

BROWNFIELD REDEVELOPMENT FOR AFFORDABLE HOUSING – AN  
EXAMINATION OF NOT-FOR-PROFIT DEVELOPERS AND MUNICIPAL PROJECTS  
IN SOUTHERN ONTARIO, CANADA

by

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**ABSTRACT**

Brownfield redevelopment has become a strategic tool in addressing urban regeneration, economic growth, and affordable housing provision in Canada. This research examines the role of not-for-profit developers and municipal agencies in transforming brownfields into affordable housing in Southern Ontario. Through a case study approach, four projects/programs are analyzed to identify barriers, enabling factors, and best practices. Findings reveal synergy between urban infill brownfield sites and conditions favourable to residents in affordable housing; obstacles include financial constraints, remediation costs, and disconnection between affordable housing incentives and remediation timelines. Strong municipal support, capacity building

through expertise and partnerships, and diverse funding mechanisms facilitate success.

The study highlights the importance of aligning brownfield remediation policies with affordable housing initiatives and fostering collaboration between public, private, and non-profit sectors, offering insights for municipalities, policymakers and non-profits aiming for socially-oriented outcomes through urban land reuse.

Key words:

Brownfield, affordable housing, nonprofit, barriers

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## **Introduction**

Brownfield redevelopment has been a core strategy adopted by multiple levels of government in Canada to achieve various policy goals, such as pollution remediation, sustainable development, directing economic growth, reducing urban sprawl, urban regeneration, and housing provision. It also has the advantages of expanding municipal tax bases, creating job opportunities, and leveraging private sector investments (Canada Mortgage and Housing Corporation, 2004; De Sousa & Spiess, 2018; Ontario Ministry of Municipal Affairs and Housing., 2000).

Since governments began showing growing interest in brownfield remediation in the late 1990s, the mainstream of North American brownfield academia has focused on the social, environmental, and physical benefits of remediated sites and some barriers associated with such redevelopment projects in a market economy. There is insufficient research on social outcome-oriented development on polluted sites that explores how not-for-profit agencies deliver projects to produce the documented social benefits in a market economy (De Sousa et al., 2023).

Housing affordability is a growing problem in Canada, affecting over 1.7 million households. There has recently been renewed commitment to federal, provincial and municipal programs to foster the supply of affordable housing from coast to coast. With the housing crisis in Canada and the shift towards a more compact urban development planning direction, affordable housing development on brownfields or urban infill sites has become more common in recent years (Tsenkova, 2022). Both brownfield/infill development and affordable housing are of great interest to all levels of government and the industry, including developers, brownfield professionals, home builders, and non-profit organizations looking to get into affordable

housing. The research focuses on brownfield redevelopment into affordable housing from the perspectives of not-for-profit developers and municipal agencies, attempts to unfold the barriers and enablers of such projects, and proposes recommendations.

A hypothesis is that while these two initiatives are clear priorities on an intergovernmental level and have various functioning programs under governance frameworks such as Community Improvement Plans (CIP) under the *Planning Act*, there is little interconnection between the elements. In practice, situations broadly differ among municipalities; while larger and more industrial cities such as Hamilton might have more sophisticated or comprehensive programs, middle to small-sized municipalities might be lacking in terms of such supports and enablers for either brownfield redevelopment or affordable residential support (De Sousa & Ridsdale, 2021). The availability of funding from other levels of government and organizations further complicates the landscape. However, it is important to note that there might not be a need for comprehensive systems in every municipality. While it is complex that the funding tools may be delivered in various formats from different levels, they are often context-dependent, and it might not be necessary for them to be integrated into a single initiative to be effective.

This paper focuses on the recent developments and policy cases within municipalities in Ontario, as the province has a well-structured framework for municipalities to deliver brownfield incentives. A mix of primary and secondary data was used to gather information for the case study. Primary data was obtained from interviews with industry stakeholders while an extensive literature review of academic articles, grey literature published by different levels of government, agencies such as Canada Mortgage and Housing Corporation (CMHC), non-governmental organizations, academic centres and news articles back secondary research. By examining four (4) cases, including a non-profit development and a municipal social housing project in St.

Thomas, a public-private partnership model in Toronto, and a municipal grant program in Hamilton, the paper identifies barriers and facilitation tools and develops recommendations of best practices that are ideally applicable in municipalities of different sizes throughout southern Ontario.

