

ASSESSMENT OF BROWNFIELD REMEDIATION
AND DEVELOPMENT IN KINGSTON: BLOCK D
AS A CASE STUDY

by
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Assessment of Brownfield Remediation and Development in Kingston: Block D as Case Study

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A model is developed through the analysis of Block D, a brownfield in Kingston, Ontario, Canada. This location was the site of the Canadian Locomotive Company's "Locomotive Works", and so is a site of significant contamination. Brownfield Policy is examined, and interviews are conducted with industry and political leaders, including the developers of the site, Ontario Minister of the Environment, academic expert, Manager of Brownfield and Initiatives with the City of Kingston and a member of the Sydenham Ward Tenants and Ratepayers Association (SWTRA). It is the combination of these analyses with archival research that provides the base of this document. The culmination of the results from the interviews allows for the development of a successful case study for brownfield remediation and development.

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INTRODUCTION

Since the industrial revolution, the human species has had a major impact on surrounding landscapes. We as a collective group have reduced the stocks of fish in the ocean, accelerated the extinction of many species, contributed to major pollution in our air, waterways and land. We have impacted the environment now to such a degree that we are accelerating climate change. It is no wonder then, with human populations reaching new heights and the desperation to reduce our collective ecological footprint growing, that we are now looking to previously developed areas in which to house individuals, industry and the community.

Brownfield sites in particular are a very good place to start. Since the dawn of industry, and increasingly through the 20th and 21st centuries, humans have been trying hard to alter the landscape, harness the power of the natural elements and better our economic state, sometimes for the better, often for the worse. It has been in response to this tremendous action that brownfields arose as sites that are “abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by a real or perceived environment contamination” (US EPA, 1996).

We have now arrived at a time when the public and political realms indicate that action is required to remediate and clean up contaminated sites. Through urban planning and community involvement, we must begin to consider many of the inner-city contaminated sites as possibilities for urban expansion and renewal. Even within North America, where the land is considerably bare, there is a collective concern to try to reduce the frequency and impact of urban sprawl and increase urban sustainability. We as a group and as a generation are trying to fix what has been damaged. This particular project has been developed to try and address one small way in which the environment may be improved, for future generations and for us.

As mentioned previously, brownfields are sites of real or perceived environmental contamination. These sites, often occurring within old industrial cities, pose environmental risk and possible human health risks: they are also sites where remediation and further development is possible. In contrast to blackfields, brownfields are sites in which there is considerable environmental damage, where there is also the possibility, with assessment and remediation, for full recovery (to residential requirements of contamination), or at least recovery for use as industrial or commercial sites. Unlike greenfields presently, brownfields are often found in the downtown areas of major urban city-centres, resulting from old commercial activities or industrial factories that were hosted on these sites years earlier. Often, they contain various types of metals or organic contaminants which can significantly impact the surrounding environment. These sites are frequently viewed as economic drains on the municipalities that house them.

As few developers in the past have been willing to take on such sites, they often remain vacant, becoming derelict sights and community eyesores. However, as fewer and fewer greenfields open up for development, the pressure is on developers now to redesign their ideology to include the remediation and subsequent development of brownfields, which often sit on areas of prime real estate in the cities that house them. It is because of these issues that brownfields need to be evaluated further to determine ideal models for remediation and development, and to provide evidence for mutually-beneficial relationships between municipality, developer and taxpayer.

Kingston, Ontario, is a city located on the north-eastern shores of Lake Ontario. Found in central Canada, Kingston was the original capital of Ontario, and boasted many types of industry. Certain types of industry well-known in the early 1900's were its locomotive yard, lead smelter and leather tannery. Now, these sites are of particular interest for developers and

environmentalists alike. They all were sites of moderate to severe levels of contamination, one of which still maintains a large amount of contamination. This is a result of the lack of developer interest in the past to remediate these types of sites, compounded with the historical unavailability of funds to remediate the sites and lack of remediation policy and guidelines.

Often cost was the major factor in deciding whether these sites would be remediated and redeveloped, and when greenfields were plenty and available, the sites were not on the list of priorities for either the City of Kingston, or the Kingston developers. Now, however, these sites, especially those located in particularly appealing locations, are quickly becoming development interests. Although the Davis Tannery still lays bare, the old site of the Locomotive Works in Kingston is blossoming into what will be two rental units, one 17-storeys high and the other 15-storeys, one condominium unit, also 17-storeys high and a Marriot hotel with a direct view of the Cataraqui River and Lake Ontario. This site has been titled Block D ever since the closing of the Canadian Locomotive Company's "Locomotive Works" in 1969.

It is this site that is the subject of interest to this study. Formerly called Block D, this site has been the subject of environmental and political interest since the demolition of the locomotive works in 1972. Block D was contaminated with a large amount of petroleum-based chemicals and heavy metals (Paterson, 2002) before remediation and subsequent development. However, it was not just the contamination issues that featured prominently into its remediation and development. In fact, political and policy issues have resulted from this particular case, such that its remediation and development was a feat in itself. Having been the first brownfield in Kingston to fall under brownfield legislation, however, it makes a good case study into how policy affects the sustainability of a city and can help to address contamination issues that both developers and municipalities can manage. In this study, I hope to demonstrate the political and

social implications of this site and how its political legacy has formed its remediation and development.

METHODS

Originally, this project was to be research-based, with a primary focus on material published in peer-review journals presently available about brownfields. It very quickly grew into a project that would also include interviews of various experts concerned with the remediation and development implications of Block D. Near the beginning of the process, a preliminary evaluation was conducted to determine who would be interested in being interviewed to assist in the development of this project and the understanding of Block D, not only as a contamination issue scientifically, but as a hotly contested social issue as well (Personal communication, Davis and Welbourn).

In addition to conducting the interviews for the project, Queen's University required that any questions a researcher may pose must be first approved by the General Research Ethics Board (GREB). Since the School of Environmental Studies does not have its own unit affiliated with this board, this application was submitted to the entire board for a hearing held in early December, 2007. This application required a reasonably complete list of interviewees, Consent and Information forms, as well as Sample Interview Questions. See Appendix A for the Sample Interview questions submitted to GREB, and Appendix B for the Combined Information and Consent form. Although this process seemed rigorous for the type of work to be completed, it helped to clarify the importance of the interviews pertaining to each interviewee, as well as to provide a clear framework from which to base interviews. This application was approved following the hearing in December, 2007.

The selected interviewees were as follows: Pamela Welbourn (Brownfields Expert and Adjunct Professor at Queen's University), Joe Davis (Manager, Brownfields and Initiatives, City of Kingston), Councillor Bill Glover (member of the Sydenham Ward Tenants and Ratepayers

Association), Mr. Alf Hendry (CEO of Homestead Land Holdings Limited), Mr. Brit Smith (Founder of Homestead Land Holdings Limited) and the Honourable John Gerretson (Ontario Minister of the Environment, former Ontario Minister of Municipal Affairs and Housing). Each individual was chosen to demonstrate a varied look at Block D, its development, policy, environmental and social implications. Interview transcripts are available in Appendix C.

Each individual was asked a series of questions that were based on the sample questions provided in Appendix A. As the interviews conducted were semi-structured, much of the information that was provided by the interviewees was unprovoked by the researcher. All of these interviews were recorded by Panasonic Digital Recorder and are preserved on disc for the academic use of future students at Queen's University. Each individual, before the interview, was required to sign the information and consent form and initial whether the researcher could attribute their quotations to their name, whether the researcher could record their interview and whether that interview could be preserved for historical and academic purposes at Queen's University. Because each of the individuals was very willing to do this, the complete album of interviews is available from the Environmental Studies Office at Queen's University.

Accordingly, interviews were arranged at the time most convenient to the interviewees, and proceeded in a semi-structured manner. Each interview was different and different variations of each question were composed and asked. Research on the interviewee was conducted prior to the interview in order to assure that information received from the interview would be useful and relevant. This also aided in better understanding the bias of each interviewee and their unique participation in the remediation and development of Block D.

During the series of interviews, which took place primarily over January and February of 2008, much information was revealed. The most important information, for me, was the network

of individuals that were impacted by the project and the general locations of files pertaining to the site. What surfaced from these interviews was a general understanding of where the environmental consultancy reports were and the ways in which the site had been analyzed in order to remediate and subsequently develop it.

Because different information had been revealed by the interviewees, research continued through the City of Kingston office to find the site ownership history, pertinent brownfields policy and a number of consultancy reports. All of this information was then reduced to the pieces of most importance and these particular items were analyzed and used to construct this report.

The methods used for the interview process were care of the Historical Ecology Handbook written by the Society for Ecological Restoration. Chapter 3 demonstrates the legacy of oral history and provides an outline of how to best conduct interviews. Much of this advice was heeded and the interviews were conducted along the lines of this suggested format. Further detail on the interview process can be found in this particular text.

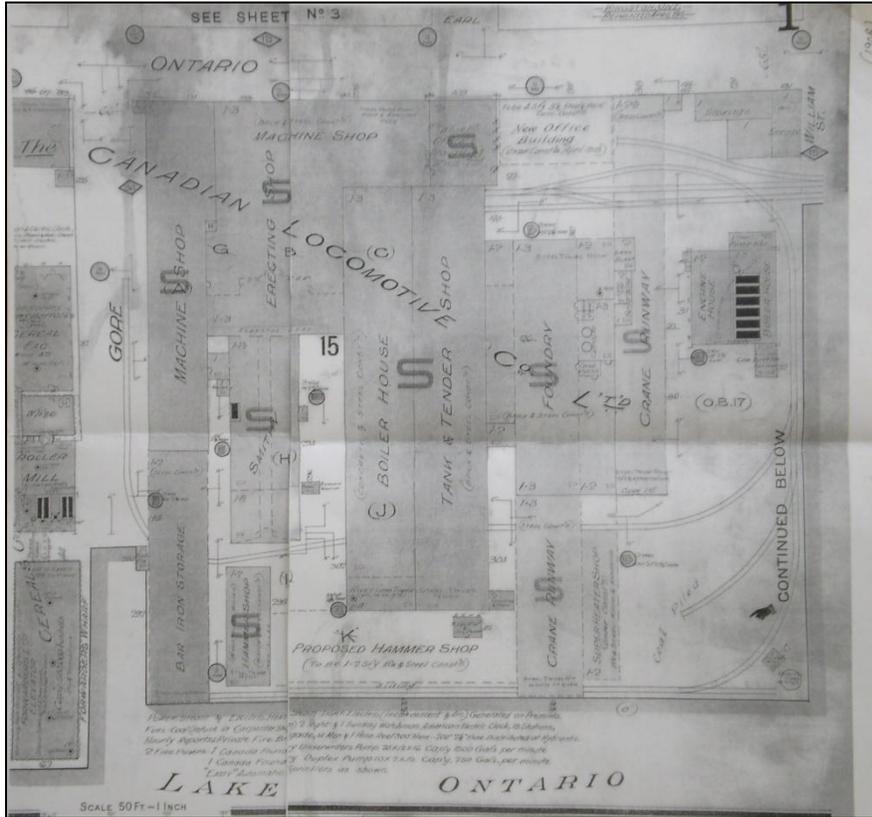


Figure 1. Map of Block D, designed in 1908. Courtesy of the City of Kingston office.

