

CATALYTIC BROWNFIELDS

FINAL REPORT

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INTRODUCTION

1.0

1.1 Catalytic Brownfields Consultants (CBC)

Students from Ryerson University, under the guidance of the Canadian Brownfield Network (CBN), have created a consulting team to develop analysis based on brownfield development in order to actualize the catalytic effect. The Catalytic Brownfields Consultants (CBC) have committed to conducting thorough research for the purposes of developing cohesive and common factors that have led to brownfield redevelopment projects being catalytic within a community.

1.2 Catalytic Brownfields Consultants (CBC) Objectives

Through our research, we have identified themes that encompass the catalytic nature of development that can be applied to brownfields across Canada. The revitalization of brownfields in a city will not only improve the area that is being redeveloped but will allow for new housing choices, a better quality of life, mitigation of health risks and the creation of new job opportunities. A vacant and contaminated site can account for a significant loss in property taxes and diminished value in land. Most brownfield development processes are time-consuming, and in most areas, undetermined, the need for environmental remediation is evident. Therefore, finding a set of successful brownfield redevelopment projects which have an effect of being the catalyst for surrounding development will encourage brownfield sites to be remediated. CBC's research will work to determine how to reduce the barriers to redevelopment and revitalization of brownfield sites and how to put underutilized or vacant land to efficient and productive use.

1.3 Report Overview

Previously, the interim report provided an overview of the brownfield process in Canada and provided four catalytic sites along with a list of potential catalytic sites. The total count of sites is now six in total and a greater emphasis should be placed on the methodology rather than on the chosen sites. The report will go in-depth with the research process used to select the list of successful case studies, and the outreach and research methods used and the process of choosing our initial sites. Before this final report delves into full detail about the catalytic sites, we will discuss the general remediation process, followed by the funding models currently present for brownfield redevelopments. The final shortlist of sites discovered was identified through a full understanding of the applicable catalytic themes. The report will also feature information regarding an interactive GIS component to represent the data collected throughout the project spatially.



REMEDIATION PROCESS

2.0

2.1 General Remediation Process

Brownfield sites are contaminated through previous industrial and commercial land uses that have left various contaminants such as petroleum hydrocarbons, metals and other hydrocarbons. These sites are found in former industrial areas that are no longer used for manufacturing uses and have been left vacant. The process begins when a proponent wishes to redevelop the site and begins to investigate the historical uses and soil conditions of the property. Across Canada, when a proponent wishing to develop brownfield lands encounters contamination within the site, both the municipality and province are notified and the process to clean up the site to accommodate new development begins.

All three tiers of the Canadian Government have varied responsibilities in the process of recording and remediating brownfield sites. Private landowners seeking to develop brownfield sites have the responsibility to report and remediate the site according to the standards of the province in which the site is situated (Tiedmann, 2008). Information on Federal and Provincial processes relating to brownfield remediation is located below. It should be noted that due to the size of the maritime provinces, a memorandum of understanding called the Atlantic PIRI is used to co-ordinate brownfield remediation efforts.

Legislation by Province

Click each province to access its remediation guidelines:

Canada
GOVERNMENT OF CANADA



The Federal Government legislates brownfields through the *Canadian Environmental Protection Act, 1999*, and keeps an inventory of federally owned brownfields which is continually updated (Government of Canada, 2016). Further, the Federal government provides remediation assistance through Federal funding (Government of Canada, 2016). According to the Government of Canada, 2,200 federal sites have been remediated and a total of \$5.7 billion dollars has been committed to site remediation. For the purposes of this report, the federal regime is not useful for determining catalytic projects as much of the remediated land in question is reserved for federal purposes and is unlikely to be sold and redeveloped (Government of Canada, 2016).

The Government of Canada also supports the Green Municipal Fund initiative, which is funded by the Government of Canada and delivered by the Federation of Canadian Municipalities (Federation of Canadian Municipalities, n.d.). Details on the funding of various models for brownfield remediation are found in Section 3 of this report. The responsibilities of recording and remediating brownfield sites is delegated to the various provinces and municipalities in which they are located. Some owners of brownfield sites have the legal obligation to notify the province as soon as contamination is confirmed on the site. Other provinces allow sites to remain vacant until such time as they are proposed to be redeveloped.

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FUNDING 3.0

3.1 Sustainable Development Technology Canada Fund

The Sustainable Development Technology Canada fund aims to promote innovation in sustainable development across Canada by dispersing funding to promising start-ups in the sector (SDTC, 2020). While this fund may be applicable to brownfield redevelopment, it is worth noting that a portion of the funding qualification conditions may act as a barrier to accessing the grants. For instance, the sustainable tech start-up applicant must be in a pre-commercial phase in order to be deemed in need of financial assistance (SDTC, 2020). Further, there must be a high level of confidence that the technology they are creating will be both an economic success and have climate improvement, a difficult claim to assert in the pre-commercial phase. Finally, the fund stipulates that a maximum of 75% of an eligible project may be funded through government financing which will inevitably disqualify the majority of brownfield redevelopments (SDTC, 2020).

Despite the barriers to access, this fund may be useful in particular brownfield redevelopment scenarios, namely those which are embarking on a public-private partnership. Opting to develop a brownfield site into a net-zero or climate positive project would create a strong message as to the possibilities of such sites and so may be suitable to initiate a wider redevelopment initiative.

3.2 Green Municipal Fund

The Green Municipal Fund (GMF) began in the spring of 2000 as a federal loan/grant program founded by the Federation of Canadian Municipalities and is funded by the Government of Canada (GMF Five-Year Plan). The goal of the GMF is to provide funding for sustainable projects which aim to improve environmental performance standards of municipal infrastructure buildings and other development projects. To date, the GMF has financed more than 1,310 developments and removed nearly 2.6 million tonnes of greenhouse gas emissions (Green Municipal Fund, 2019). Projects eligible for funding include: Brownfields, Energy, Transportation, and Waste and Water. 30% (\$150 million) of the GMF is dedicated entirely to brownfield remediation redevelopment (Natural Resources Canada, 2017). Further, GMF provides low-interest loans which range from \$5 - \$10 million, typically 15% of total funding is provided as grants, however, brownfield projects do not have a specified funding limit (Natural Resources Canada, 2017)

Case Study of GMF: Port Colborne and Welland

Both the cities of Port Colborne and Welland were granted a combined \$200,000 from the Green Municipal Fund grants for redevelopment. The grant was gifted to the City of Welland due to their innovative Brownfield Redevelopment Community Improvement Plan; a comprehensive framework implementing environmental remediation, rehabilitation and economic revitalization of various brownfield sites across the Welland Canal (Canada NewsWire, 2005). Port Colborne received \$159,264 out of the allotted \$200,000 for their commitment to revitalize their waterfront in the Port Colborne Waterfront Revitalization Strategy. De Sousa's (2017) article on Urban brownfields redevelopment in Canada: the role of local government,

stresses that local governments are responsible to attract, guide and manage brownfield redevelopment activities. Much like Port Colborne and Welland, it is of utmost importance that local governments take the initiative to redevelop brownfields within their municipalities so that they are eligible to receive funding such as the GMF.

3.3 LiBRe

LiBRe is a companion program closely linked with the Green Municipal Fund. The goal of the program is to connect practitioners in various municipalities to share knowledge, advice and expertise on how to approach the rehabilitation of brownfields (FCM, 2020). The program also provides assistance through written guidance with practical advice on the finer details of initiating and maintaining brownfield developments (FCM, 2020).

3.4 Tax Increment Financing (US) and The Community Revitalization Levy (CAN)

Tax Increment Financing or Community Revitalization Levies in Canada are a relatively recent tax tool employed by municipalities. The tool works by freezing a property's tax rate at a given year in order to use the projected future incremental increase in property tax revenue as funds for the upgrading of surrounding infrastructure (Misra, 2018). Currently in Canada, Calgary is the only city participating in this form of funding for publicly initiated projects (cmlc, 2019). This is likely due to the fact that municipalities in Canada are not permitted to run a deficit in their budget and thus cannot make investments with future revenue.

Key Factors of Implementing Tax Increment Financing

Learning from the Alberta Experience

- › Creation of a special purpose vehicle to promote accountability and focus tasks
- › How the revenue boundary for the TIF is shown
- › Provincial legislation and scope control
- › Land ownership
- › Strategic partnerships

Creation of a special purpose vehicle to promote accountability and focus tasks

The creation of the Calgary Municipal Land Corporation (CMLC) as a subsidiary committee to take control of the East Village project was instrumental in executing the redevelopment plan (Schwartz, 2016). The corporation acts as a master planner, developer, and landowner and is able to leverage these various roles to further the mandate of the city (Schwartz, 2016). The ability to effectively operate as a private organization by responding quickly to market conditions

and negotiate purchase and sale agreements has given the CMLC the capacity to advance the project (Schwartz, 2016).

How the revenue boundary for the TIF is shown

The drawing of the boundary from which the TIF revenue is derived is central to the success of the project. The boundary must be large enough to capture sufficient revenue to fund the project, however, it should also be drawn to encompass areas in which investment is guaranteed to occur (Schwartz, 2016).

Provincial legislation and scope control

The provincial legislature permitting a TIF tool gave the CMLC the flexibility to operate and work with the City of Calgary to expand the scope of work as agreed upon (Schwartz, 2016). Therefore, the nature of the legislature must create an environment where jurisdictions are able to consider the merits of the TIF for their unique situations and provide significant discretion and responsibility to the municipality (Schwartz, 2016).

Land ownership

Underutilized lands that are owned by governmental entities should be transferred to the TIF agency so that they have control over the timing and nature of the redevelopment (Schwartz, 2016). In the case of East Village, the CMLC can include provisions relating to nature of use on the site, allowing the organization the influence as to where such uses are located (Schwartz, 2016). Also, the CMLC was able to control the timing of any new developments. This meant that they could insert provisions of sale that required purchasers to activate the land within a given time frame as well as ensure that any new residential developments did not dismantle existing sales; this creates an effective supply-demand balance that can contribute to desirability in the consumer marketplace (Schwartz, 2016).