The MRP begins with a review of southern Ontario's regional and policy context. A review of the literature examining barriers to brownfield redevelopment and affordable housing is then conducted. The preliminary idea is that policy and financial instruments are essential to stimulate such redevelopment (Adams & Watkins, 2002; CMHC, 2004). The literature review then informs a conceptual framework for identifying enablers and barriers to development. The approach is similar to Squires & Hutchison (2021), who developed a conceptual model of barriers to affordable housing development on brownfields in San Francisco and then analyzed 3 cases from San Francisco to verify the validity of the literature-based concept. Discussions and recommendations are sourced from best practices across the industry with a Canadian focus.

### *Background and Definitions*

A brownfield is an “abandoned, vacant, derelict or underutilized commercial or industrial property where past actions have resulted in actual or perceived contamination and where there is an active potential for redevelopment”, as defined by the National Roundtable on the Environment and the Economy (NRTEE) in 2003. Sites where contaminants were used as part of an industrial process, including abandoned service stations, steel mills, dry-cleaning establishments, railway properties, and harbours, are typical examples. Brownfield redevelopment can bring opportunities and benefits, including increased property values, local tax revenue and employment opportunities, revitalized neighbourhoods, and reduced

environmental risks. Still, it is often riskier and more complex than conventional developments (Federation of Canadian Municipalities, 2015). The brownfield problem is widespread among industrialized cities globally, driven by the migration of industries out of central cities since the 1970s, leaving behind tracts of vacant brownfields with lingering potential contamination that awaits redevelopment (De Sousa, 2006).

Ontario is the most populous province in Canada and serves as the country's primary hub for manufacturing industries. Its industrial history traces back to the 1850s, coinciding with the growth of urban centers, railways, and industrial development in the region. As of 2016, Ontario was home to 44 percent of Canada's manufacturing jobs. The urban settlement network known as the Golden Horseshoe, located along the western shore of Lake Ontario, along with urban centers in southwestern Ontario, accommodates the majority of the province's population and hosts key industries such as automotive manufacturing and materials production. However, over the past decade, the sector has faced a substantial decline, leading to increased opportunities for brownfield redevelopment (Hillmer & Bothwell, 2024).

Affordable housing in Canada has mixed definitions. The broadest definition of affordable housing covers different types of housing across the housing spectrum, ranging from supportive housing, social housing, near-market affordable rental and near-market affordable ownership (City of Edmonton, n.d.). The definition of affordable housing in terms of shelter cost also varies across the board in Canada, with (1) shelter that costs less than 30% of gross household income for low and moderate income households and (2) 80% of the median market rent (MMR) or average market rent (AMR) being two widely adopted definitions (Côté & Tam, 2013). For this MRP, affordable housing is defined as the range of housing types across the spectrum of

below-market housing to cover the various experiences of non-profit entities in affordable housing development.

Due to the variety of affordable housing types, there is no set of regulations or rules about not-for-profit residential development. However, non-profit organizations are mostly involved in such projects, whether as real estate developers, owners of completed property, housing managers, or even on-site service providers. Such entities are usually registered as not-for-profit, charitable, or co-operative corporations under respective legislation. These groups typically rely on external funding and financing sources as they have limited access to capital in the forms of public donations, programs and incentives offered by different levels of government, and/or the minimal service fees they charge their clients based on their operations. In a real estate context, the provision of housing at a minimal profit margin translates to a different development cashflow structure compared to for-profit market-rate projects.

### *Policy Framework*

Ontario's current brownfield policy framework was introduced in the Brownfields Statute Law Amendment Act, 2001, which included Ontario Regulation (O.Reg) 153/04 (Records of Site Condition) within the Environmental Protection Act. The system was formalized in 2004 and subsequently further revised in 2007, 2009 and 2011. The goals of the policy framework were to establish clearer requirements for site assessments, improve environmental site condition standards and provide some degree of environmental liability protection. Under this regime, property owners are obliged to submit Records of Site Condition (RSC) that outline the environmental conditions of a property when redeveloping a potentially contaminated site, confirming the levels of contaminants are within the applicable standards. Property owners must file an RSC when transitioning from a less sensitive use (industrial) to a more sensitive use (e.g.

residential) through an environmental site assessment (ESA) process. Phase I of the ESA process usually comprises a desktop review of historical land use records, a site visit and interviews with past/present occupants of a property to identify past and current contamination risks. If concerns are identified in Phase I, a Phase II ESA through site investigations of sampling and testing at the property is then performed to determine the location, type and degree of contamination. If necessary, a report of cleanup work undertaken and confirmation that the site meets applicable provincial standards is also prepared as part of Phase II ESA in Ontario (often known as Phase III in other jurisdictions) (De Sousa, 2017; De Sousa & Spiess, 2018).

