited five main Zoning By-Laws on amalgamation, two from Kingston Township, two from the original City and one from Pittsburgh Township. City officials are currently carrying out a strategic planning process to develop an updated Official Plan and Zoning By-Laws – a process that is expected to be completed by 2009. As background to this process, a number of background studies were completed. Examples are: the Urban Growth Study; Transportation Master Plan; Natural Heritage Study; and Regional Commercial Study.

Subsequent steps in the corporate planning process include a review and update of the Official Plan and Zoning By-Laws by City Council and approval by the Ontario Ministry of Municipal Affairs and Housing, public consultation throughout the process, with the possibility that stakeholders or members of the public may appeal to the Ontario Municipal Board, before final approval.

4.1.2 Community Strategic Planning Process

For many jurisdictions, the community strategic planning process encompasses 5 phases (Federation of Canadian Municipalities, 2007). These are:

1. Structure the planning process.
2. Create shared understanding of community successes.
3. Determine and analyze strategies for community success.
4. Identify initiatives to move from current reality to success.
5. On-going monitoring and implementation.
Structuring the community strategic plan differs for each jurisdiction, but as a general rule, the plan, once formulated, can be used to further develop: a) a municipal development plan, in which the vision and directions are used to update the policies and vision of the Official Plan; b) a community plan, in which the vision and directions help to guide decision making for new communities an the redevelopment of existing neighbourhoods and brownfields; and c) a capital plan, in which the actions identified in the strategic plan are used to develop the capital and operating budgets for the municipality for needed infrastructure.

As a general rule, the planning exercise is based on forecasting rather than backcasting. In other words, it is based on the identification of a goal (or goals) and the creation of plans to reach that goal(s) instead of planning based on past experience and successes. Dimensions that are included in the community strategic plan usually include the key pillars: governance; culture; environment; economic; and social.

4.1.3 City of Kingston Community Strategic Plan – Historical

The FOCUS Kingston Community Strategic Plan was initiated by City Council in 1998 and a Community based Steering Committee was created under a City By-law to develop this Plan. As part of its due diligence, this Committee engaged in public consultation with stakeholder organizations, community forums and City staff discussions. As a result of this initiative, over 1000 City residents and City staff provided input into a 10 year vision for the community, summarized as follows: “Kingston is a healthy community where history and innovation thrive. People are our most valuable asset so we take pride in our local government and ensure prosperity is widely shared among our residents” (Focus Kingston, 2006).

The key elements of this vision were summarized as follows:

1. **A Healthy Community.** We respect and protect our built and natural environments in an environmentally sound and fiscally responsible manner.

2. **A Community with a Proud History.** As Canada’s first capital, we are committed to protecting our cultural heritage for future generations.

3. **A Community Where Innovation Thrives.** We recognize, encourage and support the work of our citizens and community organizations. Our neighbourhoods are safe and our citizens benefit from
our many health, education, community and institutional resources. Our urban and rural communities live in harmony.

4. **A Community That Takes Pride in its Local Government.** Our local government provides strong leadership. Our citizens receive fair representation and have access to their elected representatives and municipal staff. We value the services we receive from municipal workers and support them.

5. **A Community That Ensures That Prosperity is Widely Shared Among its Residents.** We support business growth and seek new opportunities. Our skills training and life-long learning programs will see us recognized nationally and internationally for our imaginative and dynamic tourism and investment marketing strategies. We value our small business and rural and urban communities for their contributions.

Community focus group sessions co-hosted by the Steering Committee and 15 individual community organizations resulted in the definition of 12 priority areas for development in the City. These were:

1. **Access.** Improved access to information and services.
2. **Culture.** Stewardship and augmentation of the arts, parks and heritage.
3. **Economic prosperity.** Ensure a balanced approach to community prosperity.
4. **Infrastructure.** Effective long-range infrastructure planning.
5. **Environment.** Assurance of clean air, clean water and clean land.
6. **Local governance.** Ensuring that the City “gets its house in order.”
7. **Planning.** Completion of the Official Plan and the Transportation Master Plan.
8. **Affordable housing.** Facilitate and organize affordable and accessible housing for those in need.
9. **Support for volunteers.** Provide recognition and support for community service.
10. **Promotion of neighbourhood associations.** Recognition that they provide the community building blocks.
11. **Our Young people.** Recognition that they are the “future”.
12. **Our Elders.** Ensuring that the needs of our elders are effectively addressed.

City Council determined in 2001 that an implementation committee made up of community ‘champions’ for each of the priority areas 1 – 8 would develop action plans to realize the mandates for each of these areas. In 2004, the new Council decided that the focus would be on areas #2 (expanded to include recreation) and #4, followed by tangible progress in areas #3, 5 & 8. The key areas for development under Environment were:

a) improve water quality;
b) improve air quality;
c) improve land quality; and
d) environmental assessment and awareness.

The Brownfields redevelopment strategy is a principal deliverable for land quality improvement.
4.1.4 City of Kingston Brownfields Redevelopment Planning

The City has a dedicated Environment Division that works closely with community-based organizations such as KEAF and City corporations such as Utilities Kingston to curb pollution as well as to manage and implement action plans to restore environmentally sensitive municipal properties and infrastructure. These include closed landfill sites and other properties that have been polluted through past industrial operations.

The brownfields redevelopment strategy is one such initiative that has been launched by the City. The overall objective of this initiative is to encourage clean up and redevelopment of public and private sector lands within the municipality and to transform under-utilized or contaminated lands into safe and useable properties by virtue of municipal policies and tax-based incentives that encourage clean-up.

The indicators established for this plan were:

1. Compilation of an inventory of brownfield properties within the municipality; and
2. Creation of a model that includes strategies and policies to assess, market, utilize and redevelop contaminated and under-utilized private, public and abandoned properties.

Criteria used for monitoring progress and accountability during implementation of the Plan were:

1. The number of hectares of cleaned-up land; and
2. Revenue generated to the municipal tax base as a result of redeveloped brownfield properties.

Kingston has developed a robust strategy and plan to deal with brownfield redevelopment. The next section explores the civil society perspective from a theoretical and conceptual view as a basis for evaluating the role of environmental movement organizations in brownfield redevelopment in Kingston.

4.2 The Civil Society Perspective: Theory and Concepts

Civil society, mainly through the environmental movement, plays a critical role in environmental protection and in moving society toward sustainability. Civil society is described as “the activity of citizens in free association who lack the authority of the State” (Swift, 1999, p. 4) including “the population of organizations trying to change some aspect of society, including government policy, cultural values,
corporate practices, and the activities of intergovernmental organizations” (Van Rooy, 1999, p. 9). The environmental movement is one of the main components of civil society. The environmental movement in Canada consists of thousands of organizations operating at local, regional, provincial, national and international scales. These organizations work on a wide range of issues (e.g., wilderness preservation, pollution, waste, energy, mining, agriculture, wildlife, life styles, monitoring, and stewardship) and in many cases, channel the environmental concerns of Canadians into collective action (Wilson, 2002).

Environmental movement organizations are distinct organizational entities that make up a major part of the environmental movement (e.g. environmental non-governmental organizations (ENGOs), voluntary organizations and community groups).

Environmental movement organizations (EMOs) have successfully influenced governments and the private sector to address a wide range of environmental issues and problems. Evidence from the literature suggests that EMOs have:

i. Successfully lobbied governments to create departments of the environment and changed laws governing the environment (Van der Heidjen, 1999; Wilson, 2002);

ii. Forced ecological and societal value considerations into the environmental policy process (Mangun & Henning, 1999);

iii. Acted as agents of ecological transformation including moves to the precautionary principle, responsive regulation, pollution prevention, cleaner production and ecological lifestyles (Jamison & Ring, 2000);

iv. Forced ecological and societal value considerations into private sector activities through certification and boycotts (von Mirbach, 1997);

v. Provided leadership in the areas of environmental stewardship (Lerner, 1993) and direct engagement with citizens through such activities as home energy assessments;

vi. Influenced planning through advocacy, alternatives formulation, and monitoring (Hunsberger, 2004; Jackson, 2004; Lukasik, 2002; Pollock and Whitelaw, 2005; Whitelaw et al., 2003).

4.2.1 How EMOs Influence Decision Making

Simmons (1998) identified four tactics that non-governmental organizations (NGOs) use to influence national governments, multi-lateral institutions and corporations. Although Simmons’ analysis is
based on international NGOs, the scheme works well for considering how EMOs achieve influence. The four tactics are: setting agendas; negotiating outcomes; conferring legitimacy on negotiated outcomes; and implementing solutions.

Environmental movement organizations, through a range of activities, set agendas, forcing government leaders and policy makers to pay attention. These activities include lobbying, press declarations, direct-democratic events, and demonstrative events such as petitions, occupations, blockades and rarely violent events (Van der Heidjen, 1997). Environmental movement organizations have also gained extensive experience in negotiating outcomes, in some cases through collaborative processes. In many cases, once EMOs have their issues placed on the agenda, governments will invite them to participate in negotiating outcomes in an effort to ensure legitimacy. Examples include efforts in park creation (Ontario’s Lands for Life process) and land use planning (Oak Ridges Moraine Conservation Plan).

Environmental movement organizations can promote or withhold public or political support for decisions reached. An example of an EMO conferring legitimacy on an issue in Ontario occurred with the Lands for Life park planning process. After placing their issues on the government’s agenda, the Partnership for Public Lands, a coalition of EMOs, helped negotiate a deal to increase the amount of protected area in Ontario. Once satisfied with the agreement, the Partnership then conferred legitimacy on the Province of Ontario’s decision.

Environmental movement organizations often implement solutions or carry out activities on the ground that government will not, or cannot, accomplish. This phenomenon has increased recently in response to government downsizing (Simmons, 1998). Popular EMO activities include land acquisition, stewardship (Lerner, 1993) and monitoring (Whitelaw et al., 2003; Pollock & Whitelaw, 2005).

4.2.2 Institutionalization, Social Learning and Social Capital

Institutionalization, social learning and the development of social capital, may occur as EMOs participate in activities designed to influence change. In Canada, institutionalization has been “equated with bureaucratization, professionalization and routinized politics” that leads to effective use of capacity,
in机构 memory, and organizational stability, all elements “needed to maintain good access to decision-makers and strong relationships with sympathetic insiders” (Wilson, 2002, p. 61). Money is usually easier to secure from governments and Foundations if organizations have a certain degree of institutionalization. Governments view EMOs as more stable if they have boards and business plans; foundations in many cases require groups to have charitable status, a sign of institutionalization. Charitable status carries constraints that force EMOs to be less confrontational. Certain EMOs will develop the organizational infrastructure necessary to compete for such dollars, in the process moving toward institutionalization (G. Francis, personal communications, 2000-2005). This process also leads to more sophisticated organizational structures and procedures, and requires skill development in the areas of fundraising and negotiating. Political opportunity structure is determined by the quality of access to the political system, room for new topics to be discussed like the environment, the autonomy of environmental agencies of the State, and reputation of the EMOs involved (Jimenez, 1999; Van der Heijden, 1999). The greater political opportunity structures, the more likely EMOs will choose to institutionalize. However, some EMOs resist the compromise required by institutionalization (Rootes, 1999). This grassroots segment of the environmental movement may be invaluable as it provides the conscience for the movement (Rootes, 1999).

Learning involves detecting error and correcting it based on assessing intention with outcomes (Diduck, 2004). Single loop learning involves behavioural change focused on achieving existing objectives in the context of established norms and values. Double loop learning occurs when mismatches are corrected by first questioning and changing underlying values, and then changing behaviour. Diduck (2004) suggested that double loop learning “is increasingly being used in thinking about complex resource and environmental problems” (p. 505).

Social capital is a resource that facilitates collective action including collaboration (Gertler, 2000; Maloney et al, 2000; Sobels, Curtis & Lockie, 2001). It is the combination of obligations, expectations, trustworthiness (Maloney et al., 2000), quality of information flows, norms, values, attitudes (Sobels et al., 2000) and rules that frame relationships (Maloney et al, 2000). The quality and use of these assets
determines the social capital available (Sobel et al., 2000). Three types of social capital have been articulated in the literature. The first is bonding social capital. Bonding social capital involves networks that are primarily concerned with building strong links within a community or group. The second is bridging social capital. Bridging social capital involves networks that are concerned with building links between communities or groups of actors (Putnam, 2000). The third is bracing social capital where networks are concerned with strengthening links across and between scales and sectors. Bracing social capital provides a kind of “social scaffolding” (Rydin & Holman, 2004, p. 122-123).