Strategic partnerships

Maintaining strong relationships with public and private stakeholders is crucial for success; this creates an environment favourable to investment and attracting public interest and the development community (Schwartz, 2016). Specifically, the relationship with the municipal government and the special purpose vehicle is critical towards updating zoning codes in the area of interest so that an appropriate regulatory environment is available to advance the project (Schwartz, 2016).

“ *It is suggested that a change in regulation to allow the levy to apply to remediation costs would provide incentive to brownfield redevelopment in applicable circumstances.* **”**

– 13 April 2012, Alberta Brownfield Redevelopment Working Group

3.5 Other Municipal Funding Methods

MUNICIPAL FUNDING METHODS	OVERVIEW
Tax Increment Equivalent Grants (TIEGs)	This tool considers the remediation costs of a project along with rising property tax that accompanies lot improvements in order to calculate appropriate grants which are periodically adjusted.
Study Grant	Provides funding for necessary undertakings such as EAs and other remediation related documentation.
Tax Assistance Program	Akin to TIEGs, such a program allows for a freeze or cancellation of property taxes.
Redevelopment Grants	This is a general tool which provides incentive to develop.
Municipal Fees Grants Program	Grants of this sort may be used to waive administration fees related to development such as processing or permitting fees.

* For more detailed information on remediation funding at the municipal scale please see Ismail, 2019.

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LITERATURE REVIEW

4.0

4.1 Urban Renewal

The primacy of the downtown core as central importance to cities began to change with the emergence of residential and commercial districts outside of the downtown area. Suburbanization became prevalent due to increasing economic growth, and the need to build housing for a rapidly growing population dependent on cars. As Audrey (2018) states, urban sprawl, in Canadian cities, led to the decline in downtown activities and in the next decade, large shopping malls and employment lands easily accessible from highways continued to expand while downtown areas faced struggles with filling vacant and retail spaces. City characteristics began to change as the urban settings became predicated on consumption rather than production, which were meant to provide former industrial cities with a new economic model. At the same time, researchers started to take note of the correlations between sustainable urban design and urban renewal projects (Hubbard, 1996). Chan's study, based in Hong Kong evaluates components of urban renewal that work towards ensuring social sustainability, otherwise known as the Sustainable Urban Design Concept. Socially sustainable development is referred to as such when it, "creates harmonious living environments, reduces social inequalities and cleavages, and improves quality of life" (Pg. 246). The Government of Hong Kong concurs with the following research findings and are noted as referencing the concepts when screening development applications pertaining to urban renewal. The correlation between sustainable urban design and successful, socially sustainable urban renewal projects are evident in Chan's research (2008). Overall, the research found that the most influential design concept in urban renewal satisfies social welfare requirements for a community. This includes ensuring that projects provide adequate urban infrastructure, such as pedestrian walkways. The second and third most influential factors were the conservation of resources and the creation of harmonious living environments (Chan, 2008, pg. 253).

In an effort to revitalize desolate areas, Burayidi's (2015) research urges small to mid-sized cities to increase the residential population with incentives to entice new development. The strategies laid out by Burayidi detail the importance of developing catalytic projects. Most catalytic projects, to entice public buy-in, are relatively large in nature. The projects are very visible to the public to illustrate the city's bold commitment to the community. However, localities also gravitate towards projects that are visible and can have the most impact, at a relatively low cost. Sternberg (2002) analyzes a variety of literature to assess which guidelines are most effective in determining how to ensure development will be catalytic. His findings suggest that planners should consider the commercial area the catalyst will serve and support, including its potential contribution to the walkability and vitality of street life (Sternberg, 2002). In this context, catalytic development is being regarded as a government-initiated effort to create a "non-commodifiable" element that links the public and private realm to strengthen a community and foster economic growth (Sternberg, 2002). Sternberg lists ways in which catalytic projects spur surrounding development. The most important being through its design, fostering a flow of foot-traffic and walkability, thus increasing other businesses' foot traffic and appeal for investment.

Additionally, an appealing design can shift planning staff, architects, and developers mind frame on the surrounding areas potential, thus excelling their own efforts and creativity put into the immediate area's economy and vibrancy (Sternberg, 2002). From this, it is important to look at

the need for governments to develop their own plans and mandates for revitalization, while also looking at strategies to capitalize on trends of urban growth and the importance of cultural facilities in local economic development. Cultural activities are essential in tourism strategies and urban development and would become an impetus for improved street vitality (Brown & Swanson, 2003; Grodach & Sideris, 2007). In 2003, Michigan governor enacted a "cool cities program" to dedicate funds towards cities' strategies for economic and social revitalization. The state would disburse 100,000 grants to cities meant to instill catalytic activities or improvements. Localities would need to establish a "local cool cities advisory group" to identify neighbourhoods that were vibrant or brimming with potential. Some of the criteria of the neighbourhoods include pedestrian-friendly environment, championing neighbourhood/organizing mechanisms, recreation opportunities/ parks, higher density, mixed-income housing facilities. The program would work to invest on improvements in infrastructure, streetscape and urban design, recreational/cultural amenities, and rehabilitation and construction of buildings. Within 2 months, twenty communities had developed full proposals for funding and 129 communities were prepared to take part. Wells (2007) outlines a number of case studies that involve infill development within both urban neighbourhoods and small cities as a means to restore or maintain economic prosperity and overall vitality for residents. The core design principles identified by Wells to ensure successful infill developments can be summarized as developments that contribute to the walkability, connection to transportation, re-use of abandoned areas, and the provision of open spaces (Wells, 2007). Wells notes that the process must involve the public. One case study looked at Brea, California's approach and success in revitalizing their abandoned downtown core through establishing public charrettes, restoring ageing infrastructure, and eventually promoting affordable housing developments. The city then became more appealing for businesses because it provided viable housing options (Wells, 2007).

The idea builds on the principles laid out by Robertson's (2001), which include: encouraging smaller cities to develop a vision and design guidelines, establishing public/private partnerships, and capitalizing on downtown's heritage assets to attract visitors. A critical aspect Robertson touches on is building on local assets. Most areas have assets that can provide a foundation for potential revitalization; vacant or underutilized spaces can serve as an opportunity for expansion. The incremental development ascertained by both Burayidi and Robertson promote revitalization through urban diversity, and to have guidelines in place to see plans come to fruition. Consistent improvements research on urban renewal expands on the idea of establishing the important role of a downtown champion or someone who could advocate for plans (Burayidi, 2013; Sands & Reese, 2017).

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METHODOLOGY

5.0

5.1 Process

The Catalytic Brownfields Consultant's research goals include narrowing down factors that have allowed brownfield redevelopment projects to be catalytic within a community as a whole. These four questions were the basis for our case studies in Section 6.0 and guidelines for each site:

WHAT IS CATALYTIC

- › Why did the municipality invest in this area?
- › How did the municipality make the project happen?
- › What did the municipality do to support this catalytic effect?
- › What were the catalytic effects?

We determined the difference between a brownfield and a catalytic brownfield. Our definition and what we are interested in are the projects that spark something more beyond the scope of the initial project site.

BROWNFIELD	VS	CATALYTIC BROWNFIELD
Vacant or underutilized property were past industrial or commercial activities have left contamination behind. (Province of Ontario, 2020).		A brownfield project that has since had a lasting effect on the surrounding community, beyond the scope of the original project. This could be due to new development, renewed interest in the community, its locational aspects or even the public perception of an area changing due to the presence of an initial brownfield project, sparking a renewal.

To identify potentially catalytic developments, each member of the CBC team was assigned to a Canadian province to explore various brownfield projects to produce a nation-wide list of case studies. Initially, the sites focused on small- to mid-sized cities, but the CBC quickly realized that large-scale cities must also be included for the purposes and scope of the research. The data was gathered from CBN resources, examining past brownie award winners, following journal and news articles, as well as contacting municipalities. CBC generated a catalogue of 29 brownfield projects collected in a database that will be used to create an interactive, online GIS map. This database displays the brownfield site locations across Canada, as well as a comprehensive project description that details each of the developments.

The long list garnered a greater scope for research, where CBC could determine which projects could be deemed as a priority based on certain factors: whether enough information could be curated about the remediation efforts and site background if a contact associated with the project that could corroborate some of the information while providing a link to additional resources; and more importantly, whether or not CBC can positively determine a catalytic effect

in the surrounding area that could be linked back to the brownfield development. Evaluating these components along with the site's condition and history, remediation process, proposed use(s), benefits and impact were also used as indicators to determine the catalytic nature of the five shortlisted case studies. The key being, these brownfield developments sparked a market in places that were previously unproductive or unsubstantial. These factors allowed the CBC team to further distinguish similarities and commonalities throughout the sites across the differing provincial contexts, such as proximity to rail lands, contaminants, or publicly initiated processes. The CBC studied reports, literature, and communicated with project managers in order to establish and specify which of the projects could be confidently defined and deemed to be catalytic in nature. From here, a clearer image emerged as the CBC ranked sites, identifying major cases illustrating catalytic potential, as well as additional cases that CBC thought are worth mentioning. Thus, CBC compiled a shortlist of catalytic projects that will be more thoroughly studied in Section 6: Orillia Recreation Centre, Langley Cascade Hotel and Casino, North Bay CN and CP Rail Lands, Calgary East Village, Saskatoon Pleasant Hill Revitalization Project, and Moncton Avenir Centre.

5.2 Challenges

While conducting research for the list case studies, CBC struggled with contacting developers, project managers, municipal planners; and finding information (with verifiable resources). The process of obtaining data from out-of-province presented itself as the most significant challenge. As CBC is based in Toronto, Ontario, any type of first-hand information was quite difficult to retrieve as most municipal databases, literature, or reports required a local means to gain access to them. Moreover, contacting the stakeholders and developers involved in the brownfield projects became an issue. In compiling the shortlisted projects, the availability of resources and information was a factor in choosing projects to focus on, despite other sites potentially having catalytic potential. For example, many project managers were able to corroborate the catalytic nature of the brownfield development but were also unable to support or verify these claims due to professional reasons officially. Further, confirming the benefits and positive impacts on the community as a whole was also problematic; quantitative economic welfare does not always equate to qualitative well-being.