HISTORY OF BLOCK D

Opening in 1892, this 2.89 ha site originally hosted a Machine Shop, Moulding Shop, Smithy, Boiler Shop, Erecting Shop (for wood working), Grocery Warehouse and several Coal Sheds. Located on the waterfront between Gore St. and William St., this site during the 1800s and early 1900s was responsible for much of the industry production in Kingston. By 1908, the site hosted numerous machinery buildings, including an expansion onto the machine shop for Bar Iron Storage, a Hammer Shop, the expansion of the Erecting Shop, Boiler House and Machine Shop, the addition of a Tank and Tender Shop, a Foundry, a Crane Runway and an

Engine House (see Figure 1). At this time, the Grocery Warehouse had been torn down to make way for greater machinery additions. A Super Heater Shop was also erected on this site. By 1963, the building plans for the site were labeled as “not inspected”, although the site at the time was at full capacity in terms of building and development. Being directly adjacent to the water, it would be interesting to have determined the amount of leachate entering Lake Ontario at that particular site, through the late 1800s to the mid-1900s.

It seems as though, through the late 1900s, the site lay bare of what had been left. Little developer interest encouraged its remediation and the cost of remediation of the site at the time would likely have been far too extensive a project for the City to take on. Below are some photos which demonstrate the degree of development present on the property in 1919.



Figure 2. Block D view from above in 1919. Photo courtesy of Kingston Electors website (www.kingstonelectors.ca).



Figure 3. Block D image from the west side, 1919. Photo courtesy of Kingston Electors website (www.kingstonelectors.ca)

Until 1995, there were not any regulations that were specific to brownfields, so remediation at that time involved trying to remove material from a site so that it could meet ministry guidelines.

Until 2004, there was no brownfield policy that would allow funding that would permit the remediation and development of the site. Once both of these regulatory mechanisms were developed, they encompassed a full procedural guideline document which outlined the particular stages involved in brownfield remediation and redevelopment, in particular the consultancy reports that are required for municipal support and approval. This guideline document now requires that a municipality initially develop a Community Improvement Plan, such that the areas most in need of remediation and development qualify for funding. The CIP outlines the sites that would qualify for funding, which can assist developers in choosing sites that would allow the greatest payback. The legislation also requires that a Phase I environmental site assessment be conducted by the developers, which requires a thorough analysis of any documents prepared about the site in question and an archival search through local sources that may contribute to past documents that had been prepared. The brownfield legislation requires the development of a Phase II environmental site assessment, which is the physical analysis of the depth of severity of contamination on the site, as well as the development of a Remediation Action Plan. All of these documents need to be prepared by environmental consultants and are signed off by the municipality in order for a developer of a brownfield site to qualify for funding under the Ontario Brownfields Legislation. As a benefit to the developer, by going through these steps, in addition to qualifying for the payback regime, this policy also removes the risk associated with the remediation and development of a brownfield, by placing sole liability on the owner who contaminated the site, so long as consultancy reports are conducted and filed with the municipality in which the brownfield exists.

REMEDATION INTEREST

It wasn't until 2002 that there was some City interest in Block D, when, on February 6th, there was a brainstorming session to decide the future of the site. At this time, it was owned privately, but because of the contamination, it had not been either remediated or developed. It was at this time that the City received formal correspondence from the owner, Mr. M.P. Gillan to inform that a listing was going up for the site. Associated with the site, in the eyes of the City there were three major foci: financial concerns, public policy initiatives and perceived risk. Until this time, little had happened in Kingston as to brownfield development, so it is not surprising that there were inherent uncertainties involved in the property and deciding how to treat it.

Public perception and lack of brownfields policy made up a large part of the issues associated with the site. This in part was due to poor public understanding of facts, which necessitated transparency between the municipality and the public in any future development. The brainstorming session identified ways in which to get the entire community involved, as opposed to a few special interest groups, where the city became concerned with how it would be perceived publicly as either a regulatory body or active participant in this project. Issues that concerned the public at that time were: the continued public waterfront access, environmental cleanup of the site, visual access for residents and available open space, as well as economic viability and sustainability of the site upon its remediation and development.

These types of issues often feature prominently in brownfields remediation and development. Because these sites are so often found near in populated urban centres, and because this site in particular sits directly on the waterfront, it would, no doubt, upon development, block

the lake-view for certain established residents in the area. It could also, depending on the developer, prevent public access in the future to that particular portion of waterfront. Although these issues in particular are not always of public concern, certainly in this case, they featured very prominently into any development that would occur on the site. An additional financial issue that implicated the public would be the cost of remediation.

Block D, because of its location, is a particularly attractive site due to its proximity to the water's edge. As a result, there was a public understanding held before its remediation and development that it might be purchased by the City and converted into parkland. Although this is one of the major reasons the development of Block D was such a contentious issue, often when a city develops a site into parkland, it can run deficits in the process, implicating taxpayers more than a public-private partnership project would.

To deal with these issues, a plan was formulated that would allow for a base framework for development, where the public would remain very involved in the type of development the site would allow, and also where the city was not implicated in paying directly for the remediation efforts. Because this site is large enough to house four multi-storey buildings, it is important to realize both the quantity of land to be remediated, as well as the type of industry that contaminated it in the first place. Upon further analysis, once a large portion of the site had been purchased by Homestead Land Holdings Limited, there were many contaminant issues at hand that had to be addressed. Unfortunately, because certain less costly techniques of *in situ* remediation (like bioremediation) had not been formally developed at the time, the primary method of remediation used was "dig and dump". This was necessary because of the types of contaminants found, the result of which was a large expense both fiscally and environmentally.

SCIENTIFIC ASSESSMENT

The first environmental assessment of the site was conducted by GeoCor Engineering Incorporated, a consulting firm from Kingston, Ontario, hired by Mr. M.P. Gillan. In 1995, they conducted a Phase I Environmental Assessment on the whole of the Block D property, which comprised a document search on the site with no physical intrusion. They had prepared the assessment for KidInks Holdings Incorporated from Ottawa, Ontario, a development firm that held previous interest in the site. According to the assessment, it was conducted during November of 1995. Assessed as a 2.89-hectare site, it was broken up into the Water Lots 25-28, from the Original Survey conducted by the City of Kingston. According to this assessment the “property was used for commercial and industrial purposes, including wharves for the trans-shipment of goods (between the 1850s and 1969) and the manufacture of locomotives by the Canadian Locomotive Company” (GeoCor Engineering Inc., 1995).

The plant officially closed in 1969, and was demolished three years later in 1972. At the time of the assessment, the property was vacant and had been used as a parking lot. A section of the site had also been used as a vegetable garden by local residents (GeoCor Engineering Inc., 1995). At the time of the study, the site was officially zoned for residential and commercial uses although no decommissioning studies had been undertaken or reviewed by the then called Ministry of Environment and Energy (MOEE). This report then goes on to suggest that a Phase II investigation, comprising physical analysis of the site, should be prepared and submitted to the MOEE along with the Phase I investigation to ensure the site is suitable for redevelopment. However, it mentions that it is the responsibility of the municipality and the applicant

(developer) to undertake a decommissioning study of the site. This particular survey was commissioned by Mr. M. P. Gillan, P.Eng. at the time on behalf of Kidinks Holdings Ltd.

Another investigation undertaken to determine the depth of contamination on the site was that commissioned by Homestead Land Holdings Ltd. The first of two Phase II Environmental Site Assessments was conducted in March, 2004. It comprised the entire property, owned now in part by Homestead Land Holdings Ltd. and the previous owner Mr. M. P. Gillan. This investigation was conducted by John D. Paterson and Associates Ltd. a respected firm located in Ottawa, Ontario. This investigation comprised a full site assessment, including a field assessment program of the subsurface area. This program was broken down into a variety of protocol, that of soil sampling, groundwater sampling, well monitoring (for boreholes created on the site), and a leveling survey. Following the sampling measures, additional analyses included soil sample headspace analysis and further analytical testing. Overall, the testing “consisted of placing 24 boreholes on [Block D], ten of which were instrumented with a monitoring well installation” (Paterson, 2004).

In terms of soil quality found through this assessment, over half of the boreholes contained hydrocarbons (13/24) and 75% of the boreholes (18/24) demonstrated some form of soil contamination. Five of the 24 boreholes were found to have Total Petroleum Hydrocarbons (TPH) (diesel) concentrations that exceeded the Ministry of the Environment (MOE) standards for residential and commercial development, whereas 8/24 boreholes were found to contain TPH (heavy oils) concentrations that exceeded the residential guidelines set out by the MOE. Of these eight, two contained concentrations of TPH (heavy oils) which exceeded the standards for commercial development. Six of the 24 sites contained concentrations of Polynuclear Aromatic

Hydrocarbons (PAH) exceeding residential guidelines, three of which exceeded commercial guidelines as well, and one which was equal to the commercial guideline. 11/24 boreholes contained concentrations of heavy metals exceeding residential guidelines, eight of which also exceeded commercial guidelines. Only four samples were taken to test for Volatile Organic Compounds on the site, and none were found to exceed MOE guidelines. However, the detection limits for four compounds (1,1-dichloroethylene, 1,2-dichloropropane, 1,3-dichloropropene and vinyl chloride) were above the MOE guidelines (Paterson, 2004). This causes question as to the types of analytical testing conducted and whether the instruments used were specific enough for the project. This particular problem was addressed in a peer-review paper that was paid for by SWTRA and compiled by Golder Associates (2004).

The groundwater results were recovered in February of 2003. Each of the samples were “submitted for analytical testing for BTEX, TPH (gasoline, diesel and heavy oils), sulphate and chlorides, metals, PAHs and VOCs”. Only PAHs were found to be above guidelines in two of the 24 boreholes, and two others were found equal to the guidelines. Five of the 24 sites contained a sheen or odour, leading to the belief of potential contamination prior to further analysis.

According to this study at the time of investigation, it was stated that the “remediation of the entire site at this stage is cost prohibitive for the intended development [without the input of brownfields legislation]” (Paterson, 2004). But because brownfield legislation came into effect in October, 2004, the ability to purchase and remediate the land became a viable option for Homestead Land Holdings Ltd (Personal communication, Hendry). Because of the sectioning of the lot, only the areas directly under the buildings and adjacent to them, as well as the area

around the parking garage were to be remediated. The area south of the buildings and parking garage were to be left alone as a way to manage the contaminated soil, leaving that portion up to the city to remediate. Thus, the developers did not remediate this portion of the site, where the city park is to be built. According to this study, the remediation program for the parkland should consist of an excavation and disposal method in order to allow the site to meet residential land use criteria for the northwestern quadrant of the site, and commercial land use for the northeastern quadrant, given the proposal that Paterson had been given before beginning this investigation. Undoubtedly then, the “most significant issues that would be associated with the sites remediation is the controlling of groundwater infiltration along the limits of excavation” (Paterson, 2004). Further recommendations and detail as to the remediation plan are provided in the report. They are not detailed here because of page restraints, but are readily available from the City of Kingston to any members of the public.