Social capital is generated by networks of civic engagement (Maloney et al., 2000). Social capital contributes to policy development and outcomes in various areas including environment “education, health, crime, welfare, economic growth, the performance of political institutions and the development of effective and democratic governance…” (Maloney et al., 2000, p. 802; Rudd, 2000).

Networks are critical to the generation of social capital. Networks attract government resources, facilitate learning, improve communication and increase effective use of volunteer time. Networks with these characteristics can function as public forums and lead to politically relevant organizations (Sobels et al., 2001). Political opportunity structures are critical to this aspect of the study of social capital. The creation of social capital is tied to the quality of the political opportunity structures (Maloney et al., 2000; Heffron, 2000; Murray, 2000). Institutional designs that support social capital also promote relationships with the voluntary sector, provide opportunities for public participation, and are responsive through decision making (Lowndes & Wilson, 2001).

The concepts and theories discussed above related to the role of civil society in environmental management including how EMOs achieve influence, institutionalization, social learning and social capital were applied through a case study of Brownfield planning in Kingston discussed below.
4.3 Brownfield Planning in Kingston: The Formation and Involvement of Environmental Movement Organizations

The following accounts of civil society involvement during and after the Belle Park case were gathered through primary research methods including attendance at environmental advisory committee (EAC) meetings and interviews with stakeholders from environmental non-governmental organizations (ENGOs), municipal government, an environmental consulting firm and the previously mentioned EAC. Secondary research included a review of local newspaper archives, City Council reports, EAC reports, ENGO websites and a literature review on the themes of social capital, social learning, risk perceptions and non-governmental organization (NGO) influence.

4.3.1 History

The 1998 City of Kingston amalgamation brought with it an identified need for both a community strategic plan and an environmental strategy. The Kingston Official Plan that was in existence at the time of amalgamation reflected priorities of an earlier vision for a sustainable future in Kingston and did not reflect an understanding of the environmental issues for the newly-amalgamated City (KEAF, 2000). At the time of amalgamation, the Belle Park landfill case was ongoing and the City had identified an urgency to create an environmental strategy because of the likelihood of public controversy and legal action. City Council created the Kingston Environmental Advisory Forum (KEAF) in 2000 to provide advice to Council on environmental issues and to assist in the development of an environmental strategy for the City. One of the objectives was to establish a roadmap that would enable the City to address liability issues resulting from any environmental challenges and the effect on the public’s perception of the City (KEAF, 2000).

The former landfill, where the City’s Belle Park Fairways Golf Course is located (see Chapter 5, Figure 5-2), is illustrative of one of the most controversial challenges that the City of Kingston has faced since amalgamation. In dealing with this challenge, two benefits were realized. Firstly, Council had to identify the City’s environmental priorities and issues quickly, and secondly, several social networks were
established as a result of the local controversy and concern over the City’s former industrial lands. The overall benefit to the City was an increase in social learning and social capital as a result of these actions.

The site first generated public concern in the early 1990s, when pollutants were suspected to be leaching into the Great Cataraqui River (Outwit & Yanagisawa, 1997). In 1997, a private citizen laid charges against the City, using a provision in the Federal Fisheries Act that encourages citizen involvement in the protection of common resources and enforcement of environmental law through private prosecution and fine sharing (see Appendix A). The charges were based on seepages from the landfill detected in late 1996, which were deemed to be deleterious by the informant and her legal representation Sierra Legal Defence Fund (now Ecojustice) (City of Kingston, n.d.). Subsequently, the Ministry of the Environment laid charges against the City for similar offences that took place in early to mid 1997, resulting in a total of eight charges against the City.

In December 1998, the City of Kingston was convicted on four of the charges brought by the citizen, and the City and its former director of environment were convicted on three of four charges brought by the Ministry of the Environment (Environmental Bureau of Investigation b, n.d.). Fines were levied against the City along with an order to cap the landfill with an impervious clay cap (City of Kingston, n.d.). However, in 2002 the decision was appealed by the City due to concerns over the prosecution’s testing methods, the lack of evidence proving the effectiveness of capping the site, and the negative impacts to the City of accepting a guilty verdict. After a series of appeals, the Ministry’s conviction against the City and former director was upheld, but the charges laid by the citizen were overturned (City of Kingston, n.d.).

Although the charges brought against the City by Ecojustice were overturned, the work of environmental organizations was recognized by the key stakeholders of the process for bringing the issue to the forefront. Alongside the City’s newly established KEAF, the groups’ ability to influence decision making and generate social networks serves as a good example of the role that civil society can play in municipal environmental management.
4.3.2 Civil Society and Risk Perception

Brownfield issues provide an excellent lens for examining the differences in perceptions of, and reactions to pollution. Within Kingston, varying perceptions of risk from a community and corporate perspective, respectively, no doubt enhanced concerns about pollution. In fact, many stakeholders saw it as the driving force behind the Belle Park litigation. When concern over Belle Park leachate first surfaced, the public perceived a risk to the health of the community, while scientific studies commissioned by the City deemed the actual risk to be insignificant (Welbourn, 1999). The struggle lay in determining what an acceptable risk to the community was and how the existing risk could best be dealt with.

Methods for examining risk differ greatly between social-community and social-corporate approaches. Whereas the former is driven by human perceptions of risk to the individual and the community, the latter is often driven by economic, legal, health and environmental risk. While quantifiable risk is the appealing method for assessing risk, it is important to recognize that quantitative risk assessment does not provide all the necessary information for decision making (Wandersman, 1993). Hance et al. (1988) in Wandersman and Hallman (1993) suggested that scientific information be used in combination with social, political and ethical characteristics of the risk, or what he referred to as outrage factors. The use of this approach signified that risk perceptions based on factors other than scientific information should not be dismissed as irrational.

An analysis of existing literature, along with information gathered from stakeholders in the Belle Park case, revealed the complexities of risk perception and communication. It can be a difficult task for environmental organizations and advisory committees to advise on risk information. In the case of contamination issues, the ideal environmental organization acts as a bridge between the community and corporate risk perceptions. This form of bridging social capital places emphasis on networks that are concerned with building links between communities or groups of actors (Putnam, 2000). The use of bridging social capital is crucial for ‘getting ahead’ in brownfield remediation and for establishing a common approach to risk perception. Throughout the course of the legal case, organizations such as KEAF
were successful at bridging the gap between the community and City Council by working toward common goals and communicating scientific results clearly.

4.3.3 The Kingston Environmental Advisory Forum

From its origin in 2000 to the present day, KEAF has played an important role in education, awareness and remediation of brownfields in the City of Kingston. Bringing key stakeholders together and capitalizing on existing networks, including technical experts and academic professionals, the newly formed advisory group was able to quickly engage and respond effectively to meet the City’s needs. KEAF is a civil society organization that exists on the collaborative end of the environmental movement spectrum, working very closely with local government and fulfilling the role of an advisory committee. However, although KEAF is very much quasi-autonomous in terms of its elected members and funding, it is still functions as community-based group (KEAF, 2000) consisting of a diverse membership including public representatives appointed by Council from the community, technical representatives from Queen's University, the Royal Military College, St. Lawrence College, the Cataraqui Regional Conservation Authority and the Kingston, Frontenac, Lennox and Addington Health Unit, as well as members of Council (KEAF, 2000).

Environmental Advisory Committees (EACs) have an increasingly important role within the province of Ontario. With cutbacks to provincial government budgets, more decision-making is occurring at the municipal level and EACs are becoming more influential in local decision making matters. While there are over 445 municipalities in Ontario, only approximately 39 are actively engaging local citizens through official environmental advisory committees (Ontario Nature, 2006). Older, more established committees often act as models for other municipalities looking to establish an EAC. However, each EAC in Ontario is distinctive in that while it addresses a broad range of environmental concerns, its mandate and main focus are generally correlated with community concerns. The EAC movement is driven by civil society since the community plays a large role in determining what the focus will be by voicing concerns to City Council and creating awareness around specific environmental issues (Ontario Nature, 2006). KEAF is
one EAC in Ontario whose focus has been guided by the community through a number of community consultations and through a response to civil society concerns.

Prior to amalgamation, the Kingston Environmental Forum and the Kingston Environmental Advisory Committee existed as separate entities. The former consisted essentially of volunteers from the public, while the latter was made up of mainly technical people from knowledge-based institutions in the City. In January 2000, when City Council recognized the need to develop a long-term environmental strategy, these two groups were mandated to consult with the public and advise Council. Under an amendment to City Bylaw 98-1\(^\text{13}\), the two groups were combined to form a single entity that would report directly to Council (KEAF, 2000).

Inner Harbour contamination, which included leachate from the Belle Park landfill, was one of the priority issues referred to KEAF for public consultation. Shortly after its formation, KEAF undertook a series of public workshops at which community members and organizations advised on key environmental priorities within the newly amalgamated City. During the consultations, the public raised concern over the City’s current plan with regard to both its insufficiency at addressing the complete range of environmental issues and the extent to which the plans were reflected in development practice (KEAF, 2000).

Community members highlighted the Inner Harbour as a top environmental priority. At the time, one of the identified concerns with the Inner Harbour was the contamination entering into the Great Cataraqui River from both industrial development and the Belle Park landfill. It became evident through the workshops that the community had a desire for access to information on environmental matters and as a result, public awareness and involvement emerged as an environmental priority.

In 2000, in the first report to Council, “Towards a Sustainable Future: Environmental Priorities for a New City of Kingston”, KEAF presented five recommendations and communicated their willingness to assist Council in developing a strategy to address each. The recommendations presented in the report to

\(^{13}\) The Council Procedural by-law sets the rules and regulations to be observed in all proceedings of Council, Committee of the Whole and Committee meetings (http://www.cityofkingston.ca/cityhall/bylaws/).
Council were reflective of the City’s situation during this time. Recommendations to Council in the report were:

1. That Council establish a Kingston Environmental Strategy.
2. That Council expand its public environmental awareness program.
3a. That existing data on the Inner Harbour be assembled and analysed to establish benchmarks and identify deficiencies.
3c. That Council adopt a comprehensive plan for the Inner Harbour.
4. That the City continue to maintain these initiatives as a high priority.
5. That KEAF continue to examine the high priority environmental issues identified in this report (KEAF, 2000).

While KEAF also recognized and addressed priorities that extend beyond the Inner Harbour and brownfield issues to include conservation or ‘green’ issues and planning, the focus of the first report to council had an emphasis on brownfield issues and ensuring that “a legacy of contaminated sites should not be left for future generations” (KEAF, 2000).

In order to address each of the recommendations outlined above effectively, KEAF established four working groups. Of interest here is the Inner Harbour Group (IHG), which was formed to deal with recommendations 3a through 3c. The IHG developed a Terms-of-Reference and commissioned a study to compile all the existing reports and documents available on the Inner Harbour so that they would be able to identify desired endpoints and perform a gap analysis. This information was compiled into a report titled, “The Kingston Inner Harbour – Great Cataraqui River Data Compilation and Gap Analysis Study” and presented at a public workshop in conjunction with a video tour of the Inner Harbour (KEAF, 2002).

As a result of the establishment of the working groups, KEAF was able to implement solutions effectively by carrying out activities, that at the time, the City of Kingston did not have the capacity to do. The diversity and expertise of the working groups allowed KEAF to work outside traditional government frameworks, while setting the stage for environmental priorities in Kingston.

The Belle Park landfill was a high priority issue and KEAF was reactive in developing a strategy to deal with related education and technical solutions. KEAF’s capacity allowed the group to extend its networks, resulting in an increase in the number of researchers involved in the Inner Harbour. The outcome was the performance of the previously mentioned gap analysis. Because of KEAF’s strong scientific and
engineering representation, they were able to provide supervision on this project and determine what was leaching into the Great Cataraqui River (City of Kingston, 2007). They were also able to identify where gaps existed, which was of particular importance because of the court proceedings that were occurring at the time and the community’s instinctive reaction to the pollution.

KEAF also played a role as an educator, creating public awareness of the remediation efforts at Belle Park. The group facilitated the creation of three educational depots that were erected at various stations around Belle Park and unveiled to the public in 2006 (see Appendix D). The signs provide a historical overview of the landfill, discuss environmental impacts, and describe ongoing remediation efforts. The signs also support engagement by encouraging citizens to think about waste issues (Cleghorn, Anderson, & Remenda, 2009). The new forum for public education created an opportunity for community members to engage in new learning partnerships. By reflecting on remediation efforts at the park, KEAF was successful at turning experiences into opportunities for learning.