Municipalities have the ability to provide financial assistance that helps offset the additional costs associated with the assessment and remediation processes empowered by the *Planning Act, R.S.O. 1990, c. P.13*. Section 28 of the *Planning Act* grants municipalities the regulatory power to issue Community Improvement Plans (CIP) that delineate a community improvement project area where development incentives in forms of grants or loans can be provided to compensate costs related to environmental site assessment, environmental remediation, development, redevelopment etc. CIPs are widely used in Ontario, as 70 municipalities were identified to have such plans (De Sousa et al., 2024). It is also commonly used to provide development incentives to meet other policy goals, such as building sustainability and affordability.

Formerly, a form of incentive known as “density bonusing” was introduced in Section 37 of the *Planning Act* in 2007 to stimulate density in development. Municipalities could sign an individual agreement (a Community Benefits Agreement) with developers to grant height and density increases beyond permissible limits in exchange for the provision of “facilities, services or

matters” on a case-by-case basis. However, there are now restrictions as the new section 37 requirements prohibit a developer’s ability to use this incentive to bonus financially through additional density as agreed by municipalities. The community benefits program tool is now strictly in the form of a Community Benefits Charge, with a cap at 4% of the post-development approval land value. The cumulative payment from an incentive implementation cannot exceed the total eligible costs to obtain an RSC under O.Reg 153/04 (Horner, 2024).

Ontario's affordable housing stock and policy were in a downward spiral from the 1990s to the early 2010s. Following the federal-led housing supply policy during the welfare state expansion era from post-WWII to the 1970s, the provincial government of Ontario was also active in affordable housing as an urban policy. The welfare state model was massively downsized in the 1990s, resulting from a global recession and shift towards a neoliberal ideology. New social housing developments were no longer funded, housing programs were downloaded to the provinces and, in Ontario, they were further transferred to the financially strained municipalities (Suttor, 2014, 2016). In this context of fiscal constraint and the struggle to maintain social housing stock, housing affordability deteriorated and devolved into a crisis, and the provision of affordable housing is making a comeback as the need continued to grow (Côté & Tam, 2013). In response, the federal government launched the National Housing Strategy (NHS), consisting of \$82 billion in funding initiatives in 2017, allocating and disbursing funding to the creation and maintenance of adequate housing through the Canada Mortgage and Housing Corporation (CMHC) (Morrissey, 2023). In Ontario, the Housing Affordability Task Force (HAFT) released a landmark report in 2022, setting a significant goal of building 1.5 million homes by 2031 with 54 policy recommendations (Lawrence, 2022), since then, the provincial government has made several legislative efforts implementing some recommendations, but the industry calls for more vigorous efforts as 13 out of 54 were yet to be acted on, including permitting as-of-right

multi-tenant housing, aligning property taxes and reducing tax disincentives for purpose-built rentals, which is a significant housing type in affordable housing (Ontario Real Estate Association, 2024).

While the literature review will further identify barriers associated with brownfield sites, this part introduces a brief overview of brownfield development operations in southern Ontario.

Brownfield development is usually made viable through institutional and financial mechanisms for for-profit private developers, and this rule should pertain to not-for-profit developments with a much lower profit margin. In large markets such as Toronto, brownfield redevelopment is just as profitable as greenfield development (De Sousa, 2000) and very viable. The market already unlocks the opportunity via the existing policy regime throughout the GTHA, but developers still appreciate more financial incentives from the province and municipalities (De Sousa, 2015). The factors perceived by the development community in the GTHA as barriers to brownfield redevelopment can broadly be grouped into two categories: institutional and cost (De Sousa, 2015). These factors are translated to risks and uncertainties, and hence the possibility of increasing costs and liability issues from the potentially time-consuming processes and financial lenders exercising greater caution.