An additional site assessment was conducted by Paterson in November of 2004, detailing the requirements of the west side of the property. The west side of the property was developed first so a more intensive study was conducted on this side of the property. Similar to the previous Phase II Environmental Site Assessment, this one created 18 boreholes on the west side of the property and analyzed soil and groundwater. A remediation action plan was constructed for this part of the property in conjunction with the (new) Ontario Legislation (O. Reg. 153), which came into effect on October 1st, 2004. According to the study, in order to qualify under this new legislation, what is required is full removal of any material exceeding MOE guidelines. The action plan consists of the implementation of a shoring system due to the depth of excavation at Ontario St. and to allow access to bedrock to construct the underground parking garage

foundation; as well as full excavation of contaminated soil. Groundwater was not a major concern on this area of the site because of the lack of contaminants that showed up in the groundwater tests on this side of the site, and the fact that groundwater is not used here as the potable water supply. Various soil scenarios were constructed which addressed different circumstances that might arise when dealing with contaminated soil. These scenarios were outlined worst-case to best-case, allowing for the full removal or only partial removal of contaminated material. What resulted was partial removal of contaminated soil, which was not the best case scenario, but certainly not the worst either. Because about 30% of the fill that was excavated consisted of boulders, these could be crushed and used as in-fill. The report concludes that future environmental monitoring and site assessment will be required throughout the remediation and building process to ensure that higher concentrations of contaminants are not encountered. Additionally, “final verification sampling will be required to confirm that soil remaining in the area meets MOE guidelines” (Paterson, 2004). “Finally, an MOE Record of Site Condition will be produced for acknowledgement by the MOE” (Paterson, 2004).

A third and final report was produced by Paterson in November of 2004. This was the Remedial Action Plan for the west side of the site, which detailed the conclusions found from the Phase II Environmental Site Assessment. This action plan outlined tasks that required completion in order for the remediation to be complete, these were as follows:

- | | | |
|--------|---|------------------|
| Task 1 | Health and safety plan | |
| Task 2 | Site preparation | |
| Task 3 | Soil excavation and disposal/management | |
| Task 4 | Groundwater monitoring and management | |
| Task 5 | Environmental review, sampling and monitoring | |
| Task 6 | Backfill and site restoration | |
| Task 7 | Final summary report | (Paterson, 2004) |

Each of these tasks required different stages in order to complete and took time in order to comply with Ontario Brownfield Legislation, however, while complying with this legislation it was found that the site fell under legislation that ensured developer payback for remediation costs.

Further site assessments were not available from the City of Kingston Office, with respect to the East side of the site, however, development has continued on the East side of the site, but with less issues of contamination. In all, once finished, this site will comprise four different buildings, three owned by Homestead Land Holdings Ltd. and one by Kidinks Land Ltd. The three buildings owned by Homestead are the condominium on the waterfront and the two rental buildings that face Ontario St. The other building, beside the condominium will be a Marriott hotel developed by Kidinks Land Ltd.

RESULTS/DISCUSSION – INTERVIEWS

In conducting the interviews what became obvious to me was the fact that remediation and redevelopment of Block D has not been an easy issue for any particular stakeholder. This issue has many sides and is viewed differently depending on who is speaking and on behalf of whom they are speaking. The interviews began with Councillor Bill Glover, a member of the Sydenham Ward Tenant and Ratepayers Association (SWTRA), who noted that the development of Block D was not in the best interest of the SWTRA. He noted this for a number of reasons. Mostly, he felt that the city had been placed under undue pressure to remove Block D from its list of brownfields and so SWTRA conducted three separate site assessments on different aspects of the property remediation and development. One assessment concerned transportation within and around the Block D area and how the area could not support the addition of so many individuals with vehicles, concluding that the affect of so many vehicles would be immense traffic not supported by the Kingston infrastructure. Another report, funded by SWTRA was conducted by Golder and Associates to evaluate the methods used by Paterson, the site assessment consultants hired by Homestead Land Holdings Ltd. This report asked some major scientific questions in light of certain issues raised by the Paterson report. It concluded that it would be insufficient to continue with the remediation action plan and may create another environmental disaster in its wake (this was referenced to environmental issues associated with Belle Island, and was voiced as a concern at the time to the Ontario Minister of the Environment, through a letter written by Councillor Bill Glover on behalf of SWTRA). Generally, the feelings voiced by Councillor Glover were those of frustration and anger towards the development of the site and indifference

towards the issue now, as if there had been very little impact on decisions made, based on the funding and research put forth by and on behalf of SWTRA.

What seemed to be missing, however, was the fact that Mr. Glover did not speak of any proposed alternatives that SWTRA had suggested to allow for development. This would have demonstrated their ability to work with the developer to find common ground on the issue. Had this occurred, perhaps the development now would have been different from how it is at present, through the incorporation of constructive criticism by SWTRA and compromise on behalf of both the developer and community association.

The second interview conducted was with Dr. Pamela Welbourn, an adjunct professor at Queen's University now, with a history of teaching at the University of Toronto. She is trained as a biologist, but has most often in recent years worked in environmental disciplines. She was the biologist hired in the 1970s to conduct an assessment of the Davis Tannery site in Kingston, Ontario and currently resides here. She was interviewed because of her background in brownfields research and to gain a better understanding of how residents feel about the remediation and development of Block D.

From a scientific perspective, Dr. Welbourn was pleased to see a buffer zone being planned for on the site, but felt she was not aware of most of the scientific issues associated with the site. She mentioned that it would have been most environmentally responsible to have conducted in situ remediation on the site, but is aware that at the time of remediation, in situ remediation and bioremediation disciplines and applications were in their infancy. She recognizes that the company that conducted the site assessments for Homestead Land Holdings Ltd. at the time was a respected consultancy firm and so the assessment process was probably

legitimately executed and well-based in the science available at the time. One environmental issue that is of concern now, she mentioned, is the lack of trees on the property and whether there will be any in future, where they will be allowed to grow and how large they will be permitted to grow (as many of the inhabitants will want the waterfront views rather than clouded views through a forest).

From a social and community perspective, Dr. Welbourn thought the site was an eyesore before development and is pleased to see it developed. Although the architecture may not be suited entirely to her liking, the site had been desolate before and had taken away from the Kingston waterfront. She made the point that it is important to have individuals living in the downtown and that by having individuals living there it may be possible to improve the economy of the city. In general, she finds that when compared to other cities where she has lived, Kingston does have a lot of parkland and not a lot of industry, so the choice to build rather than create parkland on this particular site may have been the only economically feasible choice for the city of Kingston at the time. She does mention, that when compared with the Admiralty, an adjacent building, the architectural styles do not compare, with the Admiralty being a much smaller Victorian-style brick building. She recognizes that with new buildings, however, there is the opportunity for energy efficiency improvements that allow developers to consider the newest technologies, as they become increasingly affordable.

The most important information received from Dr. Welbourn, however, was the fact that she has worked in the brownfield academic world since its inception, in North America. She mentions that when she began her career in the field, the term brownfield had not yet been coined, let alone defined. She mentions that the Davis Tannery site turned out to be a brownfield,

but at the time had not been labeled as such. At that time, there were no policies or regulations in place to recognize or remediate any of these sites and so many continued to lay bare and contaminate surrounding areas. In particular, many sites in inner-city neighbourhoods were derelict and often became areas the average inhabitant would aim to avoid. Block D was no exception to this, so its development, although not regarded highly by some is in fact an improvement over what was there following the demolition of the Locomotive Works in 1972.

At the time when Dr. Welbourn entered the academic profession considering environmental concerns, each site was considered on a case-by-case basis, following with the lack of policy and regulation developed in industry. Soil specifications and regulation came from agricultural guidelines, guidelines which, many of these sites could not recover to, in particular, noting that there isn't soil in any city that would meet those guidelines, especially with respect to the amount of air pollution and contaminants found in many of the combustion sources of the time (leaded gasoline being a prime example). She reasoned that many of the sites were not cleaned up because of the misunderstanding and inability for citizens to relate these sites to the natural environment, because they bore no resemblance to the natural environment. What she cites as being the first large turning point in environmental contaminant issues is Love Canal in 1978.

People finally began to recognize the types of hazards the environment, when contaminated, can present in the neighbourhoods where families and individuals live. When contamination touches schools and residential areas, all of the sudden the general public becomes worried about the health and wellbeing of humans and can collectively force political change for environmental protection, which often serves, primarily as a mode of human health protection.

It was in 1995 in Ontario when the regulatory climate finally changed, with the first drafts of brownfield policy being considered and passed. This particular document contained soil guidelines for different sorts of developments (commercial, industrial and residential) with varying degrees of regulatory frameworks for each. Additionally, this document provided for the ability for site risk assessments. Now, policies have been built to actually apply many of the guidelines and regulations found in the 1995 document. Certain incentives have been put in place, especially in cities such as Kingston, St. Catharines and Hamilton, to encourage remediation and development of many of these brownfield sites. Because there is much pressure in the province of Ontario to reduce urban sprawl and increase urban sustainability, there is now more than ever an increasing need to remediate and develop brownfield sites (Personal communications between Welbourn and Davis).

The third interview conducted involved Mr. Smith and Mr. Hendry the owner and CEO of Homestead Land Holdings Ltd., the Block D developer with many buildings already developed in Kingston and numerous other regions of Ontario and the U.S. This was the first brownfield development that Homestead had considered and felt compelled to develop Block D because of the location of the site and the need for its remediation, redevelopment and use as something other than a local eyesore. Mr. Smith is also a long-time Kingston community member and so questions were also posed to him give a greater understanding of the Kingston community history of both the site and the greater Kingston area.

According to Mr. Smith, there has been a constant change in the industry in Kingston, where the loss of a few large industries (the tannery and locomotive works among a few), with the input of a great many small industries, have greatly modified the industrial landscape. He

remarks, however, that it has been the owner pride in Kingston which has always kept it a very respectable and interesting city, with a very attractive landscape for development. He feels that it is better to have a lot of people doing things their own way rather than allowing for bureaucratic decision-making to take control of the community. It was in this vein that Block D has been developed, according to Mr. Smith and Mr. Hendry.

Homestead Land Holdings Ltd. got its start while Mr. Smith was practicing law, as a hobby. He would build one apartment building a year as a good investment. Since that time, Mr. Smith has expanded his portfolio to include developments in Kingston, Toronto, Florida, Hamilton, London, Guelph, Kitchener and many other Ontario cities. Although some condominium structures have been erected, it is apartment buildings that are their specialty. Mr. Smith feels great pride in being able to offer the community quality affordable apartment housing, when very few developers choose to develop apartment buildings. He states, offhandedly that this can be viewed as truly selfish, because a condominium is purchased by individuals and there is a one-time payment, whereas rental units consistently payback the developer and owner until the building has been bought or demolished.