Over the past several years KEAF has also been influential in terms of negotiating outcomes. As Simmons (1998) identified, non-governmental organizations are instrumental not only in providing an understanding of the science behind certain issues, but also in building trust and breaking deadlocks that can occur between stakeholders. As an EAC representative indicated, KEAF has been integral in bringing key players to the table to discuss the remediation of the Inner Harbour. This has been especially important for areas such as Belle Park that have the added complexity of the division of responsibility. While the Inner Harbour is located within the City, the municipality does not own the bed of the harbour and therefore Transport Canada is responsible south of Belle Island and Parks Canada is responsible north of the island. By capitalizing on its strengths, KEAF has been successful in providing a forum for negotiations to occur among stakeholders, a characteristic unique to the environmental advisory committee. KEAF has achieved outcomes that the City would not necessarily have been able to carry out on its own.
4.3.4 The Environmental Bureau of Investigation

Another civil society organization that played a distinctive role in progressing brownfield clean-up in Kingston was the Environmental Bureau of Investigation (EBI). A project of the Energy Probe Research Foundation (EPRF), the EBI was launched in 1997 as a citizen’s group that investigated pollution sources and in some cases prosecuted those responsible for the pollution (Environmental Bureau of Investigation a, n.d.). Although the EBI is not currently active, their work serves as a precedent and resource for community groups and citizens wishing to participate in the protection of the environment. The EBI’s role in advancing brownfield redevelopment in Kingston began when the private informant, with assistance from EPRF and Ecojustice, charged the City of Kingston under the Federal Fisheries Act for contamination that was leaching into the Great Cataraqui River from the Belle Park landfill. While the case was still ongoing, the private informant and a legal representative formed the group that would act as an investigative and technical resource both for the ongoing case and for future cases. Working with Ecojustice, the EBI was successful at getting the City to respond to their concerns. While the City was dealing with the problem over time, a City representative noted that the group was successful at accelerating the pace at which the City was required to respond to it.

The formation of the EBI is an example of the social capital that can be generated from networks of community involvement. EBI was launched in direct response to a desire to share resources on what the founders had learned from pollution prosecution cases. Although the founding members had worked on cases prior to the City of Kingston Belle Park landfill prosecution, the group was formally established following the investigation of the Belle Park landfill site. They recognized that there was a need for well-organized, experienced investigative resources to be available to communities.

Additionally, EBI’s work in the City of Kingston offered an example of the social learning that occurs when environmental organizations become involved in brownfield remediation. In this case, social learning occurred not only through the formation of social networks and the creation of the bureau itself, but also through reflection of the process. By reviewing and assessing errors, the EBI was able to produce a valuable learning tool, “A Citizen’s Guide to Environmental Investigation and Private Prosecution”
(Environmental Bureau of Investigation, 2000). The creation of the guide served as an opportunity for the newly-formed EBI to share their hands-on experiences and encourage the public and civil society to step up in the face of government cutbacks. This guide was also created to fill a gap in existing literature. While the EBI acknowledged that there were books that skimmed the surface on sampling techniques for legal action, the guide combined information from existing guides, and provided examples from their own investigations that could serve as a model for the intended communities (Environmental Bureau of Investigation, 2000).

The potential for citizens and community groups to become involved in contaminated land cases was advanced through the City of Kingston case as emphasized in the following passage from “A Citizen’s Guide to Environmental Investigation and Private Prosecution”:

Before the City of Kingston charges, environmental texts by leading lawyers and academics said that environmental groups would be hard-pressed to acquire the meticulous expertise and credibility required to win in court....As a result, few environmental groups ever tried the criminal courts, and when they did, they rarely expected to succeed. Now that a precedent has been set, showing that environmentalists can stop pollution through investigations and prosecutions, we hope more citizens will keep these options in mind as they seek to protect the environment (Environmental Bureau of Investigation, 2000).

In addition to creating a guide for citizens to consult when conducting their own investigative work, the EBI’s work in Kingston led to two subsequent cases in Ontario as well as involvement in cases in both Quebec and New Brunswick. The investigations have led to the clean-up of four contaminated sites as well as the largest fine for an environmental crime ever levied against a municipality in Canada\textsuperscript{14} (Environmental Bureau of Investigation, 2001). Moreover, the creation of the EBI has also led to the establishment of other influential organizations including Lake Ontario Waterkeeper. Following a separate successful private prosecution in the City of Hamilton\textsuperscript{15}, of which the EBI was a part, a donation was made to the bureau that was then used in the launching of the Lake Ontario Waterkeeper, a grassroots environmental group that aims to restore and protect the waters of the Great Lakes through stewardship programs, environmental pollution patrols, and community efforts (Lynch, 2008).

\textsuperscript{14} R v. City of Hamilton. See Chapter 5, Section 5.5.2.1 for a detailed account of the private prosecution against the City of Hamilton.

\textsuperscript{15} Ibid
As the EBI’s participation in pollution issues increased, the materialization of social learning and social capital also increased, resulting in a significant impact on brownfield remediation. Overall, the EBI played a large role not only in advancing the clean-up of a brownfield site in Kingston, but also in protecting common resources and enforcing environmental law in Canada.

4.3.5 Ecojustice (Formerly Sierra Legal Defence Fund)

The civil society organizations that have been discussed so far have been unique in that they were to some extent established in response to brownfield concerns. However, a pre-existing environmental organization in Canada, Ecojustice (formerly Sierra Legal Defence Fund) also played an integral role in advancing brownfield planning in Kingston. Ecojustice is an environmental not-for-profit law organization whose “trusted voice in the courts enables citizens to expose lawbreakers and hold governments accountable, all while setting powerful precedents for clean water, natural spaces, healthy communities and for global warming solutions” (Ecojustice, 2007).

Ecojustice, who at the time of the case was still referred to as the Sierra Legal Defence Fund, became involved in the Belle Park landfill case when a former lawyer with the organization was approached by the private informant regarding the leachate from the Belle Park landfill. Samples that had been collected by the informant and “fellow activists” (Morantz, 1999) were handed over to the lawyer who took the samples to a laboratory for testing (Outwit & Yanagisawa, 1997). After toxicity test results came back, the organization became legal counsel for the private citizen and launched the prosecution against the City of Kingston. According to the legal representative, the City of Kingston private prosecution was one of the first for the organization. However, the work of public citizens and civil society was something that is looked upon highly by the organization as illustrated in the following sentiment by the lawyer: “That's the hardest thing to really find, sometimes you can find pollution situations doing research because historically there's been a problem and you know about it, but often it's because people come forward and tell you about it.”
The involvement of an environmental organization that offered legal expertise to private citizens and civil society was particularly important during the time of the Belle Park trial, when recent cutbacks to government programs had the potential for hindering enforcement abilities. Consequently, civil society’s role in enforcing environmental law had increased as Ontarians were being, “left on their own to pursue legal remedies against polluters” (Lindgren, 1997). Moving in this direction provides a way for environmental organizations to implement solutions or to carry out activities that government will not or cannot do (Simmons, 1998). However, another former staff lawyer with the organization noted that clarification of the role of the private prosecutor must occur concurrently for civil society to effectively utilize this type of legal remedy.

The organization’s involvement in the Belle Park trial exemplified the emerging benefits of social capital and social learning. As a result of the generation of social networks throughout the trial, the ENGO became involved in subsequent private environmental prosecutions. In 1999 while the City of Kingston court case was still ongoing, Sierra Legal Defence Fund provided legal representation in another former landfill case, this time against the City of Hamilton. The prosecution was successful and, as a result, half of the fine money was awarded to the case’s private informant. The private informant donated a portion of the money back to Ecojustice (still Sierra Legal Defence Fund at this time), and to the EBI. A portion of the fine money was also used to establish Environment Hamilton, an environmental movement organization that has gone on to successfully tackle a variety of environmental issues (Environment Hamilton, 2009).

Although ultimately the charges brought forth by Ecojustice against the City of Kingston would not withstand, they certainly came to be regarded by all stakeholders as effective in terms of pushing the clean-up of the site forward on the City's agenda.

### 4.3.6 Conclusion and Lessons Learned

Kingston’s past and present brownfield activities are indicative of the important role civil society plays in brownfield remediation. The extensive involvement of EMOs provides an example of the valuable opportunities that exist for other communities. Kingston has seen the creation of social capital and learning
through the formation of a unique environmental advisory committee, a very successful investigative group, and the involvement of additional environmental organizations. It serves as an example for municipalities, EMOs and community members wishing to revitalize their communities. While Kingston’s experience provides a unique case study of EMOs successfully influencing decision making, the stakeholders also recognize where tactics could still be improved. Several of the lessons communicated by the stakeholders can be linked back to the concepts and themes of social capital and learning, setting agendas, negotiating outcomes, conferring legitimacy and implementing solutions, which have been outlined in this chapter. The fundamental implications and lessons learned throughout the process are as follows:

- **Build on strengths and establish innovative ways of responding to issues.** By setting agendas early in the process, EMOs increase the likelihood of capturing the attention of policymakers. An EAC respondent referred to KEAF as an example of this tactic. KEAF, a group who has a strong technical background has been able to provide scientific expertise to government, rather than become a politically involved organization. This was suggested to have helped maintain the credibility of the committee whose members consist of people elected by City Council, thus allowing them to function effectively and build a good reputation in the community. This form of institutionalization also ensures an effective use of capacity and access to decision makers.

- **Another outlook expressed by the EAC respondent was for civil society organizations to, always remember their roots.** While the organization’s strength may be technical expertise, it is still crucial to maintain a dialogue with the community through workshops, focus groups or other relevant methods. Collective action and collaboration with the community are essential for the generation of social capital, which leads to the building of networks and trust.

- **A respondent from the consulting profession suggested the importance of being proactive whenever possible by engaging with stakeholders.** By creating a forum that brings key players together, EMOs can successfully negotiate and bring about multilateral outcomes (Simmons, 1998). This is especially important in brownfield remediation where collaboration and the
expertise of a variety of stakeholders are critical for effectively addressing the numerous challenges of contaminated sites.

• An ENGO legal respondent emphasized the importance of reflecting on the learning process and learning to be adaptive. For the EBI, this meant ensuring that they had all the scientific data and expertise to prosecute a successful case, an expensive process that required access to extensive resources.

• Another ENGO stakeholder in the Belle Park case highlighted that environmental organizations that want to become involved in brownfield cases should be aware of the costs and efforts associated with doing so, especially when up against public corporations, but to also anticipate the potential for environmental benefits.

• As further indicated by the legal ENGO representative, it is important to explore all alternatives for remediation and systems for cleaning up the land and ensure that the solutions go through public consultation and environmental assessment processes.

The progression of brownfield strategies in the City of Kingston would not have been achieved without the involvement of environmental organizations. The work that has been done in the City of Kingston has brought an increased awareness and focus not only to the Great Cataraqui River, but to water bodies and contaminated lands across Canada. In the private informant’s words, “Kingston isn’t an isolated case” (Morantz, 1999). An ENGO respondent suggested that the Belle Park case is an indication that environmental law is alive and well in Canada as it relates to cities and municipalities, an optimistic message for ENGOs. As such, environmental organizations need to continue to get out there and work “not only on behalf of their communities, but on behalf of the environment and ecosystems”.

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4.4 References


Chapter 5

The Role of Civil Society Involvement in Brownfield Planning in Kingston and Hamilton, Ontario

5.1 Introduction

The remediation and redevelopment of brownfields has been growing in recognition as an effective way for communities to achieve urban revitalization and sustainable development goals. Brownfield redevelopment also plays an integral role in a community’s economic growth and social well-being. Left sitting idle, contaminated sites pose a risk to environmental and community health, and may pose a legal liability (NRTEE, 2003). Because of these factors, meaningful civil society engagement should be at the heart of successful community brownfield strategies. In the context of this research, civil society engagement includes private citizens, community groups, environmental non-governmental organizations (ENGOs), and environmental advisory committees (EACs). Proactive engagement in environmental management contributes to an understanding among various stakeholders, thereby reducing the risk of public sector and civil society confrontation later in the process. However, whether civil society involvement emerges on a proactive or reactive level, community groups, private citizens, advisory committees and non-governmental organizations (NGOs) all have a valuable role to play in environmental management.