## **Literature review**

Both academic and grey literature have identified barriers to brownfield redevelopment and affordable housing. Frameworks that help categorize and systematically analyze barriers to brownfield redevelopment in housing exist and can be adapted to understand affordable housing redevelopment. Most of the literature focuses on residential brownfield redevelopment in a market economy where for-profit housing generates the majority. Despite the popularity and frequency increase in affordable housing developments in news articles and grey literature, there is a general absence of Canadian cases and academic literature in the recent context.

### *Benefits and enablers of brownfield residential development*

The benefits of brownfield redevelopment span multiple dimensions: infrastructural, economic, communitarian, recreational, ecological, health and cultural (Loures & Vaz, 2018). In Ontario, the government has cited benefits including economic development, improvement of environmental quality, sprawl reduction, more effective use of infrastructure, revitalization of communities, and thus promoted brownfield reuse as early as 2000 (Ontario Ministry of Municipal Affairs and Housing., 2000). A quantitative analysis of costs and net benefits of brownfield residential redevelopment across the economic, social, and environmental spectrum within the Greater Toronto Area found significant net public benefits at a modest cost to municipal governments (De Sousa, 2002). Plenty of academic and grey literature supports public facilitation, stating the broader tangible and intangible benefits often exceed redevelopment costs (Kotval-K, 2016).

Residential projects were associated mainly with economic gains, including additional tax generation and jobs, and infrastructural and communitarian benefits of creating jobs, housing, and revitalization of communities (Ontario Ministry of Municipal Affairs and Housing., 2000).

Research in Milwaukee and Minneapolis in the United States noted significant benefits of residential reuse to surrounding property value and positive net gain from removing negative impacts pre-conversion, regardless of the amount of public support and the sizes of the projects (De Sousa et al., 2009). Overall, residential development on brownfields can be seen as beneficial on multiple fronts.

Common tools that can be deployed to assist brownfield developments can be categorized by: 1) financial tools such as municipal loans and grants, tax incremental financing, and municipal fee waivers; 2) liability tools such as Liability Agreements and environmental insurances to manage liability risks; and 3) process tools to assist timelines and approvals (Ontario Ministry of Municipal Affairs and Housing., 2000). Many of the tools are still highly ranked by the development industry in the Greater Toronto and Hamilton Area (GTHA) in Ontario as significant facilitation mechanisms: liability tools to protect from future and third-party liability, economic offset through government reduction of land acquisition costs, and process improvements by rezoning to more desirable uses, and regulatory processes harmonization among the different levels of government (De Sousa, 2015). It can be said that these interventions are considered effective and timeless, even with the changes in market conditions and regulatory landscape throughout the years.

All the benefits and enablers above apply to brownfield redevelopment in general, including non-profit projects. While there is little literature on non-governmental organization-led redevelopment efforts of contaminated or underutilized sites, a unique piece based on cases in Cleveland and Detroit in the United States highlighted additional community-based factors that enable the reuse of such sites by non-profit developers: 1) inclusion of community and neighbourhood development versus economic growth in the interests of city governments; 2)

strong intermediaries such as housing network umbrella organizations and lending partners that strengthen the capacity of non-profit developers, and 3) existing working relationship between different actors in the process enabling cooperation and communication (Dewar, 2009).

### *Barriers to residential development on brownfields*

Due to the interdisciplinary benefits, brownfield redevelopment has been promoted by various governments worldwide to lead the revitalization and regeneration of cities and meet sustainability goals. Countries like the UK and the US concerted systematic efforts to redevelop their brownfields since the 80s and 90s, with the UK underpinning brownfield reuse with sustainability and urban regeneration with specific housing goals (Dixon, 2007), and the nationwide work of the US Environmental Protection Agency (EPA) since 1995 (De Sousa et al., 2009). However, Canada was only concerned with environmental protection and regulation until the late 90s (Canada Mortgage and Housing Corporation, 2004).

With revitalization and growth narratives embedded into brownfield redevelopment initiatives, it is up to the interest of governments, the industry and academia to understand how to promote the reuse of brownfield sites for residential or commercial uses and beyond. Thus, there is a generous amount of literature on the benefits of such redevelopment, and barriers to the development of brownfields are common research subjects in brownfield research and grey documents to facilitate the process.