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RESULTS AND ANALYSIS

6.0

6.1 GIS Database and Interactive Online Map

Following the initial collection of potential catalytic sites across Canada, an extensive list of thirty projects were identified. To facilitate the brownfield selection process, a comprehensive list of initial data was gathered for each project including the project's address, the project size, a brief project description, who the developer was (municipal or private), proposed use(s) of the site, site history, the project involvement with indigenous communities, the process of remediation, benefits of remediation, the status of the project, and the reasons for success as a catalytic project.

To aid in the organization and processing of this large data set, a database was generated. This database was then geolocated for each project, which enabled the data to be displayed visually in an interactive GIS online map. Clicking on a project reveals an organized attribute table containing all of the data collected for each project.

The database and map were also updated with the findings and analysis of the 6 case study projects. Each catalytic project is highlighted on the online map with an updated attribute table containing the information concluded from its case study research. Where applicable and where data was available, other attributes have been included surrounding the project to illustrate the project's catalytic influence or factors that contributed to the project being catalytic itself (municipal programs/incentives, etc.). A link to the CBC's final report and a link to each of the case studies conference poster was added to the project's attribute table so readers can access further information if they like.

The goal of the interactive GIS map is to serve as a visual tool to accompany the final deliverable, highlighting the findings of the Catalytic Brownfields study, and serving as a collection of projects across Canada with the potential of being catalytic. It is to serve as a living tool that can live beyond that of CBC's final written report. As such, the map has also been updated with Brownie Award-winning projects from 2016-present as many of these projects exhibit catalytic factors and effects that may warrant future research in the future; the database can be hosted on the CBN website and serve as a collection of projects with catalytic potential across Canada and can be continually updated with future projects (brownie award winners, etc.) and direct future professionals and parties interested in catalytic brownfield information to the CBC's findings and research.

Catalytic Brownfields Consultants Database

Follow this link to access CBC's interactive online map: [HTTP://ARCG.IS/18HbjLO](http://ARCG.IS/18HbjLO)



6.2 Catalytic Case Studies

6.2.1 Orillia Recreation Facility



SITE

225 West Street South
Orillia, Ontario

HECTARES

14.57

DEVELOPER

City of Orillia with
construction by The Atlas
Corporation

PROPOSAL

Community centre

STATUS

The Recreation Facility is
on track to be opened in
the Spring of 2020

DESCRIPTION

The Orillia Recreation Facility is a 14.57 hectare brownfield site that is located near their downtown. The recreation facility will include aspects like fitness, sport and recreation. Some of the amenities that will be included are: 8 lane pool, therapeutic pool, leisure pool, basketball courts, childcare room, fitness center, and a running track.

SITE HISTORY

Subject site was previously used for industrial purposes. More specifically, the site housed wooden grain tanks, a tannery operation, farm related equipment manufacturing, aircraft industry part manufacturing, steel and grey iron casting manufacturing, manufacturing of gas and oil furnaces, automotive manufacturing, ductile iron manufacturing, and Otaco operation (City of Orillia, 2015). The most memorable industrial purpose was the site which laid vacant for 20 years after it was home to the industrial use of the Molson Brewery.

As a result of the historical uses, volatile organic compounds (VOCs), including trichloroethane and trichloroethylene (TCE) and their degradation products, as well as, chloroform and tetrachloroethylene (PCE) (Cambium Inc, 2018) were found in both soil and groundwater samples.

SITE CLEAN UP

The Orillia Brownfield redevelopment had a budget of \$55.5 million for both the clean up and construction (City of Orillia, n/a). Key to the site clean up was dealing with a 'hot spot', which

resulted in the building being moved and raised four metres to incorporate 140,000 cubic metres of soil that was imported (Bleasby, 2019). The hotspot was then encapsulated by concrete and only had a parking lot built over it (Bleasby, 2019). Bentofix Clay, in conjunction with clean soil, was used as a liner for the rest of the site, such as the natural areas (Bleasby, 2019).

RISK MANAGEMENT

Due to the results from environmental testing, it has been determined there were two zones of contamination. Risk management measures have been undertaken for both the indoor and outdoor areas to ensure that pathways are blocked so no direct contact occurs. For both the indoor and parking areas, there has been an active and passive gas venting system installed to ensure vapours are blocked from chemicals within the soil and groundwater (City of Orillia, 2015). The outdoor areas have been addressed by being covered by hard surfaces, grass, topsoil, and or gravel (City of Orillia, 2015). The city will also perform continual on site and off site monitoring, including: sampling of water and soil quality, testing soil vapour and checking the ecological diversity (City of Orillia, 2015).

WHO INSTIGATED THE DEVELOPMENT

The council that was inducted in the 2014 election were the champions and ultimate supporters of the revitalization (Orillia, 2020). The 2014-2018 council actively started with the recreation facility at the start of their inauguration in December 2014 (City of Orillia, n/a).

WHY THIS SITE WAS CHOSEN

Through a phone interview with City of Orillia staff (2020) it was understood that initially there were three sites that were chosen as potential hosts for the construction of a recreation facility. Due to size, affordability and political issues, 255 West Street South was chosen as the ultimate location. This location was chosen mainly due to the size of the lands. Due to the size required for the recreation facility, this site allowed for the design. Additionally, the site was chosen for its potential of increased walkability. City staff wanted to ensure that they were encouraging walkability within their downtown area. This would allow for this area to be less dependent on the vehicle. Further, the site was chosen due to its potential to stimulate tourism. It was determined that the area needed to encourage tourism by connecting to restaurants and other development. The plans were for revitalization of the full corridor. Thus, since the site represents such a large amount of underutilized real estate near the downtown, staff saw the potential for redevelopment.

BENEFITS OF A CLEAN SITE

The obvious benefit that the remediation of the site had for the City of Orillia was cleaning up the lands around the downtown for safety purposes. It was important to clean up the area for environmental purposes as well, especially due to the site having surrounding wetland areas like Ben's Ditch (City of Orillia, 2015). The city chose to redevelop the site so as to beautify the corridor into downtown and to utilize the previous vacant site. The redevelopment also provided a recreation facility near the downtown for residents to enjoy their community. Due to its proximity to restaurants and shops, this redevelopment brought economic benefits of encouraging tourism within the downtown..

CHALLENGES

The reasons for success are as follows: location to downtown, city funding, motivation of City Staff and council and the willingness of the City as the developer.:.

- › Public perception and opposition

Critics stated that the site was too contaminated to be remediated and that the City should be putting a new facility on fresh lands. There was public opposition regarding the risks that were being taken and confusion that the site was toxic.

- › Misinformation with the media

Due to the lack of information available in the initial stages, the media was responsible for the production of headlines that fueled misinformation to the public.

- › Costs

From the years of industrial use, this brownfield site required sampling, technical studies, special construction, preventive systems, and ongoing monitoring. Thus, costs are higher than traditional greenfield development.

REASONS FOR SUCCESS

The reasons for success are as follows: location to downtown, city funding, motivation of City Staff and council and the willingness of the City as the developer.

WHY IS THE SITE CATALYTIC

One of the ways to determine if a brownfield site has been catalytic or not is to look at the changes in the surrounding neighbourhood. If there has been an increase in development applications and/or building permits, this might lead to signs of success of the brownfield redevelopment. Although City Orillia staff could not fully quantify increases in development applications surrounding the construction of the brownfield site, they could say with confidence that there has been more interest in the area than prior to the redevelopment (City of Orillia, personal communications, January 2020). It was provided however, that at least 8 sites within visibility of the brownfield site have been sold, redeveloped or have development applications in the process.

Current development activity also suggests the recreation center project is catalytic in nature. From 2017-2018 the annual residential average purchase price rose from \$365,041 to \$462,126, a 26.6% change year over year (City of Orillia, n/a). Another sign of development surrounding the recreation facility came from the residential and commercial properties that surround the site as of 2020. For example residential development is occurring at 75 Barrie Road (with a 5 storey, 162 unit apartment building) and at 75 Queen Street (with a community hub that includes affordable housing, food center and a safe bed facility) (City of Orillia, 2020). Commercial development is occurring at 174 West street South, 250 Matchedash Street South, 55 James Street West, 495 West Street South, 425 West Street South, 460 West Street South, and 10 Bond Street (City of Orillia, 2020).

Another indicator of the Orillia recreation center being a catalyst is how it has sparked redevelopment of other areas within the municipality even before its full completion. Due to the success of this initial brownfield redevelopment, Orillia city staff are looking at redevelopment of additional locations because of their proximity to the recreation facility. Namely, 14 King Street and 10 Western Avenue have been identified as areas that are being underutilized and are not

up to the standards set by the recreation facility redevelopment. Another location staff are planning redevelopment for is the waterfront. City staff plan to take many of their ideas and lessons learnt from the recreation facility to the brownfield locations at the waterfront.

The brownfield redevelopment in Orillia has also received country wide recognition through being awarded the 2016 Brownie Award in the REBUILD - Redevelopment at the Local/Site Scale category. In addition, the project has also received positive media attention, with some articles calling the project 'transformative' (Matys, 2018). Another reason that the site is catalytic is from the technology used to ensure safety, like the elaborate active and passive venting systems.

The Orillia recreation facility is a catalytic brownfield site due to their success of transforming the landscape of the Western corridor of the city. Prior to redevelopment, it was nearly guaranteed that investors were to be distanced from this site due to contamination, now the site has the potential to become a gateway landmark for the City.

6.2.2 Cascade Hotel and Casino



SITE

20393 Fraser Highway
Langley, British Columbia

HECTARES

4.0

DEVELOPER

Gateway Casino and Entertainment Limited

PROPOSED USE

Restaurant and convention centre as well as the casino

STATUS

Fully operational

PROJECT DESCRIPTION

The City of Langley agreed to build on the former brownfield site to develop a multi-use hotel-casino and convention centre in the heart of Downtown Langley. The former site was used for multiple purposes which include auto-repair body shop and fertilizer storage facility. The doors to the Casino first opened on May 5 th of 2005. The main benefit to this project was for the City of Langley to tax the casino winnings to contribute towards the city's revenue which would be used for City repairs such as road maintenance and grant money.

SITE HISTORY

The former site was used as both an auto-repair shop and other units housed fertilizers. Much of the former building structures were reused in the development of the Cascade Casino.

SITE CLEAN UP

After a lengthy search, there were no documents that would support this section of the report. The environmental assessment happened in the later 1990s and no report on the British Columbia Site Registry can find the initial documents of this site.