While there are some studies that discuss the role of community-based organizations and public involvement in brownfields redevelopment, little has been done to investigate this topic from the perspective of social capital and social learning generation, and the influence of risk perception on civil society action. The present research addresses the above themes with a focus on the involvement of civil

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16 A version of this chapter is being submitted for publication consideration to Environments Journal.
17 See De Sousa, 2002; Greenberg, 2001; Dorsey, 2003
18 Examples include Wernstedt, 2001; Brachman 2003; Bartsch, 2003; Rowan and Fridgen, 2003; Altherr et al., 2007; Gallagher and Jackson, 2008. See Section 2.1.1 for an overview.
society that emerged from two brownfield remediation case studies. The research is unique in its use of cases studies where civil society successfully used the legal process as a community involvement tool and, as a consequence, raised awareness of brownfield issues and contributed to future brownfield remediation programs. Thus this paper examines through case studies from Hamilton and Kingston:

- Civil society’s influence on environmental governance;
- Private prosecutions as a catalyst for subsequent environmental work;
- The emerging benefits of social capital and social learning; and
- The role of risk perceptions in reactions to contaminated sites.

The paper begins with a selective overview of literature outlining NGO influence and then reviews social capital, social learning, collaborative planning and risk perception literature, with particular reference to how each of these theories fits into civil society action. The review ends with the development of the conceptual framework used to guide the research, followed by a summary of the methods. Next, the case studies are described including the history and location of the chosen sites. The paper then documents the results of the case studies including an overview of the legal action, remediation and civil society involvement. Following this is a discussion of the relationship between the themes of risk perception, social capital and social learning, and the environmental action observed in each case. The paper concludes with suggestions for future research.

5.2 Overview of Relevant Literature


Simmons (1998) discussed four ways in which NGOs affect decision makers. As a result of setting
agendas, negotiating outcomes, conferring legitimacy and making solutions work, NGOs have been successful in influencing national governments, multilateral institutions, and national and multilateral corporations. NGOs help set agendas by using a variety of campaigns that have forced “leaders and policymakers to pay attention” (p. 84). With regard to negotiating outcomes, NGOs are influential not only in providing an understanding of the science behind certain issues, but also in building trust and breaking deadlocks that can occur between stakeholders. NGOs help confer the legitimacy of projects and play a role in determining whether to “promote or withhold public and political support” (p. 86). Lastly, NGOs are successful at making solutions work by carrying out activities that governments cannot.

This influence often involves collaborative planning, described as, “interaction in the form of a partnership throughout consensus building, plan development and implementation” (Lowry, Adler, & Milner, 1997 as cited in Margerum, 2002, p. 238). Shared decision making is at the core of each of the three phases that constitute collaborative planning; problem setting, direction setting and implementation (Margerum, 2002). Healey (1998, 2003) credited Giddens’ (1984), “conception of the continual interaction between, and mutual constitution of, ‘structure and agency’” (as cited in Healey, 2003, p. 106) as providing a framework through which both planning practices and land and property development processes can be examined. Further, Healey discussed the collaborative approach in terms of its ability to foster institutional capacity and notably the way in which it “helps create arenas which can act as learning environments through which stakeholders learn new ways of relating to each other” (Healey, 1998, p. 1542).

Social learning can be viewed as a combination of action and reflection emerging among groups and individuals in civil society as a result of citizens working together on a common problem (Keen et al., 2005, p.4; Webler, Kastenholz, & Renn, 1995, p. 444). Keen et al. (2005) identified social learning as a, “process of iterative reflection that occurs when we share our experiences, ideas and environments with others” (p. 9). Social learning is described in terms of five strands each representing an important process of social learning: reflection, systems orientation, integration, negotiation, and participation (Keen et al., 2005)

A related concept is social capital. A civil society perspective of social capital is one in which, “trust and tolerance develop where social networks are formed” (Putnam, 1993; Fukuyama, 1995 as cited in
Fundamental to this perspective is the description of social capital as, “connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them” (Putnam, 2000, p. 19). The idea that the accumulation of social capital is self-reinforcing (Pretty & Ward, 2001) suggests the, “existence of strong positive feedback loops” (Wakefield et al., 2007) resulting in a ‘virtuous cycle’ (Putnam, 2000).

Building on the ideas of Wakefield et al. (2007), social capital has implications particularly for the environmental and land use planning fields because of its potential to facilitate local environmental action around community concerns. The authors posited that, “communities with strongly developed networks of reciprocity, shared norms of behaviours and high levels of mutual trust are thought to be more likely to achieve goals” (p. 429).

Civil society’s reaction to environmental risks often influences how the above-mentioned concepts factor into an organization’s ability to affect decision makers. Quantifiable approaches are often the appealing method for assessing risk; however, it is important to recognize that quantitative risk assessment does not provide all the necessary information for decision making (Wandersman, 1993). Hance et al. (1988) suggested that scientific information be used in combination with social, political and ethical characteristics of the risk, or what they referred to as outrage factors. The use of such an approach signifies that risk perceptions based on factors other than scientific information should not be dismissed as irrational.

Environmental Stress and Coping theory, as discussed by Wakefield et al. (2001), is a socially constructed approach to environmental risk. Based on coping theories of Lazarus and Folkman (1984), the theory strives to explain individual reactions to environmental events and classify them as either active coping or emotion-focused coping. Active coping often materializes in the form of civic or collective action (as cited in Wakefield et al., 2001), but can be seen through other reactions including, “actions to mitigate the impacts of exposure” (Wakefield et al., 2001, p. 165). Emotion-focused coping is perceived as an individual’s choice to do nothing more than wish for the environmental risk to disappear (Wakefield et al., 2001). Environmental stress and coping theories can, “help contextualize individual and community environmental (re)action” (Wakefield et al., 2001, p. 165).
5.2.1 Conceptual Framework

Based on the ideas discussed above, the following conceptual framework was developed to inform the research methods and evaluation of results. The framework illustrates the link between civil society and government by exploring the concepts of social capital, social learning and perceptions of risks.

Figure 5-1: The Cycle of Civil Society Involvement in Brownfield Remediation and Redevelopment: The feedback loop illustrates the social capital and social learning accumulated throughout the process of civil society’s reaction to a perceived risk, which in turn influences governance through the implementation of remediation strategies at brownfield sites.

5.3 Methodology

Information for this study was gathered through primary and secondary research on two brownfield remediation case studies in Southern Ontario, and through semi-structured interviews with ten stakeholders involved in the cases. Secondary research was conducted on each of the case studies by consulting grey literature including progress reports, strategic plans, media reports, and legal documents, and by reviewing ENGO websites, and academic literature on the relevant themes. The interviewees
included five environmental non-governmental (ENGO) representatives, a Remedial Action Plan (RAP) member, an environmental advisory committee (EAC) member as well as representatives from the public sector, environmental consulting field, and legal profession. For the purpose of anonymity, interview respondents were identified in the research findings according to their affiliation and their involvement in one or both of the cases; Belle Park (BP) or Rennie Street (RS). The following codes were used to identify the affiliations of the respondents (see Table 3-1 for further information):

vi. Environmental non-governmental organization (ENGO)

vii. Environmental advisory committee (EAC)

viii. Private sector (PS)

ix. Legal (L)

x. Government (GOV)

Each stakeholder was asked an average of ten questions, which were adapted to their individual role in the brownfield remediation cases. Questions were designed to identify: 1) the role that civil society plays in brownfield remediation, including the value of the finder’s fee\(^\text{19}\) as a tool for civil society involvement; 2) the perceived successes and benefits of the civil society involvement in the specific cases; 3) how perceived risks affected the reaction of the stakeholders; and 4) lessons learned from the cases.

5.4 Case Studies and Contextual Background

5.4.1 Belle Park Landfill, Kingston, Ontario

The Belle Park landfill, now known as Cataraqui Park, is located on the west bank of the Great Cataraqui River in Kingston’s Inner Harbour and the southern edge of Cataraqui Marsh, a provincially significant wetland (Malroz, 1999). The landfill was the site of a marshland until 1952, at which point municipal waste was placed on the natural land. The site eventually served as the City of Kingston’s

\(^{19}\) Part XI of Fishery (General) Regulations indicates that where an information is laid by a person relating to an offence under the Federal Fisheries Act, the payments of the proceeds of any penalty imposed arising from a conviction for the offense shall be made one half to the person.
municipal landfill site until 1974 (Welbourn, Hodson, & Rose, 2009). Along the north shore of the park is a federal dredged sediment disposal site and to the south of the site is a second waste disposal site located on a portion of land that was once occupied by Frontenac Smelting Works and the Davis Tannery (Malroz, 1999, 2002).

The majority of the Belle Park landfill’s operation occurred prior to 1971, which was prior to government regulations regarding the disposal of waste. After this year, certificates of approval were required for landfills. In the last few years of its operation the site operated under a certificate of approval until its closure in 1974 (Malroz Engineering Inc., 1999). An environmental impact study of the site completed in 1999, indicated that waste at the site consisted of a mixture of household and industrial waste. The study also suggested the presence of waste from the adjacent Davis Tannery site (Malroz Engineering Inc., 1999). Since 1974, the old landfill site has been used for recreational purposes with the majority of the site operating as the Belle Park Fairways, a nine-hole golf course (Malroz Engineering Inc., 2001). The location of the site is shown in Figure 5-2.
5.4.1.1 Legal Action

The Belle Park site first generated public concern in 1994, when pollutants were suspected to be leaching into the Great Cataraqui River (Outwit & Yanagisawa, 1997). In late 1996, a private citizen commissioned toxicity tests of water samples from the river. The samples, which detected toxic levels of benzene, chlorobenzene, heavy metals, ammonia, and PCBs (EBI, 1997), were deemed to be deleterious by the private citizen and her legal representation, Sierra Legal Defence Fund (now Ecojustice) (City of Kingston b, n.d.). In March 1997, the same private citizen laid charges against the City, using a provision in the *Federal Fisheries Act* that allows citizens to privately prosecute for breaches of environmental law. The
charges were for violations of Section 36(3) of the *Federal Fisheries Act* (see Appendix A). Concurrently, the Ministry of the Environment laid charges against the City for similar offences that took place in early to mid 1997, resulting in a total of eight charges against the City.

In December 1998, the City of Kingston was convicted on four of the charges brought by the private citizen, and the City and its former Director of Environment were convicted on three of four charges brought by the Ministry of the Environment. Fines were levied against the City along with an order to cap the landfill with an impervious clay cap (City of Kingston b, n.d.). However, in 2002 the decision was appealed by the City due to concerns over the prosecution’s testing methods, the lack of evidence proving the effectiveness of capping the site, and the negative impacts to the City of accepting a guilty verdict. After a series of appeals, the Ministry’s conviction against the City and former director was upheld, but the charges laid by the citizen were overturned (City of Kingston b, n.d.).

### 5.4.1.2 Remediation

Although the degree of risk associated with the contaminants was contested, the City of Kingston spent upwards of $2 million on remediation control strategies (Corporation of the City of Kingston, 2004). The original strategy, which continues today, included the use of mechanical groundwater pumping combined with physical barriers (Malroz Engineering Inc., 1999). In addition to the ongoing monitoring of groundwater and surface water quality, the use of bioremediation such as planted trees (phreatophytes) to act as groundwater pumps and a constructed artificial cattail wetland at the water’s edge, were implemented at the site. (City of Kingston a, n.d.)

### 5.4.2 Rennie Street Landfill, Hamilton, Ontario

The Rennie Street landfill, which was once the site of a low-lying marshland, was first used as a landfill in the 1950s by filling the floodplain on the west bank of the Red Hill creek (Meiers, 2000).

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20 The City maintained that the prosecution’s toxicity tests caused the samples to become toxic to fish, and that the leachate actually present on the site was not toxic (City of Kingston b, n.d.).
Landfilling continued until the 1960s, when a public works yard was established on top of the site. The lands surrounding the landfill site consist of mixed-use properties. Immediately north of the site are the Brampton Street landfill and the Woodward Avenue Water and Sewage Treatment Plants. On the south, a railway line borders the site. West of the site are residential properties on Waterloo Street and industrial properties on Rennie Street and on the east side, the site is bordered by the Red Hill Creek (Dillon Consulting, 2000).

The Rennie Street Landfill was closed prior to 1971. Therefore no certificate of approval was issued and the site was not registered with the Ministry of the Environment. As a result, little is known about the types of wastes deposited at the Rennie Street site (Dillon Consulting, 2004), although it was determined that the landfill contains about 400,000 m³ of waste (Meiers, 2000). The location of the site is shown in Figure 5-3.
5.4.2.1 Legal Action

In 1999, a group of local citizens in Hamilton, Ontario discovered leachate seeping into the Red Hill Creek from the Rennie Street landfill. The discovery of the leachate coincided with part of a larger effort by concerned citizens to determine if municipal levels of government were properly monitoring the Red Hill Valley ecosystem. The concern that potential discharges or other environmental issues would be overlooked were related to apprehensions by a local group of citizens about the Region’s plans for constructing the Red Hill Creek Expressway (now known as the Red Hill Creek Parkway), a four-lane...
expressway, that would run down the length of the Red Hill Valley. The surfacing of these concerns led the
group to follow-up on previous accounts of seepage that had been discovered in Red Hill Creek (RS
ENGO/EAC-7).