According to Mr. Smith the entire Kingston waterfront was historically heavily industrial, with the exception of Macdonald Park. The Locomotive Works was the last of the industries to close down and be demolished. Although, according to Mr. Hendry, Block D was one of the first to be developed under the new brownfields incentives that the city had promoted. He stated that reasoning for purchasing the property from the owner at the time was heavily based on the offering of remediation and development incentives promoted by the city of Kingston. Without these, there would have been no financial incentive to develop the property and Homestead

would not have purchased it (Personal communication, Hendry). Because Homestead was the first company to take advantage of the brownfield incentives in Kingston, they will receive the most payback for remediation work and environmental design of the buildings, compared to brownfield sites presently applying for incentives. Policies have changed since the purchase and remediation on Block D which permits developers less payback for the remediation work; however, what Hendry and Smith outlined, with respect to the Brownfield Legislation, is the need to continue and extend developer payback until the entire cost of remediation is repaid, rather than just for the outlined 10-year time period that was agreed upon in the case of Block D. This change in policy might be more difficult financially for the municipalities, however, because of the payback regime, where it is the incremental increase in municipal taxes that allow developer payback, the municipality will continue to benefit from the developed site rather than suffering from the tax arrears or the lack of development on a derelict brownfield site. Contrary to popular public belief, the developer must pay for remediation costs upfront and once the buildings are inhabited, the developer is paid back over 10 years from the municipality, but the municipality still receives 100% of the base taxes of the property as well as 20% of the annual incremental increases. The developer receives 80% of the incremental increase of the taxes back to pay for remediation, but only until the 10 year period has expired. This, Hendry states is where the policy could be improved, such that the developer would be paid back fully for the remediation costs involved in the site. With this particular contract, however, Homestead Land Holdings Ltd. was willing to undertake the remediation and development of Block D with the incentives offered at the time.

As far as remediation of the site is concerned, most of the remediation techniques used were of the conventional “dig and dump” variety. Most of the contaminated fill was removed and trucked to Ottawa, Ontario, which Hendry and Smith regard as a shame, because of the air pollution that was created in removing this material and taking it elsewhere. Some of the material, which was in rock form on the site was crushed and used to fill the property in order to prevent some material from having to be moved to Ottawa, but there were policy issues associated with this particular step as well, requiring more time and a municipal permit to allow for rock crushing on the property. In the minds of the developers, there are plenty of quarries around Kingston that would adequately support much of the less contaminated portions of material from the site. These quarries could then be sealed, reducing the need to transport material elsewhere. However, because this process did not fit with requirements set out by the province, it could not be used. Approximately 30% of the site was boulders which were crushed and reused as fill.

In the remediation of Block D, there were surprises along the way, which are not uncommon in brownfields and part of the reason why developers have been so hesitant to clean up and develop these sites in the past. Because of the geological makeup of the site, though, the surprises involved in the remediation of the site were offset by a different rock profile than what had been expected from preliminary assessment.

What was also very important to the developers was the public input on the site and the development. They held two separate public meetings in order to determine what the public interest was in the site and how it could be designed in such a way to satisfy public interest and developer and city requirements. What came out of these meetings was the need for a small

foundation footprint and the need for a park in the surrounding area. What was also important was public access to the waterfront. On the part of the developers, in order to ensure financial success of the property, the buildings on the site needed higher elevations to meet the public demand for a small footprint and so were designed to meet this need and retain the sightlines from Gore St. and William St.

Although many brownfield sites across Ontario are being developed to meet Leadership in Energy and Environmental Design (LEED) standards, the buildings on Block D are not certified. The reasoning for this by the developers is that there is a set model for building design that they find works. Having been in the business for 40 years, they are set to model this particular design because it has worked for them. Although, according to Mr. Hendry, most of the buildings that Homestead builds would qualify for LEED Silver certification. The standards for this sort of certification rely on six general structures associated with new construction, those concerning site location, with a special section concerning brownfields, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality and innovation and design processes. These buildings do employ some of these initiatives, but not all.

One particular aspect, although not entirely environmentally-related, that they do recognize is the historic legacy of the site. They recognize that in Kingston, this site has relevance to many citizens who grew up in Kingston, whose parents worked at the Locomotive Works. Inside the finished building, the first rental building, there stands a showcase of many of the items that were found in the remediation process of the site, to acknowledge the contributions of many Kingston-dwellers. Murals also line different walls along the entranceways in the buildings to emphasize the history of Kingston as well.

In terms of general public environmental perception, Mr. Hendry and Mr. Smith found that the failure to develop these sites is a major problem of the public eye. These sites may lie dormant for years but continue to pose environmental problems and real contaminant risk. Although development may not be the most ideal situation for the remediation of the sites, the alternative of having the sites sit bare is less desirable. Additional perception issues they discovered in the process was the failure of certain city councilors to understand the tax ramifications of the brownfield policy. In their opinion, the councilors did not fully understand the program of repayment and the fact that the developers had to pay for remediation upfront. They also failed to understand the fact that the city was still going to be paid property taxes for the site, and that these taxes would increase, to allow the city to benefit more. Greater understanding of these issues is likely necessary to facilitate a more cooperative process.

The fourth individual interviewed was the Honourable John Gerretsen, the Ontario Minister of the Environment, and former Minister of Municipal Affairs and Housing. Mr. Gerretsen was able to provide a broad owner history of the site as well as a better policy understanding regarding brownfield sites in general. He was interviewed as the Minister of the Environment, but also as a long-time Kingston community member, former mayor and council member.

In Kingston, original transport mechanisms were waterways, and because Kingston provided a direct link to other industrial cities via Lake Ontario, development along the waterfront was desirable for industries within the Kingston area. As a result, many of the industries in Kingston were developed on the waterfront, as mentioned previously by Mr. Smith and confirmed by Mr. Gerretsen. The major change in Kingston resulted from the decision to use

the St. Lawrence seaway for major transport, which diminished the need for transportation from Kingston, at the same time that technological change diminished the need for transportation by boat, when roads and rail became increasingly used for the transport of cargo. Industries in the mid-1960s were terminated as a result of this and the historic Kingston industry left its scar on the local landscape. Among these scars was Block D.

Shortly after the demolition of the Canadian Locomotive Works Yard, Bill Teron, an influential developer in Ottawa purchased Block D and the two adjacent blocks, which now house the Landmark, the Shipyards and the Harbour Place. Arrangements were made following the purchase of these lots to alter the industrial land use of Block D to residential zoning to arrange for residential development of the property by Bill Teron. The proposed site development was not much different from what is being developed now, but at the time, nobody was aware of the magnitude of the development, even though it was passed by council. Shortly thereafter, Bill Teron was elected chairman of the Canadian Mortgage and Housing Corporation and put the site into a blind trust, so as not to publicly display that any policy decisions being made would benefit him personally. In 1972-3, developers came on the scene that wanted to purchase the site from Teron and make some changes to the original agreements made by council at the time in the 1960s. Early in the 1980s, other waterfront developments occurred, those of the Landmark and the Harbour Place, built through negotiations with Bill Teron. Block D, however, laid fallow for many years, with various proposals submitted to the city that were not appropriate to the type of zoning of the site. In 1981, it came up for city purchasing, when Mr. Gerretsen was mayor of Kingston. He says now that there are few things he regrets, however not purchasing that property was one of the major things he regrets while mayor. He feels that they

could have better integrated public and private use of the site if the City had approved the decision to purchase it. He also says that although the city bid on the site, their bid was about \$300,000 to \$400,000 below the bid that took it, which, when talking about millions of dollars, hundreds of thousands does not seem like much by comparison. Nielson-Rollins were able to secure the site for around 2 million dollars at the time. Sonja Nielson was the realty firm in Kingston and Maurice Rollins a construction company from neighbouring Belleville, Ontario. Even now Mr. Gerretsen feels that the waterfront belongs to the public and that as much public access and ownership as possible should be made available. Although the current building on Block D does support this to some extent, he prefers the understated but elegant style of the Admiralty adjacent and feels that the city could have made better use had the City purchased the site, and thus further controlled the development that occurred there.

With regards to brownfield development and policy, Mr. Gerretsen points out that new brownfields policy recognizes a need to make the sites more financially palatable for developers and sees the implementation of the policy initiatives as a step in the right direction, promoting a win-win scenario for both municipality and developer. He stated that its only been in the last 40-50 years that we've recognized the need to remediate properties and that beforehand companies were just burying the environmental contaminants and building up. More recently, developers have been hesitant to touch any brownfield sites because of the amount of risk and liability involved in the site. He states that one of the major strongholds of the new brownfield policy is that it addresses financial issues, liability and risk inherent in developing previously contaminated sites. The formation of the policy also brought together several ministries, which before the implementation of the policy and recognition of brownfields as a problem had never

occurred. Much like the interdisciplinary study of the environment in the academic world, this integration of various different ministries focuses to develop policy that addresses concerns associated with brownfields with discussion from the Ministry of the Environment, Ministry of Natural Resources, Ministry of Municipal Affairs and Housing and the Ministry of Transportation. In the early days of the policy-making process, a brownfields coordinator position was developed to coordinate the work from these ministries and ensure that policy initiatives were undertaken by each of the ministries where necessary. This position reports directly to the Minister of Municipal Affairs and Housing and has the power to make ministries do things that could collectively bring about remediation from all aspects considered. Along with the development of this position, three things happened:

1. It was realized that if a developer should pay for the remediation costs, that the developer should be reimbursed through incremental tax increase for those remediation costs. This ensures that agreements can be made between the municipality and developer to encourage future tax growth and remediation of the site.
2. The provincial government waives the cost of the education portion of the taxes to the developer or landowners.
3. Liability of contamination returns to the individual responsible for the contamination, not the current owner. An environmental consultant must develop a Remediation Action Plan (RAP) for the site and requisite Community Improvement Plan (CIP), where they may then sign off on the site, demonstrating the known contamination of

the property and allowing the developer to hold the original owner responsible for contamination.

It is also important to realize that with these regulations, cleanup of the site is required, and cleanup must be to the best possible level with technology available at the time of remediation. Thus, there is allowance for technological development along the way and the policy incorporates the improvement of science in the future. Where we now consider there to be no contamination, there may be contamination found in the future simply because the technologies used will become that much more precise in nature.

Gerretsen reasons that sometimes, no matter the taxation measures, sites are not going to be financially viable to clean up simply because the extent of contamination may be too severe. In these cases, it is up to the municipal government and the developer to make up the remaining costs to allow remediation of the site, because brownfields offer a very different development opportunity than conventional greenfield development. Often there is money allocated from higher levels of government that can help to make up the remaining remediation costs on certain highly contaminated sites. Examples in the US is their Superfund Program, where only the most contaminated sites qualify for funding, but where there is enough funding to ensure that these sites are remediated.

Overall, brownfield development is a very different opportunity from conventional greenfield development. Gerretsen feels that although brownfields cause difficulty in that they require assessment and remediation, they provide opportunities for developers willing to put in the work to enable development in inner-city neighbourhoods, and this allowance for development in spaces where there is little room for new development makes these sites

desirable. Creating residential buildings on these sites is perhaps one of the most sustainable options developers have, simply because they input people to where they live, work and play, reducing the need for vehicles and increasing wellbeing. Also, these sites are often already well defined with access to nearby schools and parks, work, transit systems and sewage systems. Because of these amenities and the reduced need for the developer to install/develop these types of services to entice future residents to live there, there is added insurance that buildings constructed on former brownfield sites will be well-received by the community and high in demand. This can be seen with Block D as well, where a large majority of the condominium complex has already been sold prior to building completion. Gerretsen concludes that although the development on Block D may not have been exactly what every person involved would have liked to have seen, it is much improved over the derelict site that stood there for so many years and is far more accepted as a developed property and soon-to-be waterfront park, than it ever would have been resting as a graveled site used for community gardens here and there.