WHO INSTIGATED THE DEVELOPMENT

The City of Langley worked alongside with Gateway Casino and Entertainment Limited to develop the project. The City of Langley took this as an opportunity to fund the City's infrastructure work (roads etc.) and also contribute towards grants. The development has led to numerous phase expansions of the Casino, and as of 2019, an additional 23,000 square feet were added on to the site (2 restaurants and larger gaming area).

WHY THIS SITE WAS CHOSEN

A local Assistant Planner was able to provide some feedback as to why this site was chosen. Through the phone interview, the planner noted key points as to why this particular site was chosen for the Casino. The City of Langley itself is small covering only 10 square kilometres in area and surrounded by the Township of Langley. The Planner also noted that much of the downtown area of the City of Langley had already been built upon; meaning that redevelopment is the only way to go when it comes to any new development within the city itself. A convention centre was the initial idea for the development but city planners realized that it wouldn't make economic sense for them to do so, adding that a casino could help fund city work. Both the Provincial Government and municipality agreed to develop the Casino and the local planner mentioned 'it helped legitimize the central City of Langley'.

- › Downtown core

The project is located in the downtown core of the City of Langley. This was an ideal location purely for the convenience of walkability and transit opportunity.

- › Tourism

The City of Langley now attracts people from all over the metropolitan Vancouver area. The hotel attached to the Casino offers tourists to stay in the City of Langley which in turn has positive affects in the surrounding local businesses.

- › Utilization

The City of Langley initially wanted to centralize its downtown core with a convention centre. The city thus was able to utilize this land for both community attraction and profit as it acts as both a convention centre and casino-hotel.

BENEFITS OF A CLEAN SITE

Cleaning up this site would pose numerous benefits to the community. The City of Langley is littered with industrial sites across the downtown core. Since the early 2000s, the city has commissioned a new branding of the downtown core into a residential and commercial hub with the Casino - Convention Centre as the anchor for new development. The site offers increased tourism in the area and increased development in the rest of the downtown core.

CHALLENGES

The development applications for this site happened in the late 1990s with development being complete in May of 2005. Having done countless hours of research it was difficult to attain information regarding the previous site usage. There was no publicly available data to attain from this site (e.g. environmental assessment reports, development applications etc.) Therefore, conducting the research proved to be difficult. Additionally, it was hard to muster up contacts needed to complete a thorough report of this case. This development happened nearly 15 years ago and those that had worked on the site have since left to other municipalities and or retired as the local planner had mentioned.

REASONS FOR SUCCESS

The reasons for success are as follows: location to downtown, casino profit sharing with the city, motivation of City Staff and council, increased development in surrounding neighbourhoods (E.g. Paddington Station), and the proposed Sky-Train expansion downtown.

WHY IS THE SITE CATALYTIC

To date, the development is the current #1 employer for the City of Langley employing 500 people (Langley: Business Examiner). Brownfield redevelopment overall in the City of Langley has been largely positive. Nearly \$199 million dollars of brownfield developments have been approved which has led to an increase in surrounding property values (British Columbia, Langley City). Since the opening, Cascades Casino in Langley has generated \$83.5 million for the City of Langley (British Columbia Lottery Corporation, 2018). The City of Langley generates roughly \$1 million dollars in tax revenue alone and shares 10% of net revenue Cascades Casino receives which contributes towards road maintenance and grant programs some of which include Habitat for Humanity and the Langley Hospice Society. Additionally, Langley's local planner had noted that multiple high-density residential units had been developed since the Casino and additional units are planned for the future. Paddington Station, located adjacent to the site is a \$50 million residential complex that has since been completed as of 2014. Several other sites are planned in and around the downtown core and the city has taken it upon themselves to update their Official Community Plan which is on-going

6.2.3 North Bay CN and CP Rail Lands



SITE

100 Station Road
North Bay, Ontario

HECTARES

16.19

DEVELOPER

The City of North Bay publicly developed a large portion of the site, and approximately 4.5 acres of land were sold to a private developer

PROPOSAL

Various public and private developments

STATUS

Operational public facilities and residential developments in proximity to the site

PROJECT DESCRIPTION

The removal and rehabilitation of the CP and CN Rail Lands involved approximately 40 acres of land between the downtown and waterfront lands. Through the remediation of the lands the City was able to create a connection between the downtown core, the rail lands and the waterfront. Although the project is roughly twenty years old, the built environment of the city has changed drastically due to the undertaking.

SITE HISTORY

The Canadian National Railway (CNR) Lands were first acquired by the City in the 1990's. The Rail Lands have been present in the heart of the city for approximately 80 years, meaning that the site was heavily contaminated from the associated uses. However, the City worked to acquire the lands as they were leaving an unpleasant mark on the urban landscape (City of North Bay, 2010). The Canadian Pacific Railway (CPR) Lands were acquired by the City in 1999. The purchase of these lands instigated the development that would connect the downtown core to the waterfront through a pedestrian connection.

City staff confirmed via a phone interview that at the time of the purchase the waterfront lands west of the downtown were a highly popular destination but was devoid of amenities due to the poor connection between these lands and the downtown (City of North Bay, personal communication, January 2020). It was noted that due to the lack of connection, no one was willing to invest in the lands and as a result the city decided to acquire them. Due to the prior

uses on the lands, the City had concerns about the contaminants that could be present in the site. The type and extent of contaminants present on the site were unknown to the City at the time of the purchase. Along the corridors there was the potential for residual contamination or contamination associated with similar uses.

SITE CLEAN UP

The North Bay brownfield redevelopment required cleanup costs of \$43 million dollars. Upon investigation of the acquired lands it was determined that there was significant level of diesel oil contamination located at various specific spots within the acreage. The remediation works and the site preparations were completed by the City of North Bay.

RISK MANAGEMENT

After the initial environmental testing, it was determined that various locations among the 40 acres were more heavily contaminated than others. City staff confirmed that they were unsure what they were getting into when they acquired the lands, but the site was much more contaminated than they had anticipated (City of North Bay, personal communication, January 2020). The costs of remediation went up, creating a previously unanticipated financial risk.

WHO INSTIGATED THE DEVELOPMENT

Through acquiring both the CN and CP rail lands, the City of North Bay can be credited for instigating the development and remediation works on the properties (City of North Bay, 2010). The Lands that were acquired were located through the centre of the towns core and thus the City saw it fit to control the development of the lands.

WHY THIS SITE WAS CHOSEN

Through a phone interview with City of North Bay staff it became clear that the lands had significant development potential, and in an effort to control the development of the lands City staff deemed it appropriate (personal communication, January 2020). The Rail Lands were chosen and acquired for the following reasons:

- › Geography

The geography of the lands are as follows: waterfront, rail land, rails lines, rail land, downtown core. These strategic lands needed to be controlled in order to ensure that an investor would not come to purchase the lands and wait on development. City staff wanted control of the potential projects and the speed of the development (personal communication, January 2020).

- › To stimulate economic development

Developing the rail lands to create a connection between the downtown core and the waterfront would stimulate economic development within the City. The investment by the City created a catalyst for downtown development and created the opportunity for demand generators.

- › Utilization

The large amount of real estate connecting two large portions of the city was attractive for City staff.

- › Walkability

To create a connection between two major portions of the city. There is now a pedestrian underpass that serves as a walkable connection for community members.

BENEFITS OF A CLEAN SITE

The obvious benefit of the remediation for the City was the cleaning up of the contaminated lands within the community. With the location of the rail lands it was important to ensure that the environmental contamination was controlled. Further, the remediation and redevelopment of the lands cleaned up the waterfront and allowed for it to become more visually pleasing to both members of the community and visitors (City of North Bay, personal communication, January 2020). The development also allowed for the opportunity to widen municipal roads, upgrade water and sewer systems, add sidewalks, affordable housing and parks (City of North Bay, 2010). Additionally, studies state that the development has created \$4.5-10 million dollars a year in local spending (BayToday Local News, 2010). Due to the location of the Lands and their proximity to both the downtown core and the waterfront the redevelopment brought economic tourism to the community which has inherently encouraged increased tourism.

CHALLENGES

There were various challenges associated with the redevelopment of the brownfield. Some of these challenges include:

- › Size of the land
The size of the rail lands was approximately 40 acres, making comprehensive remediation difficult.
- › Unknown environmental contaminants
Due to the previous use of the lands there was an unknown level of environmental contamination.
- › Costs
The costs associated with remediating the site were high.

REASONS FOR SUCCESS

The reasons for success are as follows: location to downtown, city interest, willingness for development and the desire for development on the Rail Lands.

WHY IS THE SITE CATALYTIC

If the remediation and development of a brownfield site sparks interest for investors into a community, it could be a sign of a successful process. Although City staff were unable to confirm if there had been an increase in development applications following the remediation process, they were able to confirm that there had been interest in private development (City of North Bay, personal communications, January 2020). Approximately 4.5 acres of land were sold to a private developer for the construction of a senior home. This development has increased the population of the community and contributed substantially to the economic growth of the community. Due to the success of the site, and to further encourage development along the waterfront within North Bay, the City launched a Brownfield Community Improvement Plan (BCIP). With this program the city was able to implement numerous projects to embrace the changes along the waterfront. These projects include: A Waterfront Hotel and convention centre, office buildings, and a civic square. Most notably, through an extensive soil remediation effort the city was able

to construct a pedestrian underpass to create a pedestrian connection between the downtown, old rail lands and the waterfront. This construction supported the economic growth and development of the downtown core and encouraged community members to use the new space. The success seen by the City was further emulated through a corresponding Downtown Community Improvement Plan (DCIP). This CIP was put in place to ensure that the façade and building improvements made downtown could match the new façade (City of North Bay, 2010). The North Bay development is a catalytic brownfield site due to the success of the developments in the west end of the city. The remediation of the brownfield site allowed for the environmental contamination to be cleaned and allowed for a destination development to occur.

6.2.4 East Village



SITE

106, 535-8 Avenue Southeast
Calgary, Alberta

HECTARES

48.6

DEVELOPER

Multiple developers but Pointe of View was the first

PROPOSAL

Recreation purposes, open space and public market

STATUS

Construction is ongoing as the project is currently in Year 10 of 20 according to the redevelopment plan (Schwartz, 2016).