Based on major UK and US literature, Canadian sources and key informants, the Canada Mortgage and Housing Corporation (CMHC) commissioned a series of research studies to understand why brownfield redevelopment into residential uses was discouraged at the time

(Canada Mortgage and Housing Corporation, 2004; Delcan et al., 1996). The reports identified barriers under six categories, with examples below:

1. Regulatory: processes of risk assessment, clean-up standards, and the timelines relevant to clean-up
2. Technical: evaluation of contamination, cost-effectiveness of remediation technologies, disposal options
3. Legal/liability: civil and regulatory liability to future inhabitants and to regulatory bodies, as owners and developers bear the risks and costs of clean-up and the resulting land transfer reluctance
4. Financial: Reluctance of lenders, environmental insurance, assessment and remediation costs
5. Urban planning: municipal planning policies and approval timelines, greenfield competition
6. Communications: stigma, education and awareness

The liability and regulatory barriers have since shifted due to changes in the regime. The current RSC framework that emerged after an NRTEE national brownfield strategy in 2003, and the above CMHC analysis, has addressed a certain degree of these barriers. It is a response of the NRTEE's call to action on creating a more effective public policy regime to manage liability and risk (De Sousa, 2015). Filing an RSC is proof of compliance with regulations and standards, and thus can be crucial in addressing future liability issues of a development. The document is also often required by financial institutions or municipal governments for financing and planning approvals to reduce the liability risks for the respective stakeholders. Nevertheless, the use of environmental insurance and environmental legal services is vital to navigate around liability issues in the development process. In fact, the private sector development industry perceived

liability risk concerns as a quite significant barrier, and strengthening protection from future regulatory liability and third-party liability was perceived to be the most effective mechanism to facilitate redevelopment, indicating the importance of liability management (De Sousa, 2015).

While the regulatory landscape has improved drastically over the past few decades, addressing some liability and regulatory concerns, some barriers persist today, and some lie at the heart of every brownfield development. In a case study of the brownfield redevelopment efforts in London, Ontario, competition from greenfields, stigma, associated liability, and risks remained prominent (Hayek et al., 2010). Similarly, market risks, remediation costs, timely and stringent planning and regulatory processes, and obtaining financing were perceived as common barriers by developers in the Greater Toronto and Hamilton Area (GTHA) of Ontario, which has not changed much since the beginning of the century (De Sousa, 2015). Overall, all 6 categories of barriers remain present in the industry.

In the broader literature, there is a consistent theme of costs and economics playing a significant part in the viability of brownfield reuse. The baseline is that property development will only occur when the value of the finished project exceeds all development costs in a market economy, by a margin that the developer accepts for any risks involved (Munneke, 1996).

Earlier works on smart growth suggest that residential developments are beneficial but subject to the costs and economics of brownfield remediation (C. A. De Sousa, 2002; Greenberg et al., 2001b). In Canada and the UK, market forces are identified as the major drivers and constraints that determine the degree of residential brownfield redevelopment activity by the private market (De Sousa, 2017; Hutchison & Disberry, 2015). This piece is vital in Ontario as the province transitions from a mandatory regulatory model of getting landowners to clean up pollution to a

voluntary cleanup model focused on getting developers to unlock real estate opportunities (De Sousa & Spiess, 2018).

### *The complexities of affordable housing in the equation*

To ensure the success of brownfield developments, a series of factors must be balanced even in a private for-profit market, as illustrated above. The inclusion of affordability in such residential projects adds a layer of complexity to the equation. Affordable housing itself is a moving target; this term should be understood as an interrelated set of housing, social and economic issues (Leishman & Rowley, 2012). Affordable housing, as viewed in the housing spectrum, can range from supportive housing, social housing, near-market affordable rental and near-market affordable ownership (City of Edmonton, n.d.). The definition of affordable housing also varies across the board in Canada, with (1) shelter that costs less than 30% of gross household income for low and moderate income households and (2) 80% of the median market rent (MMR) or average market rent (AMR) being two widely adopted definitions concerning affordability (Côté & Tam, 2013).

The evaluation of beneficial outcomes of affordable housing projects can be categorized into place-based (infrastructure, amenities, housing quality) and people-based outcomes (access to housing, human capital, social capital, and economic opportunities) (Tsenkova, 2020, 2022). Many anticipated outcomes are shared with the commonly cited benefits of brownfield projects, particularly the place-based outcomes and the economic opportunity piece, which align with the infrastructure and economic gains, and to a lesser extent, the communitarian benefits of brownfield redevelopment. The creation of affordable housing projects, on an outcome level, is thus similar to brownfield projects and should also be stimulated as they align with many interests of governments.