The last interviewee selected for this project was Mr. Joe Davis, Manager of Brownfields and Initiatives for the City of Kingston. He was able to address many of the policy-based issues and the reasoning for the development of a CIP for brownfield sites in Kingston, Ontario. Mr. Davis was able to give insight on the success of Block D and the partnership forged between Homestead Land Holdings Ltd. and the municipality. He provided a broad history of remediation and development of brownfields and how developers are finally coming to cities other than Toronto to develop brownfield sites. He was also able to give insight into the potential for growth of the brownfield remediation/development industry, both within Kingston and more

broadly in the Canadian context. He mentioned that now his responsibilities are to continue issuing the payback grants to Homestead Land Holdings Ltd. annually.

Mr. Davis also focused on providing information about the park and the stabilization process that parcel of waterfront land will undergo in order to ensure that it is safe and the contaminants are not accessible to the public. He stated the importance of having parkland that would incorporate native plant species that are known for their stabilization properties. But he mentioned that the most important aspect of implementing parkland adjacent to the waterfront is to incorporate the need for sightlines from the building and for public access. He wants to ensure that the public will see the area as an area that is accessible and available for public use, not a space that is private at all.

Mr. Davis was also able to give insight into the types of projects that are underway that include brownfield remediation and development. One of particular interest in Kingston is the Davis Tannery site which has recently been purchased by Rideau Renewal Inc. for remediation and development. He sees a future in the brownfield industry that may be able to ensure the reuse of many industrial and commercial properties all over Ontario, and remarks that Block D is a very good case study for how the municipality can work with developers to ensure that a mutually-beneficial development results.

RESULTS/DISCUSSION – BUILDING A MODEL

From start to finish, Block D has been a major milestone in brownfield development in Ontario. According to Gerretsen, it was the first brownfield site to fall under the legislation that allowed some payback to developers. Under this legislation, increased partnership between the municipality and the developer surfaced, as well as an increased partnership between the developer and the environmental consultants. This created a greater awareness in the developer and the municipality as to what types of contamination were evident at the site, as well as providing business to the consulting firm. In general this process was fairly open to public consultation, which is quite different from older brownfield projects. Because the developers placed such an onus on public participation and interest, they felt that they were better able to achieve a partnership between public and private interest. The developers were also able to identify the need for plenty of public waterfront access and so the southern portion of the site remains dedicated for this function, although it is up to the city to decide what will become of the supposed waterfront parkland. What became very apparent in researching this particular site and all of its issues was how contentious the issue was to certain individuals according to their personal investment in the site (either through association or otherwise). However, because of the perceived openness of the developer in conjunction with the legacy in Kingston of that particular developer, development proved to be more positive than negative. The city has benefitted too, from the development of the site, in tax base, incremental increase and an increase in downtown residential units. This may prove to allow the downtown to flourish and bolster the city economy.

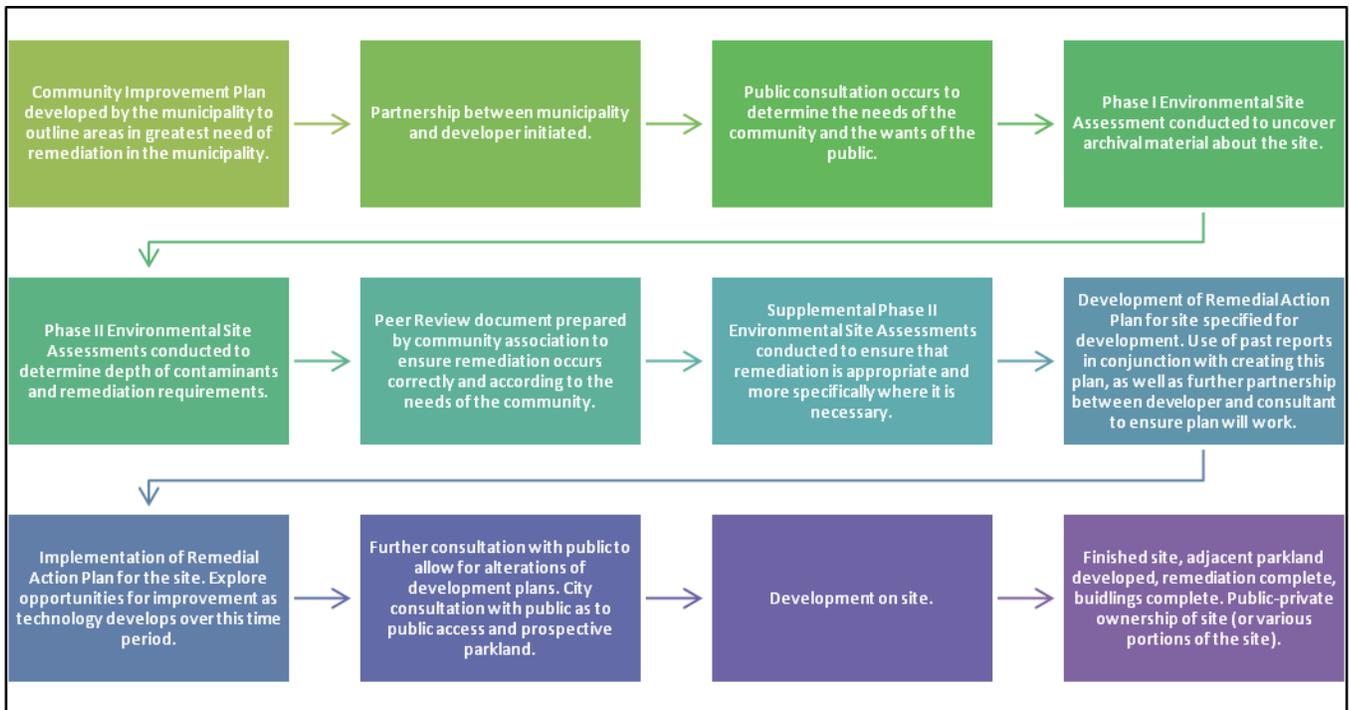


Figure 4. Layout of model for Block D remediation and redevelopment. Shows the public/municipal/consulting impact on development and partnerships between these stakeholders and the developer.

In terms of a model, this site is good because it does encompass many of the typical issues faced when dealing with brownfields. Not all individuals supported the development of the site, certain stakeholders thought the city could have done a better job, and other community members felt that the site would be better developed, no matter the development than left idle as it had been for so many years. But whether positive or negative, the development is now nearing completion. The pathway to this particular destination is outlined in the figure below, and demonstrates how an attitude of openness with stakeholders in developing brownfields helps to encourage public and private partnership and investment on the part of the developer that is not limited to the dollar amount each tenant is willing to pay.

The most important aspect of building an applicable model is that of public-private partnership and ownership of the property. Without this, public interest cannot be addressed and the private sector may not have produced a development that fits well with the community. As mentioned previously, the entire process must be open to public and municipal participation as well. Records of Site Condition must also be submitted to the provincial governments in order to qualify for funding associated with provincial environmental ministries. A partnership with the municipality must also be constructed with respect to the municipal tax breaks associated with brownfield development. Because all of these processes require partnerships and because the government is partnering not only with the Ministry of the Environment, but also the Ministry of Natural Resources, Municipal Affairs and Housing and the Ministry of Transportation, the end result is much more comprehensive and integrated with the community than the development of greenfield sites. Also, because of the placement of many of these brownfield projects, city sustainability is increased and contaminants are removed through remediation, resulting in cleaner local environments. This process, although costly at times must become the norm for development, and an open approach where partnerships are encouraged must become the focal point.

RESEARCHER CHANGE THROUGH RESEARCH

In learning how to conduct the interviews, I have learned a lot about people and how to read them. Certain questions plague different people in different ways. Customizing interviews to be able to better understand the people involved and the biases they present helps to understand the facts involved in an issue that is highly political and highly contentious. However, there were impacts on me that were greater than my understanding of how to conduct interviews. I have learned that not all people can present the facts in a fair way and that every single person, even the scientist or researcher has bias. I have learned that even these scientists make mistakes (as can be seen in nearly every scientific report that I scoured). I have also learned to adjust my view of the world to make way for the fact that people tend to act in their own best interest more often than acting altruistically.

Although after the first round of interviews I had developed a cynical view of Block D, I learned that sequestering these feelings and plodding onward to further interviews would help me better understand the issue at stake and the people involved. It also helped me form my own bias associated with the issue. Without having conducted these interviews I would have never thought I would have developed one, but the issues become imbedded in the work that you do on a daily basis, such that you find yourself resorting back your own bias and using the case study as an example, even in other works. In some ways, I've found that I've become what it is I'm studying. I've been trying to understand why things have gone the way they have, but in the midst of all of this have gotten somewhat caught-up in the process.

Another major change that I've noticed in myself is the expectation of paperwork. Although it may seem trivial now, I've come to expect that being able to talk to people about

issues, where “science” is concerned, requires many hours of working over paperwork to make sure what you’re doing is ethical. It also means several weeks of waiting and hearing and adjusting whatever your initial stance was to whatever the governing board wants it to be. This makes me wonder how unbiased scientific works really are when they are governed by sometimes harsh restrictions and the thoughts and opinions of others, no matter the issue at hand. Although this project has opened my eyes to the bureaucracy involved in academic work, it has made me more vigilant in examining what degree of involvement I want to play in projects I may take on in the future.

I have thoroughly enjoyed the process, but feel it is necessary to explain how the research has changed me as a researcher, for that in and of itself may be an interesting case study in which to follow up. Perhaps I have lost some my student naïveté and trust in people, but I hope that I have not become a total cynic in dealing with the world. In the end, I still delight in the curiosity of my local surroundings and am always thinking of how they can be improved by the human hands that shape them.

CONCLUSION

What started out as a research project has turned into a fairly lengthy project encompassing interviews, archival research and research of peer-reviewed journals. What has sprung from this work is a better idea of brownfields policy, conflict resolution (or the lack thereof), human bias and brownfield remediation and redevelopment. Block D is one of the first brownfields to have been remediated and developed under the Brownfields Legislation formed in 2004. As a result, the developers have been able to remediate and develop the property in such a way that has married some parts of public want and need for waterfront access to the financial requirements of the municipality and the developer. The public-private partnership needs to be strengthened especially in founding more brownfield redevelopment sites, in order that the developer may provide to the community what it is that the community needs. This in turn, can have a great impact at increasing city sustainability and reinvigoration. For old industrial towns like Kingston, this sort of private-public partnership model can be applied to other brownfield sites, such as the Davis Tannery sites, so long as both the municipality and the developer is willing to take some risk and put in more money than the typical legislation would allow to remove the contamination from these sites. Although this is different from the developer norm, an investment in downtown centres of industrial cities may offer more to the surrounding communities and may become higher in demand than the greenfield surrounding. These sites, in adding residents to areas where typically there was little in the way of housing, helps to increase city sustainability by reducing transit requirements and the need for vehicles. Not only this, but by creating condominium units and rental apartments, more individuals can call smaller

foundational footprints home, leading to increased economic benefit of surrounding areas (often inner-city portions), and allowing residents access to a full array of often readily developed and accessible facilities and services, like schools, jobs, sewage treatment, business infrastructure and transit opportunities.

Block D, although not the perfect case example is demonstrative of many of the issues and implications associated with brownfield remediation and redevelopment. There are risks involved in taking on a brownfield versus a greenfield, however, sometimes these risks can become positive. In the case of Block D, a half million dollar negative surprise within the first week of remediation was overturned by the half million dollar positive surprise in hydrogeological structure found out near the end of remediation. But this is fairly typical for brownfield redevelopment and needs to be accounted and budgeted for.