PROJECT DESCRIPTION

The community is located near Downtown Calgary, Alberta. It is bounded by the Bow River to the North, Elbow River to the East, 9th Avenue SE to the South, and 3rd Street SE to the West. The East Village is a community near Calgary's downtown core that was underutilized and scattered with almost 20 brownfield sites. The purpose of the project was to create public-private partnerships to rejuvenate and spur growth in the neglected area. Pointe of View Developments were the first to obtain building permits from the City of Calgary and their interest prompted many other development firms in the area to follow (Kay, 2019).

SITE HISTORY

East Village was previously a neglected industrial neighbourhood that created a barrier between the downtown core and the Bow River that flows north to south through Calgary (CMLC, 2020). The area was scattered with almost 20 brownfields including lumber and scrap yards, tanneries, dry cleaners and service stations, which resulted in soil and groundwater contamination throughout the majority of the area (Chan, 2015).

SITE CLEAN UP

An environmental site assessment was conducted in two phases; Phase 1, conducted in 2004, identified and assessed 42 city-owned and unoccupied properties in the area while Phase 2, which was completed in 2005, utilized boreholes and monitoring wells on 33 of these properties to gather soil and groundwater for analysis (Chan, 2015). The soil samples contained an excess amount of PAH's, metal components, salinity parameters, and low levels of PHC's while the

groundwater samples contained low levels of PHCs, VOCs, and PAHs (Kay, 2019). To deal with the results of the environmental site assessment, 34,000 m³ of soil had to be excavated, 4,400 m³ of the soil was reused on site and 16,500 m³ was used as landfill cover material (Kay, 2019). Also, 58,500 m³ of water was simultaneously sent to a sanitary sewer in response to the groundwater contamination (Kay, 2019).

WHO INSTIGATED THE DEVELOPMENT

The development was instigated through the Rivers District Community Revitalization Plan which was approved by the City of Calgary and backed by the Province of Alberta.

FINANCING

The financing of the East Village was mandated through the Rivers District Revitalization Plan (2009) which is financed through the Community Revitalization Levy (CRL), similar to that of tax increment financing (TIF); a popular tool in the United States (Kay, 2019). This new public financing method is used as a subsidy for infrastructure, redevelopment, and other community improvement projects (Kay, 2019). It essentially segregates property tax revenue that results from redevelopment in the Rivers District into a separate fund for infrastructure improvements, allowing the City to leverage these contributions to fund redevelopment in the East Village community (Kay, 2019). Ultimately, this enables the City to repay the costs of the initial projects, using the revenues generated from the CRL (Kay, 2019). The benefit of the CRL is that it does not require a tax increase to cover the costs of borrowing. In addition, the Province of Alberta agreed to allocate a portion of their property tax revenues for the project (Kay, 2019).

The City of Calgary created the Calgary Municipal Land Corporation (CMLC); a subsidiary committee to take initiative of the East Village renewal (CMLC, 2020). The CMLC acts as a "redevelopment arm" on behalf of the City to implement projects such as East Village, therefore, the payments that the City receives through the CRL are redistributed to this committee (Kay, 2019). Overall, the CMLC invested \$396 million on infrastructure and cleanup costs.

WHY THIS SITE WAS CHOSEN

East Village has always been categorized as a place of isolation and decline. The City of Calgary has frequently made attempts since the 1970's to revitalize the area because of its proximity to the downtown core, however, all of them had failed until the introduction of the CRL as a successful financing strategy (Schwartz, 2016). Prior to the interventions, several key demographics clearly displayed that the area needed revitalization; median household income remained stagnant, even as Alberta's economy rapidly expanded, the community held an unemployment rate three times that of the overall city rate, and frequent crime and drinking establishments categorized the area (Schwartz, 2016)22392.

BENEFITS OF A CLEAN SITE

Since the completion of the remediation process, East Village has experienced tremendous growth and has been transformed into a vibrant and rejuvenated community. CMLC's commitment of \$396 million into cleanups, infrastructure and development programs has so far attracted nearly \$3 billion of planned development (Kay, 2019). Today the area is now home to over 4,000 residents with that number growing every year (CMLC, 2020). Also, the community is considered environmentally sustainable because of the remediation measures it took

throughout the site's cleanup process. The reuse of soil on the site demonstrates sustainability as well as economic savings from mandatory excavation, essentially turning a challenge in the redevelopment process into a large benefit by providing landfill where applicable (Kay, 2019).

REASONS FOR SUCCESS

East Village overcame the obstacles presented by its brownfield sites through the cooperative regulation of several bodies (Kay, 2019). The City of Calgary's initiative to use the CRL as a new financing method to levy support and the CMLC as an additional arm to promote the development of infrastructure, aided tremendously in the creation of a vibrant community (Kay, 2019). It is a prime example of a municipality working to obtain alternative methods of funding, which in turn has allowed them to keep ownership of the land without having to sell it off to turn a profit (Kay, 2019).

WHY IS THE SITE CATALYTIC

The brownfield remediation of the East Village community can be classified as a catalyst for development throughout its surrounding areas because subsequent to the interventions within the neighbourhood, a flurry of activity pursued. Upon an analysis of the administrative community boundaries within the City of Calgary, it is evident that the project precipitated a large increase in development permits within and around the East Village area. According to the City's development map, the East Village community, as well as its 7 neighbouring communities accounted for 558 of the City's 1,629 development permits; in other words, just over one third of the total city-wide permits (City of Calgary, 2020).

In addition, the East Village community has experienced a rapid increase in residents since its redevelopment. The CMLC confirms that over 4,000 people currently reside within the community due to its infrastructure investments (CMLC, 2020). The area has attracted nearly \$3 billion of planned development since its cleanup, further emphasizing that it was a catalyst for development (Kay, 2019).

It is important to note that the East Village story has become a catalyst for ideas and inspiration as well. Several other large-scale brownfield projects have been initiated in Calgary and its surrounding region because of the success of East Village, such as the Garrison Woods and Currie Communities which specifically references East Village as an inspiration and success story (Crowther, 2016). The project has also crossed provincial borders with the Transcoma Community Bioreserve brownfield redevelopment, located in Manitoba, referencing East Village as well..

6.2.5 Pleasant Hill Village Revitalization Project



SITE

1407 20th Street West
Saskatoon, Saskatchewan

HECTARES

5.2

DEVELOPER

Primarily City of Saskatoon, with various development partners as parcels were sold off.

PROPOSAL

Revitalization project

STATUS

Ongoing

PROJECT DESCRIPTION

The Pleasant Hill Village Revitalization Project began in 2006 as a City Initiated Neighbourhood Precinct Plan that targeted a low-income neighbourhood and outdated elementary school for redevelopment (City of Saskatoon, n.d.a). The subject area is 5.2 hectare (13 acres) in size and is located north of an industrial area and a C.N Rail Line along the south of the neighbourhood. The neighbourhood is strategically located along a major corridor, 20 Avenue East. Additionally, the social aspect behind the proposed redevelopment was due to 41% of the population being indigenous. The City of Saskatchewan created a new subdivision, adding cul-de-sacs, public parks and setting aside parcels of land for future development. The proposal revitalized a neighbourhood to create the appropriate land use permissions for new parks, a new elementary school and community centre, and development parcels for medium density multiple dwellings.

SITE HISTORY

In the City's opinion, the timing of the project was perfect as a local landowner was willing to sell all 29 single detached dwellings in the neighbourhood during the community planning process. Saskatoon also reported to have purchased Parcel F, a former industrial property with the intent of incorporating its development into the Pleasant Hill Village Plan. The City of Saskatoon purchased the thirty three single detached dwellings that existed in the neighbourhood (Anderson, 2013) and formed a partnership with the Federal Government and Province of Saskatchewan to secure funding for brownfield remediation, upgrading the existing school, parks and the addition of a community centre (City of Saskatoon, n.d.b). The City formed public private partnerships with various organizations and developers to build townhouses and multiple dwellings aimed at low income and indigenous persons. Anderson, 2013).

SITE CLEAN UP

According to a staff report prepared in 2008, the Industrial Site (Site F) was purchased to add into the Pleasant Hill Revitalization project for \$462,000. Staff had knowledge that the site was contaminated and conducted a Phase 1 and 2 Environmental Assessment. The soil on the site contained petroleum hydrocarbon PHC's, volatile organic carbons VOC's and metals. Additional, water samples were collected and presented dissolved petroleum hydrocarbon PHC's, dissolved metals and PCB. (City of Saskatoon, 2020).

RISK MANAGEMENT

The chosen method of risk management for Site F was to remove 80m³ of soil and import fill into the site. The removed soil was excavated and disposed of. The cost to remediate the site was \$30,000 and the cash was funded by the Federal, Provincial and local governments.

WHO INSTIGATED THE DEVELOPMENT

The Pleasant Hill Village experienced an era of decline in the 1990's and a 2002 Local Area Plan created in consultation with area residents. The Local Area plan prioritized actions relating to increasing homeownership, addressing vacant lands, park space, safety and seniors housing. Further, in 2005 a safety audit of the community found that this neighbourhood experienced higher rates of infant mortality and attempted suicide. These alarming factors were the precursor to achieving funding for the project and implementing new communities' facilities such as parks and a community centre. (City of Saskatoon, 2020).

WHY THIS SITE WAS CHOSEN

City of Saskatoon and to some extent the residents of the neighbourhood instigated the development. The specific purpose of Parcel F was established by a council resolution to include the site within the Pleasant Hill Project area. The location of the site was logical to incorporate into the development. An opportunity presented itself when the site was left vacant in 2006 after a fire. (City of Saskatoon, 2020)

BENEFITS OF A CLEAN SITE

One of the major components of cleaning up Site F was to expand the Pleasant Hill Revitalization Plan Area. Site F was targeted by area residents as it was the only site still used for industrial purposes in the neighbourhood. According to staff, the benefit of including the site into the plan would allow for certainty that the site would be used for residential purposes and allow the City to release a request for proposals for the site and have it developed for future residential uses. (City of Saskatoon, 2020).

CHALLENGES

According to City staff, development has been slow to uptake as much of the development is more attractive in downtown Saskatoon, and its downtown has not as of yet produced an economic spinoff for other areas of the City like Pleasant Hill Village.