Once the group had determined that the seepage was worth further investigation, they enlisted the
help of two environmental lawyers. Having recently been involved in the Belle Park case in the City of
Kingston, both lawyers were aware of the proper chain of custody for collecting water quality samples that
would pass as credible evidence in a court of law (RS ENGO/EAC-7)\(^{21}\). Results of the laboratory tests
indicated the presence of polychlorinated biphenyls (PCBs) in the leachate at rates 42,000 times above the
Ontario Provincial Water Quality Objectives. Ammonia was also detected at 750-1000 times the acute
lethality threshold for fish (R v. City of Hamilton, 2000).

Using the same private prosecution provision applied in the Belle Park case (see Appendix A), one
of the involved citizens acted as a private informant. In the fall of 1999, with the aid of legal counsel, the
citizen brought charges before a Justice of Peace swearing evidence against the City of Hamilton also for
violations to Section 36(3) of the \textit{Federal Fisheries Act} (see Appendix A). The Investigations and
Enforcement Branch (IEB) of the Ministry of the Environment (MOE) had launched a concurrent
investigation. In addition to the contaminants already identified, the MOE discovered the now banned
pesticides, aldrin, and heptachlor leaking from the landfill (R v. City of Hamilton). The MOE laid parallel
charges against the City of Hamilton for violations under the \textit{Ontario Water Resources Act} (OWRA).

In September 2000, the City of Hamilton entered a guilty plea and was fined in the order of
$480,000 for the federal and provincial violations of the site. The \textit{Federal Fisheries Act} charges brought
forth by the private citizen made up $300,000 of this total. Since a provision in the Act allows for the
awarding of half the fine money to private informants for private prosecutions (see Appendix A), the citizen
was awarded $150,000 of the fine. (R v. City of Hamilton)

\(^{21}\) As previously noted in Section 5.4.1.1, the City of Kingston believed the prosecution’s testing methods
were not accurate.
5.4.2.2 Remediation

In addition to paying the fine, the City of Hamilton committed to spending upwards of $11 million on a cleanup plan for the Rennie Landfill Site (FRHV, 2000). Interim controls to manage seepage at the site were put in place while the City awaited an environmental assessment for the proposed remediation alternatives. The interim controls involved the installation of localized leachate collectors at the two most significant sources for leachate along the west bank of the Red Hill Creek (Meiers, 2000). The remediation strategies that were developed and implemented at the site included:

- widening the floodplain of the Red Hill Creek and relocating the Creek away from the landfill using a natural channel design;
- installing a horizontal leachate collection system at the toe of the landfill in the new floodplain;
- constructing a low permeability cover on the landfill to minimize further generation of leachate; and
- stabilization and lining of the landfill slopes to prevent slope failure and direct leachate to the collector system (Allison et al., 2003).

5.5 Results and Discussion

5.5.1 Civil Society Organizations and the Belle Park Landfill

Although the charges brought against the City of Kingston by the private citizen were overturned, the work of environmental organizations was recognized by key stakeholders in the process for bringing the issue to the forefront. The City had been dealing with the leachate problems over time, but it was civil society who accelerated the pace at which the City was required to respond (BP GOV-4, BP PS-6). The outcomes outlined below are indicative of this recognition as evidenced, for example, through the City’s move towards a more collaborative approach to planning. Moreover, the civil society involvement observed in the Belle Park landfill case furthered the potential for citizens to become involved in future contaminated land issues.
Kingston Environmental Advisory Forum

The Kingston Environmental Advisory Forum (KEAF) was created by City Council in 2000 as a result of the City’s need to establish an environmental strategy (KEAF, 2000). KEAF is a civil society organization that exists on the collaborative end of the environmental movement spectrum, working very closely with local government and fulfilling the role of an advisory committee. However, although KEAF is very much quasi-autonomous in terms of its elected members and funding, it is still functions as community-based group (KEAF, 2000) consisting of a diverse membership. Shortly after its formation, KEAF undertook a series of public workshops at which community members and organizations advised on key environmental priorities within the newly amalgamated City (KEAF, 2000). The Inner Harbour (shown in Figure 5-2) was highlighted as a top environmental priority. At the time, the community associated the Inner Harbour with contamination entering into the Great Cataraqui River from both industrial development and the Belle Park landfill. It became evident through the workshops that the community had a desire for access to information on environmental matters and as a result, public awareness and involvement emerged as an environmental priority.

In 2000, in the first report to Council, “Towards a Sustainable Future: Environmental Priorities for a New City of Kingston”, KEAF presented five recommendations and communicated their willingness to assist Council in developing a strategy to address each. The recommendations presented in the report to Council were reflective of the City’s situation during this time and directly addressed the future of the Inner Harbour. While KEAF also recognized and addressed priorities that extended beyond the Inner Harbour and brownfield issues to include conservation or ‘green’ issues and planning, the focus of the first report to council emphasized brownfield issues to ensure that “a legacy of contaminated sites should not be left for future generations” (KEAF, 2000).

Environmental Bureau of Investigation

The Environmental Bureau of Investigation (EBI) was formed in 1997 as a project of the Energy Probe Research Foundation (EPRF) to investigate pollution sources and in some cases prosecute those
responsible for the pollution. The formation of the EBI corresponded in time with the private prosecution suit filed against the City of Kingston. While the Belle Park Landfill case was still ongoing, the private citizen and an environmental lawyer that assisted with the case formed the EBI to act as an investigative and technical resource both for the Belle Park case and future cases. The establishment was also tied to EPRF’s recognition of the lack of “well-organized, investigative” resources available to communities (Environmental Bureau of Investigation, n.d.). In addition to their groundwork, the EBI produced, “A Citizen’s Guide to Environmental Investigation and Private Prosecution”, a guide that serves as a resource for citizens concerned about pollution in their communities.

The EBI’s work in Kingston led to two subsequent cases in Ontario as well as involvement in cases in both Quebec and New Brunswick. The investigations have led to the remediation of four contaminated sites as well as the largest fine for an environmental crime ever levied against a municipality in Canada (see section 5.4.2.1). Although the EBI is not currently active, their work serves as a precedent and resource for community groups and citizens wishing to participate in the protection of the environment. The EBI’s guide has continued to serve as a public education tool to empower citizens to stop pollution, and their website serves as a resource for information on pollution sources and sites.

Ecojustice

While the civil society involvement presented thus far has been unique in that the groups were established to some extent in direct response to brownfield concerns, a pre-existing environmental organization in Canada, Ecojustice22 (formerly Sierra Legal Defence Fund) also played an integral role in advancing brownfield planning in Kingston (Roberts, Whitelaw, Cleghorn, 2009). Ecojustice became involved in the Belle Park landfill case when a former investigator with the organization acted as legal

22 Ecojustice views itself as an environmental not-for-profit law organization whose “trusted voice in the courts enables citizens to expose lawbreakers and hold governments accountable, all while setting powerful precedents for clean water, natural spaces, healthy communities and for global warming solutions” (Ecojustice, 2007).
counsel for the private citizen on the Belle Park case. The City of Kingston private prosecution was one of the first for Ecojustice. However, the work of public citizens and civil society is something that was looked upon highly by the organization as expressed in the following sentiment, “That's the hardest thing to really find, sometimes you can find pollution situations doing research because historically there's been a problem and you know about it, but often it's because people come forward and tell you about it” (BP/RS ENGO-1).

The involvement of an environmental organization that offered legal expertise to private citizens and civil society was particularly important during the time of the Belle Park trial, when recent cutbacks to government programs had the potential for hindering enforcement abilities (Roberts et al., 2009). Consequently, civil society’s role in enforcing environmental law had increased as Ontarians were being, “left on their own to pursue legal remedies against polluters” (Lindgren, 1997).

5.5.2 Civil Society Organizations and the Rennie Street Landfill

The success of the Rennie Street Landfill case served as a catalyst for future discussions on former landfill sites within the region. The new City of Hamilton, which was formed through amalgamation shortly following the Rennie Street case, soon began an inventory to assess the status of former waste disposal sites within the municipal borders (RS ENGO/EAC-7). In addition to generating attention around other old landfill sites, the Rennie Street Landfill case also set the direction for future involvement of civil society in brownfield remediation and redevelopment, and generated the resources for examining environmental issues more broadly.

The Rennie Street Landfill Community Liaison Committee (CLC) and End Use Community Liaison Committee

A component of the judicial decision included the City of Hamilton’s commitment to form a liaison committee to oversee and advise on remediation efforts at the site (RS ENGO/EAC-7). The Rennie Street Landfill Community Liaison Committee (CLC) was comprised of stakeholders serving as members or resources and included government representatives (City of Hamilton elected officials, Fisheries and Oceans Canada, Environment Canada, Ministry of the Environment), the local conservation authority, area
residents, consulting professionals, Remedial Action Plan (RAP) representatives and community-based organizations (The Rennie Landfill CLC, 2004).

In addition to monitoring the remediation strategies implemented at the Rennie Street Landfill, the CLC’s terms of reference included the provision of feedback and advice to the City of Hamilton regarding any works that involved the Rennie Street Site or surrounding area, including the nearby Brampton Street and Nash Road landfills (The Rennie Landfill CLC, 2005). In time, the focus shifted from the original overseeing of remediation strategies to the City’s plans to disrupt the newly remediated site for construction of the Red Hill Creek Expressway (RS ENGO/EAC-7).

The City established a separate committee, the Brampton/Rennie End-Use CLC, to comment on end-use plans for the sites. The new CLC was comprised mainly of the original Rennie Street Landfill CLC members with a few additional stakeholders. However, disagreements about plans for the sites ensued as the City shifted away from original discussions. Although members of the Rennie Street Landfill CLC expressed disappointment with the City’s decisions on this matter (Public Works Standing Committee, 2008), the committee’s involvement can be seen as progressing the initial site remediation and instigating discussions on the end use of the site.

Environment Hamilton

The citizens involved in the Rennie Street Landfill case received a significant amount of support from the involved environmental organizations that donated time and energy and covered the costs of sample analysis. However, after the Rennie Street Landfill court case had concluded, the involved citizens remained concerned about future contamination and the possibility that subsequent environmental issues might not receive the same amount of support. Thus, a portion of the fine money awarded to the private citizen was used to springboard the formation of Environment Hamilton, a not-for-profit organization designed to give citizens the knowledge and skills they need to protect the local environment. The remainder of the fine money was placed in an environmental justice fund, which the organization could access for such purposes as samples analysis, and expert retention etc. (RS ENGO/EAC-7). Since its
formation, Environment Hamilton has been involved in several successful projects addressing a wide range of environmental issues from industrial emission problems in North Hamilton to the implementation of local food initiatives (Environment Hamilton, 2009).

**Lake Ontario Waterkeeper**

In addition to the fine money that contributed to the formation of Environment Hamilton, the private citizen donated a portion of the money to Ecojustice (Sierra Legal Defense Fund at the time), and to the additional environmental lawyer, who had assisted with the Rennie Street Landfill case on behalf of the EBI. In order to continue protecting water quality and restoring Lake Ontario’s natural resources, the EBI used the donation to purchase a lake patrol boat for Lake Ontario Waterkeeper, a grassroots group founded in 2001. The organization, a member of the Waterkeeper Alliance, aims to restore and protect the waters of the Great Lakes through stewardship programs, environmental pollution patrols, and community efforts (Lynch, 2008). Since its formation in, Lake Ontario Waterkeeper has continued to bring attention to clean water initiatives through education, research and awareness (Lake Ontario Waterkeeper, n.d.).