Finally, it is important to recognize the worth of having a good working relationship between municipality, developer and the public. This ensures that all of the stakeholder goals are met in terms of developer needs, public want and what the municipality can offer the developer for the removal of contaminants. In the end, even though the development may not be exactly what some people wanted, if the majority of community-members can become satisfied with the development and view it in a reasonably objective standpoint, then the remediation and development efforts have been a success. The simple fact that the contaminants have been removed can be considered an environmental success, but the end-point of these contaminants needs to become a larger concern for municipalities as well. The greater evolution of in situ treatment technologies may make them financially and temporally feasible for developers and municipalities in years to come, such that newer technologies such as bioremediation may

metabolize contaminants rather than requiring extraction procedures of contaminated material, or stabilization procedures through capping sites.

Further study needs to address methods of in situ contamination that will work under the hydrogeological constraints of sites such as Block D, as well as more conclusive study on previous ownership and history of the site. Interviews with more stakeholders and the public would have been useful to identify public wants and requirements of the site. Additionally, further study needs to incorporate this site with reference to other sites developed since then in Ontario and Canada. With this compiled, a better picture will be capable of being produced to demonstrate a more comprehensive and applicable model for brownfield remediation and development.

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APPENDIX A:

Sample Interview Questions

1. What is your relation to Block D?
2. In the time that you have been aware of the issues to do with Block D, how have they changed?
3. What do you think of the current redevelopment of Block D?
4. What are the main issues that you have with Block D, its contamination and redevelopment?
5. What have you seen change in the attitudes and awareness surrounding brownfields in Kingston, nationally and world-wide?
6. What is the historical legacy of Block D, in your opinion?

These are the backbone structure of any questions that will be posed. They are fairly basic in scope, to allow the interviewee/participant to expand and talk freely about the various aspects of Block D. As the interview will only be semi-structured, much of the information gathered will be provided without questioning or probing. The interview will be guided by the researcher.

*APPENDIX B:
Combined Information and Consent Form*

Assessment of Brownfield Remediation and Development in Kingston: Block D as Case Study

My name is Jacquelyn Norris. I am a fourth-year student at Queen's University, majoring in Environmental Science, minoring in Biology. I am conducting interviews for my fourth-year independent project (ENSC 501) to better understand brownfields in Kingston, and Block D more specifically. The title for my project is "Assessment of Brownfield Remediation and Development in Kingston: Block D as Case Study".

Brownfields in Kingston involve many social and scientific aspects. This project has been prepared in an effort to address some of these aspects. In particular, issues to do with urban planning, conflict resolution, legal framework and technical aspects are studied in the context of brownfields in general and Block D in specific. A social and scientific assessment of the property, its history, contamination, remediation and current development will provide the basis for study.

Conducting interviews will provide the necessary background to understanding and analyzing the case of Block D within the framework of brownfields in Kingston. The project will benefit the interviewees in having the researcher compile responses from some professionals in the field, making selected responses available in the form of a scientific report of independent study. This interview may take up to one (1) hour, but will more likely not exceed thirty (30) minutes in length. There may be a follow-up call associated with this interview if clarification is needed on certain topics discussed. This will not take more than fifteen (15) minutes, but will likely not take place. There are no known physical risks, discomforts or inconveniences associated with your participation, nor are there any known psychological or social discomforts associated with participation in this interview.

Participation in this interview is voluntary. You should feel free to withdraw your participation at any time throughout the study. By signing below, you are confirming your understanding that your participation in this study is voluntary.

You are under no obligation to answer any questions that you find objectionable or that you do not feel comfortable answering. You are free to withdraw any information provided in the interview at any time.

This interview will be recorded by a Panasonic Digital Recorder. By initialing below, you are authorizing the recording of this interview. The recorded interviews will be stored on the researcher's computer until completion of the study. Should you consent by initialling, this

interview will be copied to disc after completion of this study to preserve for historical records, and to allow other students the use of the information. Otherwise, this interview file will be deleted upon completion of the study.

The report, once compiled, will be made available to Dr. Pamela Welbourn (Queen's University), Mr. Joe Davis (City of Kingston), Dr. Brian Cumming (Queen's University) and will be presented at a symposium in March, 2008. This report may also be posted on the Environmental Studies website at Queen's University for consultation by future students of the Environmental Science Independent Study course (ENSC 501).

Your confidentiality will be protected, unless you consent to your name being attributed to your quotes, or unless you consent to your interview recording being retained for historical records and possible future academic use by students at Queen's University.

There will be no remuneration for participation in this interview. You may contact myself, my supervisor, the director of the School of Environmental Studies or a representative of the General Research Ethics Board at Queen's University if you have any questions, concerns or complaints about the research. Contact information for the above-mentioned individuals is provided below.

In signing below, you are confirming that you have read and understood the terms agreed upon with respect to this interview, have had any questions answered to your satisfaction, and that you understand the expectations and requirements of being involved in this interview. You are also confirming you have read this letter of information and will keep a copy of it for your records. You understand that you will be participating in "Assessment of Brownfield Remediation and Development in Kingston: Block D as Case Study", that you have been informed of your involvement, consisting of this interview and possible follow-up call, which will be recorded by Panasonic Digital Recorder, provided you consent, and that you understand that the purpose of this study is to better understand brownfields in Kingston, and to create a framework for future brownfield professionals to use in any subsequent remediation and development projects.

By initialing the use of a digital recording device, you are authorizing the recording of this interview and your responses. By initialing the use of your name attributed to your specific quotes, you are confirming that your name will be used in the study where pertinent and relevant. By initialing the preservation of the interview for historical records, you are confirming that this interview may be used in the future by students of Queen's University for the purpose of academic research.

Name: _____

Signature: _____

Date: _____

By initialling this statement below,

_____ I am granting permission for the researcher to use the Panasonic Digital Recorder.

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

_____ I am granting permission for the researcher to copy this interview to disc following completion of this study. I am also permitting that this interview be preserved for historical records and may be used by future students at Queen's University in an academic context.

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APPENDIX C:

*Block D Interview with Bill Glover on SWTRA (Sydenham Ward
Tenants and Ratepayers Association)*

Map – showing areas of contamination

The way to go ahead was to go to Golder Associates – Golder Report addresses a number of concerns that Golder had about the Paterson Report – no review of soils or groundwater, should have been applied and would preclude the approval of and RSC by the City to

Redevelopment in accordance with the owner may be impractical in the way it was presented GeoCor – provided more information, suggested that they go to Court Proceeding – Involved Bureaucracy in Queen’s Park and taxpayers money is being used to remediate the site.

Reason not to go ahead with the development of the site in accordance with the Golder report
Why were people not receptive?

Ask Paul McLachey – at the time, city staff, the City’s representative for environmental assessment

Lack of public interest in the report.

Site privately owned – had zoning for a certain type of development so that the owner could do what they wish, the owner wanted change in zoning to develop more things, which was the problem to begin with.

The city decided that they would let it go.

Three reports were done – one by Ruber – on Transportation
One on Urban Planning
One on Environmental Assessment

Staff were under “enormous political pressure” to pass the development of Block D
Kevin George
Floyd _____

Academic Background

- Degrees in England, Botany, Chemistry and Microbiology (no Environmental Studies in those days)
- Always interested in organisms pushed to their extreme and how they coped
- Chose and encouraged to work in Environmental studies – Sudbury work, sites with metals and acidity (organisms pushed to their extreme).
- Professor of Botany and Environmental Studies by then in Toronto
- Conducted a study in Kingston, turned out to be a brownfield
- Retired and moved to Kingston and is now (2008) a part-time adjunct professor in Kingston

Block D (scientific and social knowledge)

- Don't know a lot about the scientific side
- Pleased to see a buffer zone between the development and the lakeshore
- Building directly on the waterfront is not very publicly supported
- Community POV: only lived for 4 years
- Was an eyesore before development – people dumping things there, once in a while “tent city”
- Good to have it developed, have housing there
- The rental building is full, condo 70-80% sold before people have seen it finished
- Good idea to have people living in the downtown
- What a lot of cities don't have – people living elsewhere
- Location is great, and really happy to see it developed
- Probably good for the community, generally too
- There is a tax-base now, but I don't know the difference between the tax-base of residential versus commercial value
- I know some people had thought it would be nice to have it as a park, but dollars and cents, the park doesn't satisfy that, and Kingston doesn't have a lot of industry and we have quite a lot of parkland: City Park, Ontario park, some parks further in the John A. Macdonald area and the waterfront
- Positive thing that I've seen happen

Issues (contamination)

- I don't know the technical details
- The company that did it was a fairly well-known company at the time
- Had a few accidents along the way, but did spend a lot of time curtaining off the waterfront

- Environmental Issue: the loss of trees on the property, plant a few little pathetic saplings which may or may not come to fruition
 - o There were mature trees on the property, but there weren't any majestic trees in the beginning anyway, perhaps some Manitoba maples

Condominium Views

- Doesn't compare well with the style of the Admiralty – the core is an old warehouse, but it itself is not an old building
- Not bowled over by the architecture
- Thinks they have some energy efficient structures built-in
- Putting a new building up does have the advantage of all the latest technology in energy efficiency
- Toxic substances, cannot provide anything

Changes in the Brownfields Industry (Attitudes and Awareness)

- The term brownfield didn't even exist when I did my first study that I mentioned
- There weren't regulations or guidelines to deal with contaminated sites in urban centres
- Everything was on a site-by-site basis
- Given soil quality guidelines for agricultural soils receiving sewage sludge
 - o There isn't a soil in any city that would meet those guidelines
 - o Had leaded gasoline at the time as well, which didn't help
- 1980's regulatory agencies came along and realized that something needed to be done
- Springboard of environmental movement generally – dated back to late '60s emergence of awareness and education, regulators and other professionals including healthcare professionals and politicians about environmental quality generally
 - o Why didn't brownfields happen at that time? Because it didn't happen to 15-20yrs later
 - o Speculated upon the reasons for that – why the lag?
 - o “Many of the abandoned industrial sites are in urban areas and they bear very little relationship, in an urban area to what is perceived as a pristine or natural environment. So the most concern wouldn't be for the environment, but rather for aesthetic problems related to abandoned sites. And there really isn't any regulation about something that looks like hell, so perhaps the ENGOS wouldn't have taken up this cause the way they would have taken up wildlife dying from pesticides and other sort of more visible problems. Secondly, compared with the barren appearances of sites that have been degraded, like by mining and smelting (Sudbury) very, very visible, though its improving, brownfields rarely convey that impression. Doesn't jump out at you. Thirdly the legacy of the old industrial activities often run underground anyway. Then I thought of love canal as probably being the springboard that got people worried about the contamination of schools and residential sites.