Further, the City is adamant that some of the units be constructed for affordable housing which is not attractive to developers.

Staff also note that this neighbourhood still experiences economic challenges such as low incomes, low occupancies and safety issues. There is still social stigma surrounding this neighbourhood despite the changes that have occurred over the past 15 years.

REASONS FOR SUCCESS

The City effectively transformed 29 single detached rental housing units and a derelict industrial area into a new community which will contain over 100 units at full build out, a new school, new parks and community garden. Without remediation, and the outreach by the community this area of the City would still remain undeveloped, especially since downtown Saskatchewan receives much of the development attention.

WHY IS THE SITE CATALYTIC

The Pleasant Hill Revitalization Project presented a unique opportunity to partner with the Federal, Provincial, Local governments and the indigenous population of Saskatoon to revitalize and support a neighbourhood experiencing economic downturn and in turn provide additional affordable housing units to the community.

According to staff, the investment into this community has spurred development of new socially conscious housing and housing with supports including an elder's lodge and seniors housing. Further, other developments outside of the community such as Station 20 West, a community enterprise centre that provides child care, employment support and meeting spaces was constructed in 2012. City staff have also noted another development located across from Parcel F and the proposed Elder's lodge that was submitted for approval after Parcel F was approved by the City. (City of Saskatoon, 2020).

Finally, in 2014 the City of Saskatoon completed a new comprehensive plan called the Junction Improvement Strategy. This plan includes Pleasant Hill Village, its neighbouring residential area to the east called Riversdale and the West Industrial Neighbourhood to the south of Pleasant Hill Village. The Plan created a land use concept for all three neighbourhoods so that development could proceed in an orderly manner, while identifying new uses for existing vacant lands and industrial lands. (City of Saskatoon, 2020). In particular, the West Industrial area is identified within the plan as a transition zone, which could potentially free up brownfield land for development once the opportunity arises to purchase the lands (City of Saskatoon, n.d.a). Unlike Pleasant Hill, the City does not currently plan on purchasing additional lands.

6.2.6 Avenir Centre



SITE

150 Canada Street
Moncton, New Brunswick

HECTARES

3.5

DEVELOPER

City of Moncton

PROPOSAL

Arena

STATUS

Completed and opened
in 2018

PROJECT DESCRIPTION

Avenir Centre is a modern 10,000-seat arena that hosts a variety of large sporting areas including ice hockey and basketball. The complex includes rental spaces for events, and community gathering spots on landscaped grounds located at the heart of downtown Moncton, New Brunswick. The site is part of areas for potential revitalization projects as described in the City's Downtown Moncton Development Vision, a guide for development and investment in the downtown area (City of Moncton, 2006 & Golder, 2019a).

SITE HISTORY

Historically, the land was occupied by Canadian National Railway operations from 1918 to the early 1960's and later redeveloped into the Highfield Square Mall until its closure in September 2012; however, the site's condition was left vacant with contaminants from its former railway use. In 2014, the property was purchased by the City of Moncton (partnered with New Brunswick Department of Environmental and Local Government) as a replacement for the Moncton Coliseum which used to be the City's main indoor arena, although it remains open. The proposed Avenir's name means "Future" in French and it was named after Avenir Hearing, a New Brunswick Audiology company who has 11 clinics across the province (Golder, 2019b & Magee.S.,2019a).

SITE CLEAN UP

The City of Moncton retained Golder Associates and Bird Construction to remediate the site from contaminants left from its former railway use. Together, they developed a Risk Management and Remedial Action Plan, mitigation measures and a Soil & Groundwater Plan to reduce construction environmental footprint and manage the contaminated soil and groundwater on-site. Moreover, multiple environmental site assessments (ESAs); Vapour Intrusion Mitigation System as well as other assessments were part of several remediation tasks

completed to reduce contaminated material management costs on the property (Golder, 2019b).

WHO INSTIGATED THE DEVELOPMENT

The City of Moncton along with the Downtown Moncton Centre Ville Inc (DMCI), are the main initiators of this proposal advocated for the construction of the site by forming the Downtown's Revitalization plan proposed the discussion for the existing redevelopment's location to bring economic growth to the surrounding areas since 2010. As of August 2015, Moncton City council voted 8-3 during a special public meeting to finally proceed with the \$113 million downtown entertainment sport facility. Those in opposition referred to the centre's economic viability, increased property taxes in the area and insufficient public infrastructure to support the influx of those who visit the centre.

This project received approval from the provincial government's Municipal Capital Borrowing Board and the Federal government to obtain the loans for this development which initially was expected to take three years and cost \$104.2 million but end up with increasing its value to \$113 million after council approval to fund to pay for adjacent public plaza and other extras (CBC News, 2015 & Magee, S. 2018).

WHY THIS SITE WAS CHOSEN

Initially the site was left vacant for a few years with no use; later, the City along with DCMI decided to consolidate a vision and plan for the downtown area due to its potential for development. Avenir Centre site was chosen as an important brownfield redevelopment due to its geographical location in the downtown core of Moncton; its scale, its proposed use that will allow influx of residents and tourist to the area and the spurring growth effects in the surrounding areas as well as its walkability potential in the area. In comparison to other brownfield redevelopments in Moncton, City staff of the Moncton's Development Department emphasizes that Avenir Centre has shown more potential and economic and social impact on the community as it has revitalized its downtown area.

CHALLENGES

One of the major challenges of this research was to contact the right authorities that could confirm and indicate how catalytic this project has become since its completion. Information related to this site has been available through primary and secondary sources; however, primary sources such as emails and phone interviews have been essential to clarify the catalytic effect of this site. The use of secondary sources helped to emphasize these responses with statistical data provided by Moncton's City Staff and online sources-news also reaffirmed the impacts of this development in the downtown area.

REASONS FOR SUCCESS

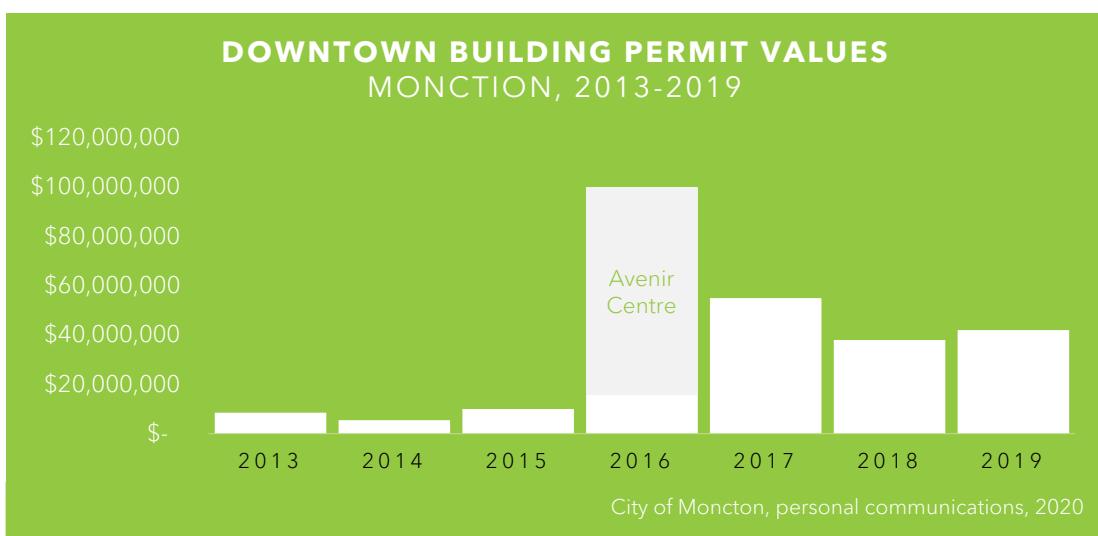
Avenir Centre, a modern facility with energy efficient design has increased economic development in the local economy. Due to its location in the downtown core, the support from City Council, the Provincial and Federal government and the community made it possible to revitalize and grow the area. The city's investment of \$ 113 for the creation of the Avenir Centre expects to attract between 317,000-396,000 people to the downtown area each year and generate \$12-\$15M in spending, helping to revitalize and support commercial and residential

growth in the downtown core (Golder, 2019b). Moreover, this development has created a major impact in new development projects in the downtown area and has received a 2019 Canadian Brownfields Network Brownie Award (Golder, 2019a).

WHY IS THE SITE CATALYTIC

As per Moncton's City staff, Avenir Centre's investment has served as a catalytic site for growth as there has been an increase in the Downtown building permit values since 2016 as shown in the graph below and this has also expanded Moncton's Downtown Development incentive programs seeking to lure more investment (City of Moncton, 2015). These building permits are traditionally used as an indicator of a community's economic growth and as per today, the entire City has issued \$378 million in building permits in 2019 (Magee, S. 2020).

With the opening of the arena, the site has attracted thousands of tourists and residents to come to the downtown core area. Moreover, it has spurred growth and development in the immediate area such as the Hyatt Place hotel on Main Street and Hilton Garden Inn hotel on Highfields Street; Tannery Place South, a six-storey commercial and residential building, on Vaughan Harvey Blvd; An apartment building under construction at the site of a former gas station at the corner of St. George and Weldon streets (Magee, S. ,2019b).