**Figure 1. Project outcomes to evaluate the benefits of affordable housing projects (Tsenkova, 2020)**

Researchers have identified a range of barriers to affordable housing development. Common themes include land acquisition, funding shortages, regulatory complexities, and administrative hurdles (Spaan & Abraham, 2023). In addition to these factors, land use planning is often said to be one of the barriers to affordability (Leishman & Rowley, 2012). In a case study of Australia, stigma, NIMBYism, public opposition, limited government support and political issues are found to be the most significant barriers (Han et al., 2021). Similarly, political issues in the form of conflict of governance are identified to be a significant obstacle in the delivery of affordable housing on a municipal level in Canada (Rauf & Frayne, 2024).

In Canada, the root of such problems can be said to be the austerity and downloading of social housing since the 1990s, leading to such providers struggling to maintain the affordable housing stock (Suttor, 2014, 2016). While the causes that led to these barriers might be different than those in the brownfield industry, they can be categorized similarly to the barriers to brownfield reuse. In terms of enablers, many scholarly works and articles cite financial solutions such as tax incentives, rebates and additional funding to be the key to delivering affordable housing

(Côté & Tam, 2013), which again is a common suggestion in advocating for brownfield redevelopment. The policy and financial instruments deployed in affordable housing projects are formatted similarly to brownfield reuse facilitation mechanisms.

Recently, in larger Canadian cities, public, private, and non-profit partnerships (PPNP) have been used as a social planning strategy to deliver affordable housing and revitalize brownfield sites. Effective provision requires partnerships involving all levels of government, the private and non-profit sectors, and local communities. The model capitalizes on the public sector's effective mobilization and regulation management, the efficiencies and large capital pool of private agencies in the development process, and the management and delivery expertise of non-profit institutions (Tsenkova, 2022).

### *Frameworks to conceptualize the barriers*

To systematically understand the implications of these barriers, some scholars have developed conceptual frameworks that can be adopted to underpin this paper.

Regarding brownfield reuse, McCarthy (2002) proposed the concept of a “*Dual Policy Challenge*” in which private actors are engaged in such projects to deliver public good. Government agencies, on the one hand, must help reduce private-sector reuse barriers by addressing the uncertainties created by four major issues: legal liability for contamination, uncertain cleanup standards, the availability of funding for redevelopment, and complicated regulatory requirements. On the other hand, redevelopment efforts should connect to the broader community efforts to achieve environmental protection, central city revitalization, and reduced suburban sprawl.