5.5.3 **Risk Perceptions and Decision Making**

Brownfield issues provide an excellent lens for examining the differences in perceptions of, and reactions to, pollution. Informants in both the cases described here provided evidence of the complexities of risk perception and communication. Within Kingston, varying perceptions of risk from a community and corporate perspective, respectively, no doubt enhanced arising concerns about pollution (Roberts et al., 2009). In fact, many respondents saw it as the driving force behind the Belle Park litigation (BP EAC-2, BP/RS ENGO-3, BP PS-6, BP GOV-4, RS ENGO/EAC-7). When concern over Belle Park leachate first surfaced, the public perceived a risk to the health of the community, while scientific studies commissioned by the City deemed the actual risk to be insignificant (Welbourn, 1999). The struggle lay in determining what an acceptable risk to the community was and how the existing risk could best be dealt with (Roberts et al., 2009). Similarly, risk perceptions played a large role in the Rennie Street landfill case due to the
proximity of the site to the Red Hill Creek and to residential neighbourhoods. As a result, residents who were motivated by their concerns of risk to health and the local environment became activists. In this case, risk concerns continued beyond the remediation of the site due to the City’s plans to excavate a portion of the site for the construction of the expressway. Presently, local residents remain concerned about the end use of the site (RS ENGO/EAC-7).

While a quantifiable approach is often the appealing method for assessing risk, it is important to recognize that quantitative risk assessment does not provide all the necessary information for decision making (Wandersman, 1993). To revisit Hance et al. (1988) as reviewed in Section 5.2, scientific information should be used in combination with social, political and ethical characteristics of the risk. The use of such an approach signifies that risk perceptions based on factors other than scientific information should not be dismissed as irrational. Excerpts from Welbourn and Wright (2002) alluded to the complexity of risk perception at the Belle Park landfill site:

…discharges were highly visible as reddish-brown stains on snow\textsuperscript{23} or surface substratum, indicating precipitates of ferric iron compounds. …These types of stains are commonly observed when anoxic or acidic water rich in iron encounters oxygenated less acidic water, and, although they may be aesthetically unacceptable, they do not of themselves, necessarily constitute a risk (p. 514).

5.5.4 Social Capital

It can be difficult for environmental organizations and advisory committees to advise on risk information (BP EAC-2). In the case of contamination issues, the ideal environmental organization acts as a bridge between the community and scientific risk perceptions. The use of this form of bridging social capital is crucial for ‘getting ahead’ (Putnam, 2000, p. 23) in brownfield remediation and for establishing a common approach to risk perception. Throughout the course of the legal cases, organizations such as KEAF

\textsuperscript{23} See Figure D-1 for a photograph of the reddish-brown stains, which were particularly noticeable in the winter.
attempted to bridge the gap between the community and the City by working toward common goals, creating awareness and ensuring public confidence in the information being provided (BP PS-6).

The idea that social capital has the potential to facilitate local environmental action on issues that are of concern to the community (Wakefield et al., 2007) was significant to the Rennie Street and Belle Park landfills. The outcomes of the two cases substantiate the role of social capital in attaining environmental goals related to land remediation. The strong civil society response during the Belle Park and Rennie Street cases was due in part to social capital that was acquired prior to the cases (BP/RS ENGO-1, 3; RS ENGO/EAC-7). The idea that the accumulation of social capital can be seen as self-reinforcing (Pretty & Ward, 2001) and a ‘virtuous cycle’ (Putnam, 2000) was consistent with the events at the Belle Park and Rennie Street landfills. The case study findings indicated that the formation of social networks in Hamilton and Kingston both resulted from, and contributed to, social capital. The findings also reinforced Putnam’s (1993) idea that attributes such as trust can both contribute to, and result from, social capital.

The networks that were already in existence at the time of both cases can be credited with establishing a sense of trust and reciprocity among the involved civil society representatives (BP/RS ENGO-1, 3; RS ENGO/EAC-7). The case study findings suggested that the presence of social capital at the time of the cases enabled the creation of further social capital, which was seen through the emergence of new environmental networks such as the EBI, and eventually Environment Hamilton and Lake Ontario Waterkeeper. These environmental organizations played a large role not only in advancing remediation strategies at the two sites in Kingston and Hamilton, but also in protecting common resources and enforcing environmental law in Canada (BP/RS ENGO-3).

5.5.5 Social Learning

The implications of social learning theory (see Section 5.2) for the Belle Park and Rennie Street Landfill cases are evidenced through the networks and resources that emerged from both the action taken by civil society and the reflection process that followed (Roberts et al., 2009). Social learning theory was best illustrated by the EBI’s role in the two cases. In this instance, social learning occurred not only through the
formation of social networks and the creation of the bureau itself, but also through a reflective process. By reviewing, and assessing errors that transpired during the Belle Park case, the EBI was able to produce a valuable learning tool, “A Citizen’s Guide to Environmental Investigation and Private Prosecution”. The creation of the guide served as an opportunity for the EBI to share their hands-on experiences and encourage civil society to engage in the face of government cutbacks (Environmental Bureau of Investigation, 2000).

Social learning was also evidenced through KEAF’s diversity and role as an educator. One of the educational campaigns carried out by KEAF was the creation of three educational depots in Belle Park (see Appendix D). The depots were created to heighten public awareness about the Inner Harbour and the steps the City was taking to deal with leachate from the Belle Park landfill. These depots were erected at various stations around Belle Park and unveiled to the public in 2006. The new forum for public education created an opportunity for community members to engage in new learning partnerships. By reflecting on remediation efforts at the landfill, KEAF was successful at turning the experience into an opportunity for further learning (Roberts et al., 2009).

Friedmann’s (1987) explanation of social learning in which, “existing understanding is added to lessons from experience and the new understanding is then applied in the continuing process of action and change” (Friedmann, 1987, p. 81) best describes the action taken in the two cases. The success of the case in Hamilton can be partly attributed to a reflection on errors made during the Kingston case, in which water sample testing methods completed by the prosecution were challenged. As a result, the samples tested for the Rennie Street landfill case followed a proper chain of custody (RS ENGO/EAC, 2008-7) and were not challenged by the City during the court case.

Furthermore, in both circumstances, the parties involved had prior experience working on other environmental cases including landfill leachate issues. The private citizen and legal representative who prosecuted the Belle Park landfill suit had established a relationship during a previous case and consequently both had acquired an understanding of the science and bureaucracy involved in such matters (BP/RS ENGO-3, 2008). Similarly, the private citizen who prosecuted the Rennie Street landfill case had...
previous experience investigating old landfill sites and analyzing brownfields legislation on a policy level (RS ENGO/EAC, 2008-7). In both cases, the findings suggested that earlier learning helped affirm and support later action on landfill leachate issues in Kingston and Hamilton.

5.5.6 Civil Society Influence on Brownfield Redevelopment

The brownfield experiences in Kingston and Hamilton substantiate the evidence for civil society’s ability to influence environmental governance. Kober (1998) described the key function of non-governmental organizations (NGOs) as, “providing an environment in which it is possible for those out of power to influence those in power” (p. 3). This assessment of NGOs is epitomized in the site remediation and brownfield strategies that emerged as a result of civil society’s involvement in Hamilton and Kingston. Simmons’ (1998) exploration of the ways in which NGOs influence government (see section 4.2) also holds relevance for the two cases; this is best seen through an analysis of KEAF.

Over the past several years KEAF has been influential in terms of negotiating outcomes (Roberts et al., 2009). As Simmons (1998) identified, non-governmental organizations can be instrumental not only in providing an understanding of the science behind certain issues, but also in building trust and breaking deadlocks that can occur between stakeholders. KEAF has been integral in bringing key players to the table to discuss the remediation of the Inner Harbour (BP EAC-2). This is especially important in brownfield remediation where collaboration and the expertise of a variety of stakeholders are critical for effectively addressing the numerous challenges of contaminated sites (Roberts et al., 2009). By capitalizing on its strengths, KEAF was successful in providing a forum for negotiations to occur among stakeholders, a characteristic unique to this environmental advisory committee (BP EAC-2).

KEAF’s diversity and expertise contributed to the implementation of solutions by enabling them to effectively carry out activities that at the time the City of Kingston did not have the capacity to do (BP EAC-2). Because of KEAF’s strong scientific and engineering representation, they were able to provide supervision on Inner Harbour research and determine what was leaching into the Great Cataraqui River (City of Kingston, 2007). They were also able to identify existing gaps in information, which was of
particular importance at this time because of the ongoing court proceedings and the community’s instinctive reaction to the contamination. Further, this diversity and expertise allowed them to work outside of traditional government frameworks, while setting the stage for environmental priorities in Kingston (Roberts et al., 2009).

From its origin in 2000 to the present day, KEAF plays an important role in education, awareness and the remediation of brownfields in the City of Kingston. Bringing key stakeholders together and capitalizing on existing networks, including technical experts and academic professionals, the newly formed advisory group was able to quickly engage and respond effectively to meet the City’s needs (Roberts et al., 2009). This type of shared decision making is suggestive of collaborative planning (Healey, 1998) in terms of KEAF’s ability to foster institutional capacity and notably the way in which it “helps create arenas which can act as learning environments through which stakeholders learn new ways of relating to each other” (Healey, 1998, p. 1542).

5.6 Conclusion

Kingston and Hamilton’s past and present brownfield activities demonstrate the value of engaging civil society in the remediation and redevelopment of contaminated sites. Preceding the events surrounding the Rennie Street landfill court case, the City of Hamilton was developing strategies to address local brownfield properties through the establishment of an Industrial Redevelopment Task Force. In contrast, the formation of the City of Kingston’s Brownfields Task Force occurred following the commencement of the Belle Park trial. Regardless of the point at which each task force was formed, Community Improvement Plans for brownfields programs in the respective cities were not implemented until after the cases were underway. As a result, there was little opportunity for proactive engagement or collaborative planning on local brownfield issues preceding the two private prosecutions. Consequently, civil society engaged in a more radical approach including prosecution.

While an ideal community participation model is one in which citizens are engaged proactively in decision making, this study confirmed the potential for proactive strategies to emerge from (re)action to
contamination. The extensive involvement of civil society observed in this study advanced brownfield remediation concerns in the respective cities, resulting in the establishment of proactive community engagement. The social capital that was generated throughout the process contributed to networks of trust that ultimately guided the formation of succeeding environmental organizations and the establishment of KEAF and the Rennie Street CLC. The processes that occurred throughout the Rennie Street and Belle Park landfill cases have influenced other environmental planning activities, and represent examples of the valuable opportunities for municipalities, ENGOs and community members wishing to engage civil society in community revitalization.

To enhance opportunities for meaningful civil society involvement in brownfield remediation, further study on methods of engagement is suggested. It is evident that civil society has a role to play in brownfield planning; however, it is still unclear what this role is. Exploring potential engagement opportunities such as education, monitoring, planning or otherwise will secure a place for civil society in municipal brownfield decision making. Further study is also needed on how to measure the success and effectiveness of EACs. This will hopefully enhance the role that these groups play and ensure that original objectives are not abandoned throughout the life span of the organization. The findings of this paper suggest that risk perceptions contributed significantly to civil society response. It is recommended that further research be done on how to address inherent differences in risk perceptions in order to ensure a more consequential engagement process.

On a local level, the work that has been done in the Cities of Kingston and Hamilton has brought an increased awareness and focus not only to old landfill sites, but also to former industrial sites along the cities’ waterfronts. More broadly, the proximity of both landfill sites to water bodies has brought attention not only to the Great Cataract River and the Red Hill Creek, but also to water bodies across Canada. The success of the cases is an indication that environmental law is alive and well in Canada as it relates to cities and municipalities, an optimistic message for civil society organizations (BP/RS ENGO-3).
5.7 References


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*R v. City of Hamilton* (18 September 2000), Hamilton, Ontario (Ontario Court of Justice). (Guilty Plea Transcript).


Chapter 6

Implications, Conclusions, and Future Directions

6.1 Introduction

Drawing on the literature review and case study findings, this chapter presents general conclusions regarding the original research objectives and the civil society response at the Belle Park and Rennie Street landfills. The chapter also discusses the implications of the research and the ability to extend the theories to external cases. It concludes with possible directions for future research.

6.2 Summary of Research Findings

The following section discusses research findings in the context of the original research objectives. It also revisits the development and application of the conceptual framework and reconsiders one component of the framework. The research objectives, restated from chapter one, sought to examine:

i. civil society’s influence on environmental governance;
ii. civil society reaction (private prosecutions) as a catalyst for subsequent environmental work;
iii. the emerging benefits of social capital and social learning; and
iv. the role of risk perceptions in civil society reaction to contamination concerns.