6.3 Case Study Analysis

	CATALYTIC FACTORS	SPIN OFF EFFECTS
Avenir Centre	<p>Near downtown Near major arterial roads and highways Former railway lands Moncton City Council supported the development of this project Public investment</p>	<p>Part of the Downtown Moncton Development Vision & Downtown Core Community Improvement Plan (Revitalization Plan) The downtown area has become a well connected and walkable site due to its public infrastructure Recreational Use proposed to attract new residents and tourists to the area New commercial and residential developments in the area Increased in building permit values in the downtown areas since 2016</p>
Orillia Recreation Centre	<p>Near downtown Near water Eager Councillors Presence of post-secondary institution (Lakehead)</p>	<p>Much more real estate and development activity around the site; parallel to this activity is a massive increase in property values in the area (26%) The success of the project has also injected city staff with the confidence and motivation to take on other projects around Orillia Allows for a more walkable, connected and appealing downtown Although a scan of downtown plans for the city locate the site just outside their scope, the 2008 Economic Development Strategic Plan marked arts, entertainment and recreation as an economic driver while 2014's Parks, Recreation and Culture Master Plan explicitly names 255 West Street South as ideal for outdoor park development</p>
Pleasant Hill Village	<p>Near downtown Initial brownfield remediation Pilot Project turned into a full Brownfield Program for the City PUBLIC PRIVATE New development for social situations, new community centre, meeting space New community centre and new school City redeveloped lands first to prove that development was appropriate in this neighbourhood Council purchased brownfield lands</p>	<p>New Secondary Plan for broader neighbourhood Included an existing industrial area as a "Transition Zone" New affordable housing units Indigenous elders lodge Renewed interest in the development Rejuvenated a part of town that no one wanted to go to due to perceived danger</p>

	CATALYTIC FACTORS	SPIN OFF EFFECTS
North Bay CN and CP Rail Lands	<p>Near downtown</p> <p>Near water</p> <p>Revitalization on a past railway (this is due to the fact railways were constructed in high priority areas which account for large areas of land)</p> <p>Investment from City initiated the trust that the development would be successful</p>	<p>All time record high of development and permit applications</p> <p>Connection of downtown core of North Bay to waterfront generates economic value within the City</p> <p>Large amount of real estate opportunities available because of the connection of the two large areas in the city</p> <p>Initiated development of a pedestrian underpass which serves as a connection for residents of the community</p> <p>The success of the site, encouraged the City to launch a Brownfield Community Improvement Plan (CIP)</p> <p>This program implemented several other projects along the waterfront; including: Waterfront Hotel, Convention centre, Office Building and City square</p> <p>The success witnessed by the City, further implemented Downtown Community Improvement Plan (DCIP) to ensure revitalization of the downtown corridor was accommodating the new development</p>
East Village	<p>Near water</p> <p>Near downtown</p> <p>Dozens of available sites, several with large parcels of land</p> <p>City Revitalization Plan in place to guide redevelopment</p> <p>Funding mechanism utilized (Community Revitalization Levy/TIF) was highly effective in funding the cleanup process and infrastructure improvements</p>	<p>Huge spurt of growth, thousands of new residents, jobs, and recreation/open space</p> <p>Revitalized an area of the city that had been underutilized, neglected and crime filled for decades</p> <p>Rise in development permits in neighbourhood and surrounding communities (a third of all development permits in the city occur in these areas)</p> <p>Used as example across Canada as a successful brownfield redevelopment as well as a prime example for the successful implementation</p>
Cascade Hotel and Casino	<p>Downtown location</p> <p>City Council was eager to develop the Casino as an opportunity to help with city debt</p> <p>Public-private collaboration</p> <p>Located off of Fraser Highway</p>	<p>New public infrastructure (sidewalks, roads, proposed Sky-Train connection)</p> <p>New Downtown Secondary Master Plan around the Cascade Casino</p> <p>Numerous residential developments around the area (E.g. Paddington Station)</p> <p>Increased employment for residents</p> <p>To date, nearly \$200 million in brownfield development has taken place and had a positive impact on the housing market</p>

6.4 Catalytic Factors

Of the 30 case study sites inputted into the GIS database, six sites were picked amongst the group of 30 to narrow down the catalytic factors which were common amongst each site. Building upon the literature above, sites were chosen based on their proximity to downtown first, as it is the most likely determinant of catalytic potential. Further, cities are increasingly paying more attention to their downtowns and looking for ways to increase economic development within those downtowns. Other factors include desirability, usually typified by a waterfront, as shown by the East Village, North Bay and Avenir projects. Further, the group has found that these catalytic projects are typified by a renewed interest in the downtown and represent the beginnings of new investment into the downtown core. Therefore, the six catalytic projects were determined by their lasting effect on city centers. For that reason, the projects were influenced by the amount of time between construction and the present day to determine catalytic factor, save for the project located in Orillia, Ontario, which had available evidence from city staff to justify its inclusion on the list. Further, the group attempted to diversify each site across Canada to diversify the scenarios and to further give credence to the catalytic factors that were common amongst each site with the hopes of making the selected factors repeatable throughout Canada. In all, two projects were chosen from Ontario, one project from New Brunswick, one project from Saskatchewan, one project from Alberta and one project from British Columbia.

Catalytic Factor 1: Proximity to Downtown

The primary location for projects that exhibit catalytic factors is either within or nearby the downtown of the municipality. All six catalytic projects that were chosen showed this catalytic factor. One of the primary reported reasons for projects becoming catalytic was due to the permitted density and higher land values in and around the downtown area. In Moncton, the Avenir Centre project is located in an established downtown, and the project attracts people to the downtown to take advantage of the amenities, which is why the project is catalytic, it can have effects on the rest of the downtown and creates a market outside of the project site. In Orillia, the community centre was located south of downtown, which adds onto the available amenities, including Lake Simcoe. City staff reported additional new development, which has catalyzed the potential created for the downtown by this community centre. Similar to Orillia, the North Bay park project took advantage of Lake Nipissing by creating a place where people could access the marina and the downtown in one location. The addition of the park attracted people to downtown which in turn led to increased downtown development and the economic development for businesses located in downtown North Bay. The Pleasant Hill Project in Saskatoon created additional social institutions as a result of the project, further, more people were able to be accommodated with affordable living closer to downtown Saskatoon where the most jobs are available to residents. This project is further catalyzed by a future development plan to revitalize an adjacent employment district and a new proposed BRT line leading directly to downtown. Without the Pleasant Hill Village project, the city would have a harder time investing in an important transit project without having the density to support it. East Village in Calgary was situated directly adjacent to downtown Calgary but was not targeted for redevelopment until 2007. Once it was, development was easily created as there were already existing downtown amenities available for the project to catalyze itself on. This is evidenced

today as there is still new construction occurring in the East Village area of large mixed use buildings. Finally, Langley B.C created a destination in its downtown, which had the effect of generating revenue and tourism for the city's downtown. The impact of having a casino made downtown Langley a destination and is the target for a new rapid transit stop in the future.

Due to factors that attract people, such as water, parks and restaurants, downtowns are prime areas for economic development and a major factor in determining sites that have catalytic potential. Land value is highest in downtowns, and therefore, brownfield projects are less risky due to the value of the land available. Therefore, the catalytic potential exists across all downtowns in municipalities across Canada so long as it is supported by the municipality, leading into the second catalytic factor.

Catalytic Factor 2: Downtown Revitalization

Revitalization of communities is a vital factor that was noticed in the case studies. For a site to be genuinely catalytic, there must be a sound revitalization plan that's in place beforehand as well as a purposeful interest in renewing the downtown core which will have domino-like-effects on the municipality. Local governments are better suited to taking on brownfield redevelopments for numerous reasons. Local governments are not motivated by profit; they receive cheap financing through the Municipal Finance Authority, controls zoning which reduces the risk of land investment and has a long-term perspective on achieving desired returns. We see this in the East Village case where financing for the redevelopment is mandated through the Rivers District Revitalization Plan. Calgary thus had the advantage of revitalizing the neighbourhood while simultaneously amending the bylaw to fit the needs for redevelopment. East Village, a place formerly known for its industrialized land-uses, is now suitable for commercial and residential development as outlined in the amendment of Land Use Bylaw 1P2007 (City of Calgary, 2018). This allowed for the rapid revitalization to occur that we see today in East Village. The City of Langley set out a revitalization plan that would ultimately change the downtown core. Immediate developments such as the \$50 million Paddington Station residential complex is an example of redevelopment that has occurred due to Cascades Casino. Likewise, the City of Moncton was highly motivated to create a facility that would be a cornerstone in their Downtown Revitalization Plan. Avenir Centre was proposed in 2015 and with great support from both the community and the city was passed, and construction began. This plan made it possible for the City of Moncton to receive loans and grants from the government, which has since then sparked a drastic transformation in the immediate surroundings of the Avenir Centre. Similarly, the city of Saskatoon initiated the Pleasant Hill Revitalization Plan, which allowed significant redevelopments to transpire there.

Cities and Municipalities must initiate revitalization plans of brownfields that can foster quick solutions socially and economically. Revitalization plans seem to be a vital factor that help kickstart brownfield developments into fruition. Cities must be capable of envisioning a revitalization plan; without this vision, brownfields will not be able to be a catalyst for change.

Catalytic Factor 3: Proximity to Water

In order for a brownfield to gain an edge and become a catalyst for growth it must understand and play to its strengths. One major point of leverage can be geographic location. While sites

located in major urban centres are clearly well positioned, desirable geographic features such as a proximity to water can help push remediation efforts to levels of success otherwise unattainable. In fact, a 2004 article which explored a vast array of medium sized cities found that the success of their downtown revitalization efforts often hinged on taking advantage of such assets (Filion, Hoernig, Bunting & Sands, 2004). Three of our five green cases, the Orillia Rec Centre, North Bay and East Village, have experienced success in part due to their proximity to water. In North Bay, the project's ability to enable new found access from the downtown core to the waterfront was at its core and seems to be a selling point of the project. East Village also marketed their development proudly as river front property (evexperience, 2020). Finally, while Orillia isn't explicit about their proximity to Lake Simcoe when considering their new recreation centre, the city on a whole is well aware of their geographic upper hand as is apparent through the city website's promotional material (City of Orillia, 2020). In summation, these projects unlock the waterfront, so it is accessible to the public again, as vacant land does not encourage placemaking and does not attract the public to the waterfront. These projects have catalyzed the surrounding area by moving people nearby water to encourage growth and economic development in the area. Therefore, access to water is key to providing a catalytic brownfield project and cities should seek to unlock these lands to their benefit.