- The time had sort of arrived when the regulatory climate got changed, where it has finally got (1995) Ontario document, has now guidelines for soil on contaminated sites, and the opportunity for site specific risk assessment.
- Resulted in a lot of hurdles that came up for the potential developers (bureaucratic and financial).
- Now increased incentives for would-be developer
- c/o Joe Davis: “Within the province of Ontario, where there was and is a great need to slow down the transformation of farmland of reduce urban sprawl ... The province passed legislation to encourage developers to take on these sites. New legislation of the province removed the liability of the municipality and provided authority of planning and financial tools to deal with these sites, where the cost of developing greenfield sites keeps growing, although the brownfields do too, but only to the technological requirements to remediate the sites.”
- Haven’t done a lot of practical brownfield research
- The love canal perhaps started the idea of the brownfield issue, rather than the more widespread concern for the environment
- Quite encouraging, along the way, there have been some setbacks, some frustrations...
- Ontario is probably ahead of some of the other provinces, but we have all the cities in which to have this
- Hasn’t become such an issue in Vancouver, Calgary, Victoria
- In the developed world, there is a lot of concern for brownfields
- A lot of the old ruins in Greece would be highly contaminated with lead, because they used lead plumbing and probably had very little concern for the environment at the time.

History behind Block D

- Like some of the other brownfields, was still an active industrial site into the 50’s – the whole area was not the kind of place you’d like to go to in the dark, it was kind of rough around there, squatters?
- In fact a lot of Sydenham ward, the expensive homes were workman cottages
- Price of properties has gone up too
- Restricts a lot of lower-middle-class people to live there
- I don’t think block D is very different from any other site
- But when the harbor place was built several years ago, nobody went in there to cleanup at the time
- Industrial contamination isn’t and wasn’t an issue in a far neighbouring site, but may not be the case for more closely and adjacent sites
- Concern for Lake Ontario and on the west side of the Great Cataraqui River – refer to Nathan Manion’s report
- One thing after another and mainly people just walked away
- And either somebody bought it, or it reverted to the municipality

- It's not going to go away, and it looks at least if that part of the city is being quite nicely developed
- And I don't know, 20 years down the road, they may be tearing it down and putting up something else
- Doesn't know where infill came from for the sites
- When they cleaned up lead pollution in Toronto, they took away the soil from 200 backyards and rumor has it that the "clean" dirt that comes in was loaded with copper...solution?
- Solution if possible should be in situ decontamination, if there is one hotspot, then it could be removed, but in situ cleanup is the way to go, we don't use the groundwater for drinking in Kingston, but it is very close to Lake Ontario, where we do receive our drinking water.

Industry change in Kingston (Smith)

- Constant change in industry
- Lost two or three major industries and a great many small industries
- The environment was not a consideration up to recent years, but now of course it is very high on the list of priorities
- Owner pride has always kept Kingston as a very attractive city from the landscape point of view
Better to have people do it their own way rather than have too many bureaucrats get involved have always wanted to do things their own way rather than

Homestead Land Holdings (Smith)

- When I was practicing law, I thought building buildings would be a good investment, so it started off as a hobby

Historical Legacy of Block D (Smith)

- The whole Kingston waterfront was pretty much industrial, apart from Macdonald park, there was a whole series of industries along the waterfront
- Block D was the last of the large industries and afterwards demolished
- There were two or three ventures that failed – usually because they didn't have the money and were designing things that were too grand for Kingston
- Became as a real jinx on the property
- Had been interested in it on and off
- The brownfields incentive was essential to be able to purchase the property, wouldn't have done so without
- The first in, so were able to get many development charges reimbursed or waived
- The overall cost to clean the site- will not get all the money back on the first or third rental buildings, will get it back on the condo
- Brownfields and greenfields was not the issue, it was Block D, it wasn't the same as anywhere else
- If the public did not like what we were presenting, we would not go ahead with it
- We held two public meetings

Building Design (Hendry)

- Can't see over a 3-storey building any more than a 17-storey building
- Kept the footprint smaller, and allowed us to keep the sightlines down Gore St., William St.,

- Agreement with the city is that we'll build the basic park and the city will change it according to public input (has been bending over backwards for public input)
- New counsel came in, want to start back at square one and let everyone add their input
- If the public doesn't like it, we will back out
- Getting more positive calls than negative calls
- Brit has a great reputation in town, very modest man, at the end of the day, if we failed, how long was that site going to sit there?
- The public got behind Block D and it came through
- Asking for half of the amount of property of what the people around us had
- The city staff thought it was very fair, allowed us and supported us throughout the whole process
- A lot of money to clean up

Clean up (Hendry and Smith)

- All had to be hauled to Ottawa
- A lot of old quarries around Kingston, could have been sealed quite quickly, but it takes so long to get a new dumping site approved
- Thousands of tones of not so badly contaminated went to landfill
- What are we cleaning up? Poisoning atmosphere to clean up the site
- Local industry here is very good for the environment
 - o .5million\$ surprise: lead contaminants on top of a slab of the locomotive plant
 - o Spent lots of money doing tests – Lead contaminants on the surface, met residential and commercial guidelines
 - o Looked for a site for 3 months to find somewhere to dump the soil which met commercial guidelines but didn't with residential
 - o Lots of rocks and boulders on the site 30% was rocks
 - o Rocks aren't contaminated, needed to separate from the soil – do it through a screening process
 - o Considered processing of waste
 - o Wanted us to go through a process to shut down the site to do this – got the locals involved to prevent having to get this permit to process waste
 - o Diesel, gasoline, mercury, lead, everything

Brownfields (Hendry and Smith)

- First brownfield site
- Shell Canada site in Toronto – shell Canada is remediating it, we're not cleaning it up (purchased in 1995) - rezoned to build another tower, shell had been on the site for years, quite contaminated, but they are cleaning it up and will hand it over to us in March and we will build on it again
- We're not responsible for the actual cleanup
- Not looking at any brownfield sites right now – nothing on the market that we covet

Homestead Workings (Hendry and Smith)

- Developers, buy vacant land, service if necessary, build buildings, sell as condos or more often develop as apartment buildings – don't do commercial buildings
- Mr. Gillan – original owner, sold the three corners
- Corner of Gore and Ontario – locomotive works – complete
- Condominium – on lakeshore
- Third will be 15 stories tall, not 17 stories tall – the greatest is the condo
- All of the units are beautiful – very good water view – condo
- Environmental Designs – not LEED certified
 - o Many of the buildings – we don't register a lot of buildings that way
 - o Most would be LEED certified (silver), we just never go that way
 - o Locomotive work has radiant floor heating, condo pool has radiant floor heating
- We know the model, it works, stick with what we know many times (have a model)
- There will be trees and a running/walking track on the roof, barbecues (6 trees in planter boxes)
- Greenhouses in the building on the top floor –started doing this in the “Barriefield Motel”, the vines do quite well in the boxes, owners have to keep them pruned back

Original Costs of Cleanup (Hendry)

- \$500,000 surprise in first week of brownfield site – lead fill
- Most were relatively met
- \$500,000 positive surprise at the end to recapture, because the rock profile was different
- I don't know why some other municipalities don't stop the payments back to the developers to get the money back from remediation – should be ongoing, until paid back rather than stop it after 10 years

Other brownfields issues/public perception (Hendry and Smith)

- Some people that think that giving us the tax rebate is being too good to the developers, saying we're on the backs of other taxpayers
- Overlook the fact that by adding another 1000 people to the downtown area, that we are keeping it alive, that the downtown was slowly dying
- Failure of public perception to realize that getting these sites developed is a problem
- The city does the best job to convince them that its worth it that they get the money back indirectly because the other businesses profit and prosper
- Speaking to counselors, didn't understand the program
- Developer puts money into cleaning up the site – city always gets the base tax money, but the developer gets 80% of the incremental increase in taxes – cities still benefit
- In discussion with counselors, they didn't understand that – thought the city was handing over all this money
- Once the taxes are increased, we get the money

Rental vs. Condo? (Hendry and Smith)

- We do both, only a limited market for condos
- Build what we can sell, sometimes we wind up with a building that is not full – the last few we have to rent until we can sell it
- We are a rental company, that is our forte that is what we like to do
- How many rentals have we built 40?
- Great pride in providing rental stock to cities
- From a selfish point of view, it's a long term investment – don't have to pay tax and continue to get profit from the rents forever and get the benefit of the capital appreciation as real estate values go up
- A building that we sold as a condo ten years ago, if you had kept that and rented it, you probably would have been much farther ahead now
- Condos? Like the quick buck – don't want the headaches of being a rental landlord as well
- Been doing it for 50 yrs, have a system in place – it has its challenges, but also has a lot of good things about it too
- Available capital: need to sell the condo to be able to build the rental units
- Eventually you build up enough so that you can keep continuing the cycle

Alf Hendry

- Became CEO in 2002, joined in 1999

*Interview with Honourable John Gerretsen, Kingston Ontario,
Minister of the Environment*

1960s – Used to be two main industries – Canadian shipping yards and Canadian locomotive company – since mid-1950s fully familiar with both operations

- Involved as a councilor and a member of provincial parliament
- Waterways main method of transportation
- Kingston was going to be the capital of Canada, public limestone buildings built all over the place
- Never materialized
- Harbor still used for transportation of goods
- Big change in Kingston when decision was made to have the main channel of St. Lawrence seaway on other side of Wolfe island, need for transportation diminished, transportation changed, rail, road, etc.
- Industries were terminated (mid-60's)
- Bill Teron – influential builder in Ottawa area, bought both sites, convinced council of the time that he was going to build into a residential developed area, Block D and two blocks beside, Harbour Place and Shipyards close to marine museum and steam museum.
- Approval where harbor place is and landmark, city of Kingston got the land immediately in front of city hall, now city park
- Bill Teron makes arrangements with the city, whereby he is going to turn industrial into residential land use
- Nobody understood the magnitude of developments
- Nobody had seen what 100units/acre meant then
- Became chairman of CMHC, put everything he owned in blind trust, so that accusations could not be made that the decisions made for CMHC would directly benefit him
- Came on the scene in 1972-3 developers came along that had bought it from Teron, wanted to make some changes to the original agreements made with council at the time (1960s)
- Utilized the best information that they had, everybody seems to forget about Block D
- Can remember in the 70s, people would not venture past Prince George hotel, derelict area, homelessness etc.
- Early 1980s landmark and harbor place get built – built as part of separate agreements negotiated with Teron, the units per acreage is the same as what Teron had originally negotiated – council was not heavily involved in that process
- Too much development? Concerns at this point
- Block D lay fallow for so many years – blind trust – Maurice Rollins Construction of Belleville and Sonia Neilson Realty of Kingston, people came up with new proposals for development – the zoning wasn't appropriate for the site

- 1981 – tried to buy block D for the City – regrets not purchasing the property, could have called for a development proposal that would have better integrated public uses along waterfront with private use on the property
- Put an offer in Neilson-Rollins counter-offered, only about 300-400K difference (1.7m – 2.0m) – turned down on vote
- What is built there is much in line with what the original zoning that Teron got. Some don't like high-rise buildings
- Waterfront belongs to the public, not to anyone individually – as much public access and ownership of waterfront as possible – there are certain elements of that in Block D, although the Admiralty place is wonderful – was a square warehouse, built into beautiful building it is today – probably built in early 1980s – marine museum next to it and then steam museum associated.
- As far as brownfields go:
 - o Always a recognition that having been a locomotive company and shipyards company that there were probably contaminants in the yard
 - o People didn't focus on contamination in the 70s and 80s
 - o Why pro brownfields remediation:
 - One of the very few situations where you can literally have a win-win situation totally
 - Every community large and small in this province has brownfields
 - Many communities had mills, tannery, contaminated material? Just bury it
 - Only in the last 40-50 yrs when a lot of the businesses shut down, what do we do with contaminated sites now?
 - New development was afraid to touch it, find out there is contamination after development creates risk they don't want to take
 - Too many pieces within different ministries: environment, natural resources, transportation, municipal affairs and housing
 - Convinced government to appoint brownfields coordinator : Marcia Wallace
 - Reported directly to minister of municipal affairs and housing
 - Necessary that this position had the power to make ministries do things that could collectively bring in parts of remediation from each ministry
 - Three major things happened
 - 1. If a developer pays for the remediation costs, that developer should be able to recoup most of the remediation costs out of the future tax growth – agreements can now be made between municipality and developers
 - o Block d was an empty field, and taxes now have changed and remediation costs over period of time can be paid to the developer over future tax growth
 - 2. Province is willing to kick in education portion of taxes