6.2.1 Conceptual Framework – The Cycle of Civil Society Involvement

The conceptual framework presented in Chapter Two proved to be a successful instrument in the research. The framework identified the link between civil society and government, and explored the relationship through the concepts of social learning, social capital and perceptions of risk. It was also used to inform research methods, including the identification of key stakeholders, questions for the semi-structured interviews, and the decision to employ a multiple case study approach. Subsequently, the
framework was used to evaluate the results of the two case studies. Each of the key themes identified in the framework were applied to the case studies and explored in terms of the relationship between civil society action and environmental governance. However, revisiting the framework after the study was completed suggested the need to reconsider one aspect. The framework initially indicated that the perception of risk triggered civil society’s reaction to the environmental concern. However, the findings highlight that the link between civil society reaction and risk perception is two directional, meaning that perception of risk both leads to and results from civil society reaction. This is evidenced through the concern that emerged among community members in response to the private prosecutions in the respective cities. Section 6.3 suggests that further research be conducted on the factors that contribute to risk perceptions.

6.2.2 Influence on Environmental Governance - Brownfield Remediation and Redevelopment Strategies

The findings of the case studies provided evidence of the pivotal role that civil society had in influencing environmental decision making in Kingston and Hamilton, Ontario. In both cases environmental activism led to remediation strategies being implemented at both former landfill sites. However, the cases were also influential in terms of establishing municipal strategies for brownfield remediation and stimulating discussion on other contaminated sites. For instance, shortly after the Rennie Street landfill case, the City of Hamilton began an inventory of closed landfills and established remediation projects and studies for all twelve sites (Gondim, 2007). Further, the private prosecutions brought about changes in local governance, and played a role in the formation of two influential advisory committees. KEAF and the Rennie Street CLC contributed to remediation efforts at the sites and set the course for future brownfield discussions. Consequently, the change in the regime of municipal decision making in both cities led to a more collaborative approach to planning. The findings validate literature on the role of NGOs (Simmons, 1998) as reviewed in Section 2.3.2. For instance, Simmons emphasized NGOs as being influential in terms of making solutions work by carrying out activities that government cannot.
6.2.3 From Reactive to Proactive Environmental Strategies

The findings of the cases supported the idea that while proactive community engagement in brownfield remediation and redevelopment is ideal, the reactive nature of the cases studied in this thesis resulted in a positive cycle of events. As revisited in Section 6.2.2, the environmental activism that occurred in Kingston and Hamilton in reaction to leachate from the Belle Park and Rennie Street landfills, resulted in a number of proactive environmental strategies. The formation of KEAF and the Rennie Street Landfill CLC are exemplary of the proactive community engagement that occurred following the events at the respective landfills. The Rennie Street CLC brought together area residents, community groups, government, consultants, and other relevant stakeholders to oversee remediation at the Rennie Street Landfill. The committee also acted as a forum for residents to discuss environmental and health concerns not only concerning the Rennie Street site, but also the surrounding Brampton Street and Nash Road landfills (The Rennie Landfill CLC, 2005). KEAF integrated representatives from NGOs, academia, government, and the community to develop a long-term environmental strategy for the City of Kingston. Early public consultations identified “brown” issues as an environmental priority (KEAF, 2002).

Consequently, the strategy that emerged encouraged proactive discussions and plans to examine brownfields in Kingston. Proactive environmental strategies also emerged following the establishment of Environment Hamilton, Lake Ontario Waterkeeper and the EBI as discussed in chapters four and five. The formation of the three environmental groups was a direct result of private citizen reaction to pollution and the accompanying social capital and social learning discussed in chapters four and five and revisited below.

6.2.4 Social Capital and Social Learning

The research found that the Rennie Street and Belle Park landfill events both contributed to and resulted from social capital. This finding was consistent with Pretty and Ward (2001) and their idea that social capital can be seen as self reinforcing. Both social capital and social learning were determined to be influential in facilitating action that advanced brownfield decision making in Kingston and Hamilton, a finding that was in line with literature on the theories of social capital and social learning reviewed in
chapter two (Diduck, 2004; Hayward et al., 2007; Keen et al., 2005; Nelson & Serafin, 1995; Pretty and Ward, 2001; Putnam, 2000; Wakefield, 2007). Social learning was observed through the reflection process that occurred throughout the Belle Park court case, and through the resulting growth in knowledge and resources. Implications of social learning were also evident in the prior learning experiences of the involved citizens that ultimately supported their succeeding action on brownfield issues. This learning was largely attributable to the social networks and trust that existed prior to the cases and that materialized during the cases.

6.2.5 Risk Perceptions

The research found that risk perceptions were significant to the civil society action and ultimately influenced municipal decision making. In both cases, there was verification from key stakeholders that risk perception was the motivation behind the private prosecutions (BP EAC-2, BP/RS ENGO-3, BP PS-6, BP GOV-4, RS ENGO/EAC-7). The resulting environmental activism was correlated with the apparent difference in risk perceptions between civil society and municipal decision makers. The findings reiterated the importance of recognizing both quantitative and qualitative components of risk perceptions (Hance et al., 1988; Wandersman, 1993). However, the findings also emphasized the complexity of risk perceptions in environmental issues and the need for further research on this area, discussed further in Section 6.4.

6.3 Implications for Theory and Practice

Although the cases studied in this thesis were situation specific, the information nonetheless has generic significance and the findings can potentially be used in a wider context. Based on the potential for external validity, the implications for theory and practice have been considered and are discussed below.
6.3.1 Municipal Decision Makers

The findings from the case studies contribute further to the importance of civil society involvement in environmental governance and thus have implications for municipal decision makers. Prior to the court cases in Kingston and Hamilton, neither city experienced meaningful citizen engagement when confronted with brownfield issues. Consequently, civil society participation occurred through the environmental activism that took place in response to brownfield concerns at the Belle Park and Rennie Street landfills. The studies demonstrated that as facilitators in brownfield redevelopment (De Sousa, 2006b), municipalities need to find a way to approach civil society involvement more effectively. The Kingston case study revealed that meaningful involvement was enhanced when the municipality integrated local participation into the end use goals of the sites; KEAF played a pivotal role in transforming the Belle Park site into an educational resource after the remediation had begun. While the City of Hamilton established the Rennie Street Landfill CLC to oversee remediation efforts, the City formed a subsequent committee to advise on end use goals. Consequently, the City’s plans were met with resistance from original CLC members. This was evidenced through the disappointment of members as referred to in Chapter 5, Section 5.5.2 of this thesis; at a Public Works Standing Committee meeting that took place in May 2008, one committee member indicated:

…My point here is that there was a substantial redefinition of what was on the table for community end use discussions between 2000 and 2005. I don’t believe this was a fair thing to do to the community – particularly those who have invested years and years of effort into seeing problems in the neighbourhood resolved (Public Works Standing Committee, 2008).

This finding is consistent with the literature, particularly Wernstedt (2001) who suggested that adding an element to Superfund projects to take into account the end-use goals of the sites would enhance local participation. The success of groups like KEAF provided evidence of the benefits that can be experienced by municipalities when meaningful engagement is used. The benefits of community cohesion, improved communication and trust, and an increase in access to information were all observed in the Belle Park case, findings that were consistent with public participation literature reviewed in Section 2.3.1.
6.3.2 Civil Society

Secondly, the research clearly has implications for the practice of environmental organizations and provides insight into how civil society organizations can engage more effectively with decision makers. The cases demonstrated that civil society recognizes that they have a role in environmental decision making. In both communities, there was a strong presence of civil society and the desire to be engaged where environmental concerns were found. Interview results verified that ENGO respondents acknowledged that in the face of government cutbacks and environmental monitoring declines, the need for civil society involvement is expanding (ENGO RS-7, ENGO BP/RS-3). The strong civil society response and influence in the Belle Park and Rennie Street landfill case studies are indicative of the potential for environmental organizations and community groups to successfully engage wherever brownfield concerns are found.

The findings suggest that there are several benefits to the participation of environmental groups in brownfield issues. Specifically, the thesis provided insight into benefits of social learning and social capital theories as outlined in the literature. The social learning that occurred created new opportunities for learning for all participants; this emerged in the form of educational resources and an increased understanding of the importance of toxicity tests. As a result, the groups increased the potential for future successes in pollution cases. The social capital that transpired through the foundation of networks, served as a catalyst for strengthening civil society capacity. The case findings were in line with literature that outlined the potential for social capital to facilitate local action as discussed in sections 2.3.2 and 5.2 (Wakefield et al., 2007). Overall, the social learning and social capital that materialized throughout the cases facilitated a more sophisticated and diversified civil society. The benefits that came about for all civil society participants could be particularly informative for civil society organizations, notably those with sustainable land use goals. The research could serve as a reference for organizations that wish to incorporate brownfield programs into their mandates, but are unsure of civil society opportunities in this area. Nevertheless, a more cohesive engagement process, one in which there is proactive collaboration between environmental groups and decision makers, would reduce the need for action through private prosecutions. This would ensure that both stakeholder groups reap the benefits of civil society involvement rather than experiencing an
inequitable outcome. Determining methods for effective collaboration in brownfield programs is a future research direction suggested in the following section.

6.4 Future Research Directions

As discussed in chapter one of this thesis, the research presented in chapter four is being published in a broader study of brownfields in Kingston, Ontario. As such, the research will be shared not only with the interview respondents, but also with a proposed audience of academia, university students, municipalities across Canada and other relevant stakeholders. Further, the case study findings presented in chapter five are being submitted for publication consideration to Environments Journal and therefore intend to be shared with a similar audience. It is anticipated that this research will serve as a reference for future researchers and contribute further to brownfield and civil society literature.

Further research on this topic could enhance opportunities for municipalities, planners, civil society organizations and other relevant stakeholders to collaborate on brownfield planning. A key area for future research focuses on how to make community engagement a more central component of local brownfield decision making processes. Meaningful engagement through partnerships, delegated power and citizen control (Arnstein, 1969) becomes increasingly important as environmental awareness rises and civil society becomes more concerned with potential direct environmental effects within their communities. The increased environmental knowledge will presumably also bring about an acquired understanding of environmental rights. Thus, meaningful community engagement will not only relieve the potential for confrontation between government and civil society at a later time, but will also contribute knowledge from those who interact with the urban environment on a daily basis.

Further study is also needed to determine the components of a successful environmental advisory committee. Land use planning decisions are occurring more frequently at the municipal level due to government cutbacks. Consequently, this has brought attention to the need for committees to advise municipalities on local environmental matters (Ontario Nature, 2006). However, there was a significant difference as far as the visions, longevity and success of the environmental committees involved in the
remediation of the Belle Park and Rennie Street landfills. Thus to avoid the possibility of becoming discounted by municipalities, EACs need to revisit objectives regularly and establish measures to evaluate success levels.

A final research direction concerns the inherent discrepancy in risk perceptions. It is evident from the two cases studied in this thesis that both qualitative and quantitative aspects contribute to risk perceptions and that these play a role in environmental reaction and decision making. Ideally, civil society organizations such as ENGOs would bridge the gap between concerned citizens and scientific community. Further research on the validity of both forms of risk perception could contribute to the establishment of a successful civil society engagement process.

6.5 Concluding Remarks

This research set out to study the role of civil society in brownfield remediation and redevelopment; what was uncovered was a virtuous cycle of civil society involvement and a strong civil society presence in Kingston and Hamilton, Ontario. As the urgency for redeveloping brownfields grows, it is fundamental that planners, developers and municipalities not overlook the contribution of those who are most affected by the presence of brownfield sites, the local community. The consequence of brownfields on the community is best encapsulated in the following statement:

The public bears the burden of Brownfields. They endure the health risks, suffer the loss of services not provided because of diminished tax rolls and experience the deflating presence of blight (Bogen, 2006, p. 175).

It is my hope that this thesis will convey to all brownfield stakeholders the benefits of engaging civil society in municipal brownfield planning.
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Appendix A

Relevant Legislation and Regulations

*Ontario Water Resources Act* R.S.O. 1990, c 0.40

Interpretation

1. (1) In this Act,
   “discharge”, when used as a verb, includes add, deposit, emit or leak and, when used as a noun, includes addition, deposit, emission or leak; (“rejet”, “rejeter”)

   “person” includes a municipality; (“personne”)

   “place” includes a building, structure, machine, vehicle or vessel; (“lieu”)

   “waters” means a well, lake, river, pond, spring, stream, reservoir, artificial watercourse, intermittent watercourse, ground water or other water or watercourse; (“eaux”)

Discharge of polluting material prohibited

30. (1) Every person that discharges or causes or permits the discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters is guilty of an offence. R.S.O. 1990, c. O.40, s. 30 (1).