Catalytic Factor 4: Public/Private

Throughout the six catalytic projects that were chosen, there are several trends that can be analyzed and identified for having a correlation on achieving a successful catalytic project. One in particular is the coordination between the Private and Public parties, which support the projects towards future catalytic achievements. The funding from both parties is necessary, especially in the early stages due to the financial risk that can be involved when remediating contaminated sites. Developers are usually hesitant towards such projects because of liabilities risks that come with remediating, which consequently force the municipalities to take charge of the project. This is why municipalities are usually defined as the champions in most catalytic projects. Moreover, the developers often can be credited for the catalytic effect of the projects as they are the one's developing the land surrounding the brownfield site. This is due to the fact that developers can take advantage of prior knowledge of potential property value increasing in the area, which can accumulate to large profits for private investors. Therefore, at the end of the day it is a win - win for both parties, the municipalities accommodate the needs of the people by revitalizing underutilized areas and developers generate large amounts of profits from surrounding development. Apart from this, there are few projects from the six that display an example of a successful catalytic brownfield through the coordination of public/private parties. For example, The City of Langley cooperated with Gateway Casino and Entertainment in which they achieved an ultimatum which concluded with the City to tax the casino's winnings and use it towards city benefits such as road and infrastructure maintenance. In addition, North Bay's revitalization of the rail lands can be fully credited towards the city identifying opportunities on the contaminated site. However, 4.5 acres of land were sold to a private developer to construct a senior home which increased the population of the area and was credited for significant amounts of economic growth. Moreover, East Village project's main goal was to create public - private partnerships that would coordinate together to redevelop and spark growth in an underutilized area. Pointe of View Developments initiated inquiry from the City of Calgary about building permits which caused other developers to follow, creating a catalytic effect of

development. Therefore, it is evident when analyzing all six successful catalytic projects that the coordination between public and private parties is a fundamental factor when redeveloping a contained brownfield site.

6.5 Lessons for Other Municipalities

In preparation of this Final Report, various municipalities were contacted through phone interviews. In doing so, these municipalities have given lessons that they felt were important to pass on to future municipalities when it comes to the redevelopment of brownfield sites. This stems from their experience with their own redevelopment with brownfield sites, which allows them to provide their challenges, obstacles and helpful hints. The purpose of this section is to highlight the lessons from municipalities to provide insight on the challenges of brownfield remediation. (Information from the City of Brantford, the City of North Bay, the City of Orillia and the City of Saskatoon).

Look at brownfields as opportunities

The City of Orillia stated that brownfield sites should not be viewed as challenges, but rather opportunities (City of Orillia, personal communications, January 2020). This means having to change the mindsets of both City staff and the public that brownfield redevelopment is not something that is forced to be done when you run out of greenfield development areas. Instead, brownfield sites should be viewed as an opportunity to redevelop a property that would otherwise be vacant. A lot of the time, brownfield properties are located near or within the downtown of a community, so redevelopment would allow for remediation of an area that is an eyesore or not being used. The City of Orillia also advised celebrating what remediation would mean to both the City and the community (City of Orillia, personal communications, January 2020). That since community members are not typically technical experts they cannot appreciate the reports as much as city staff. Therefore it is important to communicate to the public the community benefits they will receive because of this redevelopment. Orillia has also recognized the opportunity of incentivizing brownfields through their CIP program, which is approved by the council, but not yet implemented. Their Downtown Tomorrow Community Improvement Plan (2016) will provide brownfield tax assistance through cancellation of property taxes to encourage the remediation of more sites.

Do your research

The City of North Bay described that brownfield redevelopment starts with large amounts of research into the site and its history (City of North Bay, personal communication, January 2020). Municipalities first need to understand what they want to build, but more importantly, where they want to build. Brownfield sites need to be deeply examined to get a handle on the cost of remediation. Orillia described that one of the challenges of brownfield sites is not knowing what you are buying until you start to redevelop it and find more information (City of Orillia, personal communications, January 2020). Thus, it is important to always be prepared when redeveloping a brownfield site that cost and time commitments may go over what is initially assumed.

Look at the benefits

Especially when challenges arise during brownfield redevelopment, it is important to communicate to the community the benefits that will come out of the remediation. The City of Orillia described to the community that their community center would provide benefits like remediation of a site near the downtown or remediation of a whole street that can provide a location for community events, using an otherwise vacant property as a gathering place (City of Orillia, personal communications, January 2020). They wanted people to recognize that there are economical, economic development, environmental, ecological, and societal benefits with the redevelopment of brownfield sites. The City found it was important to educate others who did not understand environmental benefits with facts such as: for every hectare of brownfield redevelopment, approximately 4.5 hectares of outlying greenfield land is saved from being developed (National Round Table on the Environment and the Economy, 2003). The communication of facts like this supports the City of Orillia's stance on brownfield education, that they want people to understand that there is an environmental benefit beyond just the remediation of the site.

Be transparent and work together

The City of Orillia talked about the importance of community involvement with the redevelopment of brownfield sites (City of Orillia, personal communications, January 2020). The City learned from the redevelopment of the community center that it is important to be transparent with the community in terms of both community leaders and citizens, and is a lesson they are incorporating in their next brownfield project, remediation of their waterfront. During the community center redevelopment, the municipality held a closed session with council to discuss the environmental reports as they wanted first to understand them, their technicalities, liabilities, and risks. Since the redevelopment was done publicly, it was important for the citizens to see where their tax dollars were going, and to see progress ultimately. This could only be done with the municipality sharing their technical reports and designs, giving progress updates to the community to produce an open line of communication. Moving forward, the City is making all environmental reports public for its waterfront redevelopment. Both the municipalities of Orillia and Brantford also discussed the importance of working together as a team (City of Orillia, City of Brantford, personal communications, January 2020). The City of Orillia also discussed that brownfield redevelopment impacted many departments, including Economic Development, Engineering, Parks and Recreation, Planning, and Communications (City of Orillia, personal communications, January 2020). Therefore they advised creating an internal, cross-department team to address and destigmatize brownfields within the municipality, so it is not just an environmental issue, instead choosing to look at brownfields from many perspectives, working together.

Take advantage of resources

The City of Orillia summarized that brownfield redevelopment is expensive and has cost implications for receiving environmental and social benefits (City of Orillia, personal communications, January 2020). This requires municipalities to research maximizing funding from Federal, Provincial, and private programs to offset municipal costs as much as possible. The City of Brantford also echoed the importance of preparing and using resources to ensure

the success of brownfield sites (City of North Bay, personal communications, January 2020). In addition to taking advantage of the monetary tools open to brownfield redevelopment, the idea of taking advantage of land as a resource is also necessary. The City of Orillia discussed the importance that both the City and residents have placed on environmental sustainability (City of Orillia, personal communications, January 2020). The municipality has recognized that land is not an infinite resource, and is, in fact, finite. This means we need to repurpose brownfield sites to better utilize the existing resources that we hold. Viewing land as a finite resource is necessary as municipalities like Orillia are running out of greenfield land to develop, requiring municipalities to turn towards brownfield sites as a resource for future growth. Further, the City of Saskatoon began looking at temporary financial incentive programs to entice developers to redevelop brownfield projects, and so a temporary incentive program (Enterprise Zone) was created and offered for a specified time period. The Enterprise Zone Program provided financial assistance to developers in order to complete environmental screening and remediation (City of Saskatoon, 2020). According to the City of Saskatoon, the program was popular and successful in encouraging redevelopment for a number of years. The Vacant Lot & Adaptive Reuse Incentive Program was designed to encourage development on existing vacant or brownfield sites, and the reuse of vacant buildings in established areas of the city, including the Downtown, by providing financial and/or tax based incentives to owners of eligible properties (City of Saskatoon, 2020). City staff suggested to establish a pilot program and monitor for its popularity before beginning to fund a new brownfield remediation program in your city. Further, the City noted that it was harder to get any traction on development outside of the downtown, therefore Downtown sites should be targeted first before looking at other areas of the City (City of Saskatoon, 2020).

Recognize that "there is no blueprint" for brownfields

Overall, it is important to recognize that every brownfield redevelopment will follow a different path for a variety of reasons. These sites are unique but will present monetary and time requirements that are sometimes unexpected. The City of Brantford described that as much as municipalities can get opinions and ask for help, at the end of the day, there is no blueprint telling them what to do (City of North Bay, personal communications, January 2020). Each site will have strengths and challenges that make it unique to redevelop. The City of Orillia said that it is important to recognize that brownfield redevelopment is costly (City of Orillia, personal communications, January 2020). This has implications for a municipality as they need to understand the powers they have and the challenges they face when choosing the best route for redevelopment. For example, they need to understand what a private developer would bring to the table instead of a public developer and vice versa, or they would need to know if they have the power to increase taxes if required.



RECOMMEND- ATIONS

7.0

7.1 Recommendations from Canadian Brownfields Consultants

The goal of this report was to utilize various examples of Brownfield Projects across Canada to inform where best to invest in new brownfield projects that have the potential to impact cities beyond the scope of the initial project. To initiate this effort, the project team used municipal websites to find brownfield projects throughout the various provinces. The group attempted to contact front line municipal staff involved for more information with varying degrees of success. The project team compiled a list of projects and found common factors amongst each project that produced a "catalytic" effect.

The main factor to take away from these case studies is that the historic downtowns of major cities are a crucial contributor to making projects catalytic. Further, the opportunities exist in many historic downtowns across Canada, and it is just a matter of unlocking existing brownfield lands to fulfil its potential. Another decisive factor attributed to downtowns is their proximity to water, as many of the case studies brought people and, therefore, economic development to their downtowns by connecting people to places like lakes or rivers. Further, utilizing existing services is an appropriate way to intensify existing downtowns and encourage active modes of transportation rather than auto-oriented development on the outskirts of cities.

Canadian Brownfields Consultants hope that this report could be used by small and mid-sized municipalities as a basis to create a framework for which these catalytic brownfield projects could occur in a manner that is repeatable across Canada.

Based on the information contained in this report, Canadian Brownfields Consultants make the following recommendations:

7.1.1 Recommendations for Municipalities

- › Use GIS Mapping to make it easier to identify where brownfield projects are taking place in the municipality;
- › Create incentive-based grant programs to ease the financial burden of the private sector;
- › Update land designations and zoning accordingly, (via Secondary Plans, Community Plans, Zoning By-law), to encourage development interest, and create development-ready lands, and;
- › Create Community Improvement Project Areas nearby downtown.

7.1.2 Recommendations for Canadian Brownfields Network

- › Maintain a project database throughout Canada and have members contribute to the database;
- › Prioritize and advocate for brownfield projects in downtowns;
- › Make research readily available on the CBN website via a "Start Here" section, and;
- › Create a "catalytic" category for the Brownie Awards.

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8.0

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