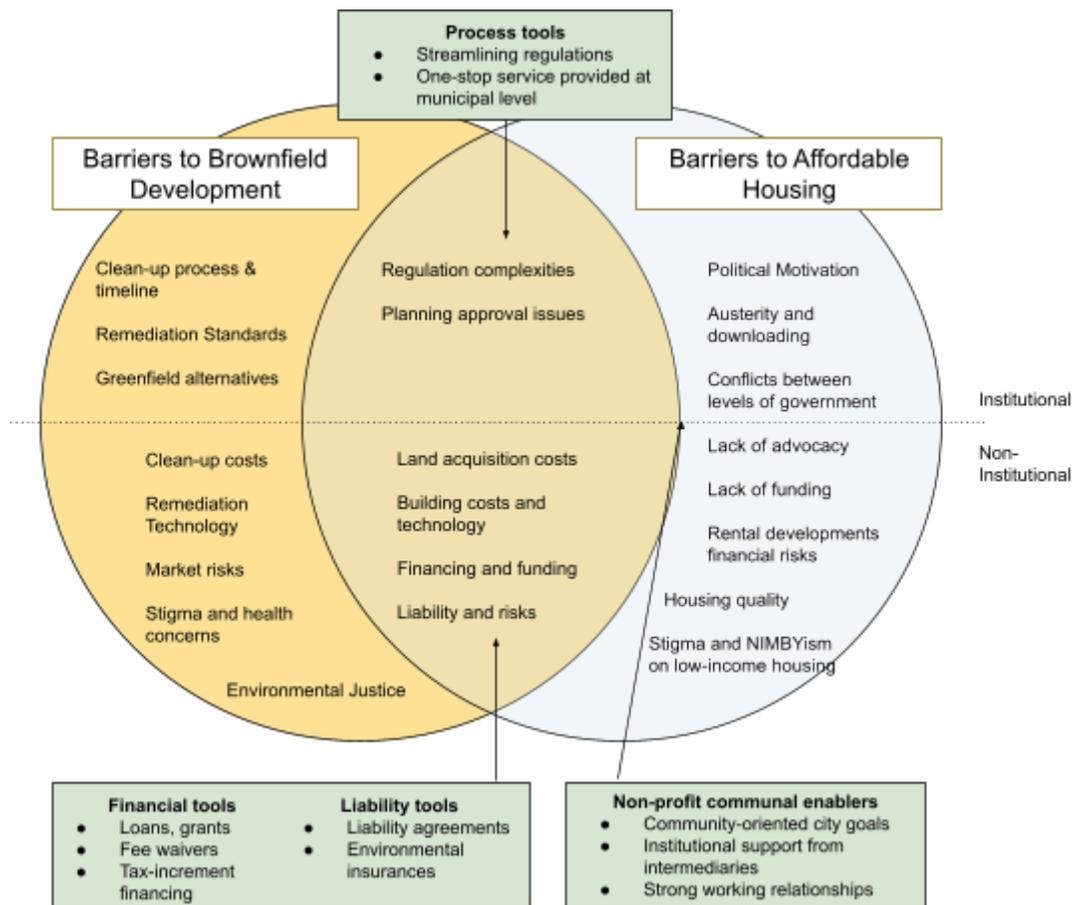
As documented by De Sousa, the barriers associated with brownfield sites perceived by the development community in Ontario can be grouped into two categories, institutional barriers and non-institutional barriers associated with costs (De Sousa, 2015). Institutional barriers at the provincial level include: time and complexity of risk assessment and regulatory process, site-by-site complexity not addressed by regulations, changes in regulations over time, mixed messages from different brownfield units within the Ministry; at the municipal level: limited municipal expertise and complex development approval processes. Non-institutional barriers are related to cost, liability, time, weak market demand, the degree or extent of contamination, and a lack of available funding, which all reflect in the value and cost margin determining developers' decision to commence a project.

Few scholarly works exclusively seek to investigate the relationship between brownfield redevelopment and affordable housing. One earlier work noted in New Jersey that people of colour and lower-income classes were more willing to consider moving to a cleaned-up site, citing the viability and broader acceptance among disadvantaged groups, but environmental justice should be noted (Greenberg et al., 2001). The financial modelling complexity and liability issues once again come to play as such development depends on the effective management of two "uncertainties": (1) the risk that the environmental cleanup impacting economic feasibility, and (2) the risk of "tail" liability, in the form of lawsuits (Rubinstein, 2004).

Only one work throughout the literature review investigated the challenges surrounding the development of brownfield sites in the US and Canada, which seeks to integrate affordable housing development in San Francisco (Squires & Hutchison, 2021). The article followed McCarthy's 2002 model. Barriers were identified and further categorized into four themes:

engaging with economic geography rationale, integrating economic viability and sustainability, increasing affordable housing quality, and assessing the efficacy of policy tools.

This paper will adopt a modified and simplified model from the Squires & Hutchison paper. The “Duo Policy Challenge” can be interpreted as bridging brownfield development barriers under market conditions and delivering community goals, in this case, appropriate housing that meets affordability and physical and social needs. Following De Sousa's work, barriers are then sorted into institutional and noninstitutional categories instead of the four themes. The diagram below shows the conceptual framework of barriers and enablers.



**Figure 2. Conceptual framework of barriers and enablers**

Upon close inspection of the two worlds, it is clear that brownfield redevelopment and affordable housing delivery overlap significantly in the barriers faced and require similar regulatory and financial mechanisms to facilitate. It is also in the government's interests and goals of both initiatives, despite some disconnections between governments on the more recent issue of affordable housing. While the facilitation mechanisms may operate on separate dimensions, the rise in the need for affordable housing and the ever-increasing competitiveness of brownfield sites in Canadian urban settlements make affordable housing development on brownfields more sought-after than ever. Hence, more institutional and financial mechanisms will be required. It is then clear that more research should be on public and community investors in socially-oriented brownfield development (De Sousa et al., 2023). However, to date, no extensive study has been done to investigate such developments, the barriers they face, and facilitation tools or enablers that can be deployed in the Canadian context and policy landscape.