- 3. Liability: Isn't current owners concerned with it, but the developers who are developing the property that are concerned with it. What if we find contaminants after the fact? File a certificate of site approval (Conditions of site approval) signed off by a consultant (still haven't passed all the regulations on it yet) must sign off on certificate of site condition, can always still hold the original owner responsible for contamination – so long as developer follows approved plans.
- City also has to pass a bylaw of CIP in areas where brownfields need to be remediated – that's an area that is allowed to get in agreement with developers
- 3-4 yrs ago, less than ten and more than fifty now in the province, Block D being one of them
- From a brownfields remediation viewpoint, it was the first site in Ontario that was approved for that
- Program that will grow further and further
- Always focused on contaminant issues – perception doesn't change on that MMAH and MOE worked very close together – close interaction between the two ministries
- Ministry of environment is concerned that we use the best science available at the time to make sure the sites are cleaned up to the best possible level
- By having a qualified person who can file these plans and using the latest technology and putting the tax structures in place so that the developers can be paid back for the remediation costs
- Qualified engineers only (as per regulation stipulation)
- Still have to approve the site remediation plan through the ministry, that has to go hand and hand between both ministries
- Want to make sure that the properties are well remediated in residential areas – requirements are higher because people live there and are going to be there more
- Want remediation standard to be as high as possible
- Sometimes contamination can be so severe of these lands that all of the taxation measures are not going to be beneficial enough because the remediation costs will be much more beyond that
- The provincial and local governments and the owner share the responsibility to come up with the extra costs
- Have money allocated to help in more severe cases (like superfund sites in US???)
- “Brownie of the Year Award” acknowledgement of the work we did to get the process moving to deal with the thousands of brownfield sites that we have all over the province
- Policy details: 1. Liability always to hold back to who is going to be responsible for any future environmental work that needs to be done “original owner” problem: quite often owner is long gone, abandoned the property etc. If you can't

go back to the original owner, if you follow the definite plan then any future remediation costs, who would be responsible? Reality is that there haven't yet been any lawsuits where further remediation costs have not somehow been dealt with in total process. Ministry as far as I know have never come up with standards that were required at the time that remediation took place.

- Most people will say that it is good that something is happening to block D, yes other things could have been possible to allow for greater public use. Development is better than nothing on the property at all. There is one more advantage to brownfield redevelopment. Usually in the middle of cities such that the cost to the community as a whole is reduced because there are already services, like sewage, transport, schooling and work available.
- Essential to have people living there, working there to have a prosperous community
- People live downtown and that's part of the reason why we have such a prosperous community
- People have to live and work in downtown communities if you hope to revitalize those neighbourhoods
- If people don't live there, it's always going to be a struggle
- Environmental Perceptions: probably biased over the past 3 months, but its always possible to pick up a magazine or newspaper and there is some environmental issue that is highlighted. The science is in that we better start doing something about it. People are starting to say "its great to have a higher standard of living, but we also want to be able to swim at our beaches, drink water out of our tap"
- People are getting to be more and more concerned about the environment.

Interview with Mr. Joe Davis, Manager, Brownfields and Initiatives, on Block D and the CIP Program in Kingston, Ontario

Educational Background

- College background in Finance
- University course in project management
- Assigned the project in brownfields because of strength in project management
- Learned planning as a result

Relation to Block D

- Development of City of Kingston CIP
- Offered certain financial incentives
- Block D in old industrial area of city, prime property for development
- CIP approved by MAH, Homestead was the first in for remediation and development on Block D
- Administer the program in conjunction with the community improvement plan
- Involvement now, is the ongoing support of program and annual distribution of grants based on remediation costs back to developer

History

- Site purchased by Gillan Engineering out of Ottawa
- Parcel of land subject to numerous planning applications since late 60s all of which failed for one reason or another, much to do with public pressure
- Issue of contamination also made it difficult to develop – concern about digging up contaminated area and flooding the area, contamination meeting lake
- wanted to sell property – up for sale for \$8million, city petitioned to purchase it, but economics were not available to do that
- Homestead took options of three of the four parcels of land, on condition that if brownfield policy came through, they would be subject to purchasing the three of four parcels
- Gillan always wanted to put a hotel on the fourth site
- Homestead acted as their agent for applications for the cleanup of the site, and cleaned up each of the four parcels in tandem, but as a parcel, so that each of the costs could be assessed back to the parcel, because grant funding is based on what legal description of the land will be after development
- The land then had to be severed to build on all parts of the plot
- Gillan has made application for cleanup (done), made application for building permit, unsure as to what the hotel is

Development

- Two key components of application that make it very positive

- Retains strip of public parkland along water's edge – trying to get access to all of waterfront properties so that people can use it
- Site is now being occupied and used – in keeping with other apartments along the water
- Not sure it's the best or most innovative planning – economics for the site allowed only for high-density buildings with a large number of floors – even with that, the developer does not get back everything they paid for remediation
- Does also cleanup the area, which was vacant since late 60s, which enhances the community
- Probably one or two other properties which now may develop now that this development has transpired (hoping that that's the case)

Other Brownfields

- At the same time as app for Block D, started application for the Davis Tannery site (37 acres on water's edge) – outer edge of downtown area, northerly edge of downtown
- Different proposal (was in tax arrears), city went out and invited people to submit proposals to take it from tax arrears to development. One was head and shoulders above the rest complete detail.
- City exercised right to tax sale to take over ownership of property and flip it to successful proposal.
- Purchase and sale agreement with KinCore Land Holdings (Rideau Renew Inc.) – have 5 years to exercise option to clean the land and develop, if not, city exercises right to take it back
- City can receive \$1000/unit – city could see \$1million for the site and wrote off \$3million for the site in taxes from the 1980s
- Because of where it is in old industrial area, we view a 1000-unit development in that area, as a catalyst to spur on community cleanup generally and encourage others to take on brownfield remediation and development
- Very early Rideau corn metal site(Rideau, Railway and Montreal) – 8 acres of land, heavily contaminated with metals as a result of lead smelting
- Small application on Wellington for 4 luxury townhomes – small battery plant cleanup
- A couple other applications that are in process – created the CIP to spur remediation in the industrial core first in the downtown
- Instrumental in brownfields development in the community – get access to land that we define as being land-locked
- Core of land that was the industrial/commercial core, that a lot of the property is underutilized and property being used for what it was not originally designed
- Want to extend Wellington street to access that land and catalyze further development in that area
- probably 5-10 years out

Social Perception of Brownfields

- Most interesting thing is that we've always acknowledged that land was probably brownfields, never gave it the attention that it would need per exposure to our health
- Brownfields allow us to reclaim land that was laying fallow for so many years – the fact that it was contaminated was secondary to the fact that it had laid bare for so long

- Inner harbor that abuts the Davis Tannery, the aquatic life is fine because contaminants are settled in the sediment and is not being stirred up – don't see contamination as a worry
- In a positive way, when Block D developed, and went on the market, they were captured very, very quickly, progressed very quickly and probably a little faster than our original expectations

Apartments

- Better use because
 - 1) makes project economically viable – industrial-commercial or low-density residential, economics may not work
 - 2) our industrial area of the city is just that old, so some of the businesses are no longer there, so we want to do more infilling with more residential is more desirable, because of the public's demand to be closer to where they work and go to school (biggest catalyst)
- Amenities are more in keeping with economic situations of the day
- Often the largest advantage is to go residential because of the density and economics to the developers

Contentious Issues

- Need to go back to mid 60's and saw what was there before Block D, old industrial warehouse that when right to road edge
- See the eyesore that that was, and it served a purpose for its time, it was also a scary place to go at night, from a historical point of view. When it was torn down, people viewed the open space as a good thing.
- A lot of development applications have been lost because of lack of public support
- Went through a time where public wanted to see a park there
- Felt that some of the apps didn't support their thoughts 2000-put a convention centre there (study), hotel and hockey arena, went under a lot of scrutiny, public support was not there for that sight – traffic and parking was a big issue, traffic was already hectic down at the time, and SWTRA had a very strong voice and carried a lot of weight with members of council, there was another development proposal on the sight in the late 90's possible site for a casino, might have happened if we had voted in favour of it, residents formed a very strong voice against having a casino in Kingston, so council turned down the resolution that would have allowed, site no longer considered – most were development of one residential thing or another
- When Gillan bought the land, he was hoping that that would change

Positive Feedback

- I received no negative comment on that site at all – calls from tentative purchasers for the condo, to see how the program worked and how they would be covered if contamination was found – wanted to check with the municipality – even council received no negative comments to my knowledge, if they had, I would know about it
- Homestead is well-respected in the community, they are firm in what they want, but they've been great to work with, from a developer point of view in the brownfield program, would work with them every day

Applying Model Elsewhere

- In presentation use Block D as an example for brownfield redevelopment
- When you go through the economics of it, from municipality's point of view, going to be collecting millions of dollars in taxes once developed after the ten years (80% back to Homestead), but its 80% we wouldn't have gotten anyways – to us its an investment – ten years afterwards, it goes up 1000-fold –use as our success story
- CIP – about partnerships – find it by working together with the developers that we understand and what each wants and what we need and then we get that accomplished
- Homestead said that they couldn't have done it without the CIP program, but we couldn't have done it without their motivation to do it in the first place
- Program suffers because a lot of developers don't see how it can impact their business -see it as a liability
- Education gets out there to let them know that it can be cost-neutral rather than a deficit and can be maximized

City Responsible for Park

- Before the land coming into city ownership, needed to see that there was a study saying there would be no risk to wildlife (aquatic), plan to design a park area that would minimize exposure to hazards through planting – because its park it does have a different standard – some of the venues we're looking at have to lend itself to public access and a view of the waterfront, but also a view from the building too – accessibility and meeting the standard for contamination – won't harm life or limb
- For years there was a community garden planted there by residents, I don't know if they were consumed or what, but at the front half of the site, the city has had to reinforce the seawall, because it was failing, flushing the soil away with the contaminants, that repair was done or is scheduled to be done, so that it will aid, not make the problem worse

Development of the Park

- Our recommendation is to use native plant species that are known for their stabilization properties

Change Brownfields Industry

- Developers are more willing to take the risk, the ones that got in early are leading the way and reaching out to the communities other than Toronto where there is a large land mass, saying it can work elsewhere
- See that there is a general acceptance, everybody sees the value and understands it now
- Quebec, Toronto, taking old rail yards, train station, distillery district where they've done a lot of work and the developers that were keen got in early and the others are now seeing that it's a good thing to get involved with