Definitions

34. (1) For the purposes of sections 35 to 43, “deleterious substance” «substance nocive »

“deleterious substance” means

(a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water, or

(b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water,

and without limiting the generality of the foregoing includes

(c) any substance or class of substances prescribed pursuant to paragraph (2)(a),
(d) any water that contains any substance or class of substances in a quantity or concentration that is equal to or in excess of a quantity or concentration prescribed in respect of that substance or class of substances pursuant to paragraph (2)(b), and

(e) any water that has been subjected to a treatment, process or change prescribed pursuant to paragraph (2)(c);

"deposit" «immersion » ou « rejet »

"deposit" means any discharging, spraying, releasing, spilling, leaking, seeping, pouring, emitting, emptying, throwing, dumping or placing;

"fish habitat" «habitat du poisson »

"fish habitat" means spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes;

"water frequented by fish" «eaux où vivent des poissons »

"water frequented by fish" means Canadian fisheries waters.

Regulations for purpose of definition "deleterious substance"

(2) The Governor in Council may make regulations prescribing

(a) substances and classes of substances,

(b) quantities or concentrations of substances and classes of substances in water, and

(c) treatments, processes and changes of water

for the purpose of paragraphs (c) to (e) of the definition "deleterious substance" in subsection (1).

R.S., c. F-14, s. 31; R.S., c. 17(1st Supp.), ss. 2, 3; 1976-77, c. 35, ss. 5, 7.

36. (1) No one shall

(a) throw overboard ballast, coal ashes, stones or other prejudicial or deleterious substances in any river, harbour or roadstead, or in any water where fishing is carried on;

(b) leave or deposit or cause to be thrown, left or deposited, on the shore, beach or bank of any water or on the beach between high and low water mark, remains or offal of fish or of marine animals; or

(c) leave decayed or decaying fish in any net or other fishing apparatus.

(2) Remains or offal described in subsection (1) may be buried ashore, above high water mark.

(3) Subject to subsection (4), no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any
other deleterious substance that results from the deposit of the deleterious substance may enter any such water.

(4) No person contravenes subsection (3) by depositing or permitting the deposit in any water or place of

(a) waste or pollutant of a type, in a quantity and under conditions authorized by regulations applicable to that water or place made by the Governor in Council under any Act other than this Act; or

(b) a deleterious substance of a class, in a quantity or concentration and under conditions authorized by or pursuant to regulations applicable to that water or place or to any work or undertaking or class thereof, made by the Governor in Council under subsection (5).

(5) The Governor in Council may make regulations for the purpose of paragraph (4)(b) prescribing

(a) the deleterious substances or classes thereof authorized to be deposited notwithstanding subsection (3);

(b) the waters or places or classes thereof where any deleterious substances or classes thereof referred to in paragraph (a) are authorized to be deposited;

(c) the works or undertakings or classes thereof in the course or conduct of which any deleterious substances or classes thereof referred to in paragraph (a) are authorized to be deposited;

(d) the quantities or concentrations of any deleterious substances or classes thereof referred to in paragraph (a) that are authorized to be deposited;

(e) the conditions or circumstances under which and the requirements subject to which any deleterious substances or classes thereof referred to in paragraph (a) or any quantities or concentrations of those deleterious substances or classes thereof are authorized to be deposited in any waters or places or classes thereof referred to in paragraph (b) or in the course or conduct of any works or undertakings or classes thereof referred to in paragraph (c); and

(f) the persons who may authorize the deposit of any deleterious substances or classes thereof in the absence of any other authority, and the conditions or circumstances under which and requirements subject to which those persons may grant the authorization.

(6) A person authorized to deposit a deleterious substance by or under regulations made pursuant to subsection (5) shall, when directed in writing by the Minister, notwithstanding any regulations made pursuant to paragraph (5)(e) or any conditions set out in an authorization made pursuant to paragraph (5)(f), conduct such sampling, analyses, tests, measurements or monitoring, install or operate such equipment or comply with such procedures, and report such information, as may be required by the Minister in order to determine whether the person is depositing the deleterious substance in the manner authorized.
PART XI
PENALTIES AND FORFEITURES PROCEEDS

To Government of Canada

60. (1) Where an information is laid by a fishery officer or a fishery guardian employed by the Government of Canada relating to an offence under the Act, the payment of the proceeds of any penalty imposed arising from a conviction for the offence shall be made to the Minister.

(2) Where an information is laid by a fishery officer or a fishery guardian employed by the Government of Canada relating to an offence under the Act, the payment of any proceeds of the sale of any forfeited articles arising from a conviction for the offence shall be made to the Minister.

To Provincial Government

61. (1) Where an information is laid by a fishery officer or a fishery guardian employed by a provincial government relating to an offence under the Act and all of the expenses incurred in the prosecution of the offence are paid by the provincial government, the payment of the proceeds of any penalty imposed arising from a conviction for that offence shall be made to that provincial government.

(2) Where an information is laid by a fishery officer or a fishery guardian employed by a provincial government relating to an offence under the Act and all of the expenses incurred in the prosecution of the offence and in connection with the custody and disposal of any forfeited articles are paid by the provincial government, the payment of any proceeds of the sale of the forfeited articles arising from a conviction for that offence shall be made to that provincial government.

To Persons

62. (1) Where an information is laid by a person in circumstances other than those referred to in section 60 or 61 relating to an offence under the Act, the payment of the proceeds of any penalty imposed arising from a conviction for the offence shall be made

(a) one half to the person; and

(b) one half to the Minister or, where all of the expenses incurred in the prosecution of the offence are paid by a provincial government, to that provincial government.

(2) Where an information is laid by a person in circumstances other than those referred to in section 60 or 61 relating to an offence under the Act, the payment of any proceeds of the sale of any forfeited articles arising from a conviction for the offence shall be made, net of any expenses incurred in connection with the custody and sale of the forfeited articles,

(a) one half to the person; and

(b) one half to the Minister or, where all of the expenses incurred in the prosecution of the offence are paid by a provincial government, to that provincial government.
Appendix B
Ethics Approval and Interview Consent

November 21, 2008

Ms. Allison J. Roberts
School of Environmental Studies
Biosciences Complex
Queen’s University

GREB ref. # GENC-016-08
Title: “The Role of Community Groups and Environmental Non-Governmental Organizations in Environmental Mitigation Programs

Dear Ms. Roberts:

The General Research Ethics Board (GREB) has reviewed and approved your request for renewal of ethics approval for the above-named study. This renewal is valid for one year from January 24, 2009. Prior to the next renewal date you will be sent a reminder memo and form to reapply.

You are reminded of your obligation to advise the GREB, with a copy to your unit REB if applicable, of any adverse event(s) that occur during this approval period (details available on our web page www.queensu.ca/vpr/greb/adforms.html#Adverse). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that any adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be approved by the GREB. Examples of required approvals are: changes in study procedures or implementations of new aspects into the study procedures that affect human subjects. These changes must be sent to Linda Frid at the Office of Research Services or FRIDL@queensu.ca prior to implementation. Ms. Frid will seek the approval of the GREB reviewer(s) who originally assessed your application.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

Joan Stevenson, Ph.D.
Professor and Chair
General Research Ethics Board

cc.: Dr. Pamela Welbourn, Supervisor

JS/ig

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January 24, 2008

Allison J. Roberts
Masters Student
School of Environmental Studies
Queen’s University

GREB Ref # GENSC-016-08
Title: “The Role of Community Groups and Environmental Non-Governmental Organizations in Environmental Mitigation Programs”

Dear Allison Roberts,

The General Research Ethics Board (GREB) has given expedited approval to your proposal titled “The Role of Community Groups and Environmental Non-Governmental Organizations in Environmental Mitigation Programs”. In accordance with the Tri-Council Guidelines (article D.1.6) and Senate Terms of Reference (article G), your project has been approved for one year. At the end of each year, GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this approval period (see www.queensu.ca/vpr/greb/adiforms.htm#Adverse). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that any adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be approved by the GREB. Examples of required approvals are: changes in study procedures or implementations of new aspects into the study procedures that affect human subjects. These changes must be sent to Linda Frid at the Office of Research Services or FRIDL@queensu.ca prior to implementation. Ms. Frid will seek the approval of the GREB reviewer(s) who originally assessed your application or the GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

[Signature]

GREB Chair

For: Anthony Wright
Member, General Research Ethics Board

Copy: Pamela Welbourn and Graham Whitelaw, Faculty Supervisors
Combined Information and Consent Form

The Role of Community Groups and Environmental Non-Governmental Organizations in Environmental Mitigation Programs

My name is Allison Roberts. I am a Masters student in the School of Environmental Studies at Queen’s University. I will be conducting interviews to gather data for my Masters thesis which will examine the role of community groups and environmental organizations in brownfield remediation and re-development. The case of Belle Park in Kingston, Ontario and interviews with those involved will form the basis for this research but remediation strategies will also be looked at from a broader perspective by studying the sophistication and diversification of environmental groups, perceptions of risk and lessons learned throughout the process.

I will be interviewing participants that will be chosen based on their involvement in brownfield remediation strategies or on their knowledge of community involvement and the environmental movement. Conducting interviews will provide valuable information that could not be acquired through secondary research. The interviews will be done in a semi-structured format leaving room for an open discussion on your experiences and thoughts related to the research and interview questions.

With your consent, the interviews will be recorded using a Panasonic digital voice recorder. The recorded data will be transferred to the researcher’s computer from the recorder and will only be accessible by the researcher. The interviews will run up to ninety minutes in length but most will likely not exceed sixty minutes. Any follow up calls that will be conducted will last approximately fifteen minutes although follow ups will most likely be deemed unnecessary. By participating in this interview you will not be exposed to any known physical risks, social or psychological discomforts or inconveniences. Signing below will confirm that you understand the expectations and requirements of the interview.

As a participant in this research, you will be assured definite rights and participation is entirely voluntary. You are free to refuse to answer any question at any time and are free to withdraw from the interview or study at any time. By signing below, you are confirming that the interview is entirely voluntary and that you are free to withdraw at any time.

Information that is collected through the interviews may be made available to the researcher’s thesis supervisory committee. However, throughout the thesis, a coding system will be used to ensure your confidentiality. Your confidentiality will remain protected unless you indicate below that you consent to quotes being attributed to your name. You will have the opportunity to review (prior to publication) quotations from your interview that I intend to include in publications in the context in which I intend to use it. By signing below you assure that you are aware of the provisions regarding confidentiality and anonymity.

This research, once completed and compiled will be in the form of a formal thesis and will be made available to the supervisory committee; Graham Whitelaw, Pam Welbourn and Harry Cleghorn. The data will also be used for a chapter in a book on brownfields which will have a proposed audience of university students, municipalities, the public and environmental organizations. The thesis report may also be posted on the Queen’s University QSpace website for access by future students.
There will be no remuneration provided for participating in this interview. If you have any questions, concerns or complaints about the research procedure, you may contact myself, my supervisors or a representative from the General Research Ethics Board. Contact information is provided below.

In signing below, you are confirming that you have read the letter of information and have had any questions answered to your satisfaction. You are also confirming that you will keep a copy of this letter for your records.

Name: ________________________________

Date: _________________________________

Signature: _____________________________

By initialing this statement below,

_____ I am granting permission for the researcher to use a tape recorder (and/or)

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

Contact Information

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Appendix C
Sample Interview Questions

1. Can you describe how you or your organization first became involved in the Belle Park/Rennie Street landfill case?

2. Can you talk briefly about your role during the Belle Park/Rennie Street landfill case?

3. From your perspective was this a case where civil society groups contributed positively to the brownfield redevelopment process?

4. How do you feel that civil society groups can fit into this particular type of environmental issue?

5. Do you think that the finder’s fee is an effective method for encouraging citizen involvement in the brownfield remediation process?

6. How do you feel perceptions of risk differed in this case? Why do you think these perceptions differed so much among stakeholders?

7. Can you describe any subsequent work that emerged as result of involvement in the Belle Park/Rennie Street Landfill remediation?

8. Did brownfield issues become an area of strength for any of the organizations you were involved with?

9. Do you feel that there is opportunity for civil society to work with the public and private sector on brownfield remediation strategies?

10. Can you talk about any lessons learned either while working on the Belle Park/Rennie Street case or other brownfield remediation efforts? What would help to make these experiences better? What were the limitations?
Appendix D
Photographs

Figure D-1: Rusty Coloured Seeps from the Edge of the Former Belle Park Landfill
(Source: Malroz Engineering Inc., 1999)

Figure D-2: Educational Depot Orientation Board, Belle Park, Kingston, ON
Figure D-3: Educational Depot Landfill Description
Belle Park, Kingston, ON

Figure D-4: Educational Depot Describing Deep-Rooted Tree Remediation
Belle Park, Kingston, ON
Figure D-5: Educational Depot Describing Discharge Water Control Wells
Belle Park, Kingston, ON