## Methodology

Based on the literature, there are two main questions that this research aims to answer:

1. What are the barriers faced in the cases, and how do they compare to the existing literature framework?
  - Are they similar to the barriers faced by for-profit projects?
  - Any additional barriers specific to the context?
2. What are the enabling factors that helped to overcome such barriers and made the projects viable?
  - How did they bridge the gap?
  - What are the key factors that facilitated the projects?
  - Can they be replicated?

These questions determine the fieldwork focus of the case studies. A case study method cross-cuts the primary and secondary data. It expresses how the cases can be handy for combining mixed methods and having a strong relationship with real-world qualitative research. Compared to other approaches, the case study method focuses on the *how* and *why* kinds of research questions directed at exploring and understanding some phenomenon in depth (Yin, 2009). This MRP deployed the case study method, aiming to reveal *how* and *why* affordable brownfield redevelopments can succeed despite barriers that work against both affordable housing projects and brownfield reuse.

Cases and programs representative of the spatial and temporal context under scrutiny are selected. Following the techniques of influential, typical and diverse case selection (Gerring, 2008), the selection criteria are to develop a representation of the diverse picture of the affordable housing scene for an exploratory exercise. Considering the broad spectrum of affordable housing and the variety of landscapes and conditions present within southern

Ontario, four (4) cases were selected for this paper. Successful cases in St. Thomas represent recommendations for a typical environment of small to mid-sized municipalities. Toronto's case illustrates the public-private-non-profit collaboration typically required for housing development in larger cities. The Hamilton program can be assessed for its effectiveness in overcoming the barriers and, hypothetically, a best practice recommendation for mid- to large-sized cities.

The secondary data set consists of case study documents, such as online newspapers, consultancy reports, city websites, council reports, minutes and Records of Site Condition files. To reveal insights unavailable from secondary documents, semi-structured interviews were conducted with senior stakeholders with substantial knowledge of the particular cases selected. The interview questions were designed to probe the experiences, work, and capacity of those involved in brownfield and/or affordable housing development. Outcomes, barriers, and enabling factors across different dimensions (e.g., environmental, financial, social, and political) were evaluated. Follow-up questions were asked about project-specific details such as program requirements, partnership models, and tools utilized. The detailed interview guide is attached in the Appendix.

Primary data retrieved from interview respondents and secondary data from case study documents were processed through a thematic analysis based on the framework and categorization identified in the literature. Data were tagged and sorted by the themes of different barriers or facilitators, about brownfield development, affordable housing, or both, and then grouped according to the framework. The summary and direct quotations will be presented in the discussions to highlight findings.

The main limitation of this exploratory study is the small sample size of cases and interview numbers. The study aims to investigate specific cases of affordable housing development on brownfield sites. However, such cases are often not explicit: certain developments might not label themselves one or the other, or affordable housing can be intricate as one of many elements of a project. This results in difficulties in identifying appropriate cases to research. Furthermore, the small sample size and this study's exploratory nature limited the number of interviewees. Together, they contributed to the possible sample bias and limited representation. Nevertheless, the robustness and variety of case selection compensate for the generalizability and further applicability of the research. The short timeframe for conducting this research poses further limitations to the case identification and recruitment process. A more extensive and open recruitment process might help to locate more appropriate cases and stakeholders to overcome the sample bias.

## **Results and Discussion**

### *Case Study Description and Location*

A total of three (3) completed or undergoing affordable housing development projects and one (1) municipal grant program were selected, including two development cases (Project Tiny Hope, 230 Talbot Street) from St. Thomas, one (Birchley Park) from Toronto in Ontario, and a grant program under the Environmental Remediation and Site Enhancement (ERASE) Programs in Hamilton, known as the ERASE Affordable Housing Grant (EAHG). The selection spans a range of institutions involved in development work (traditional nonprofit organizations, municipal government, municipal real estate agencies, for-profit and not-for-profit real estate developers), affordable housing types across the spectrum (supportive housing, affordable rental units and other forms such as PPNP) and operations in various sizes of municipalities.

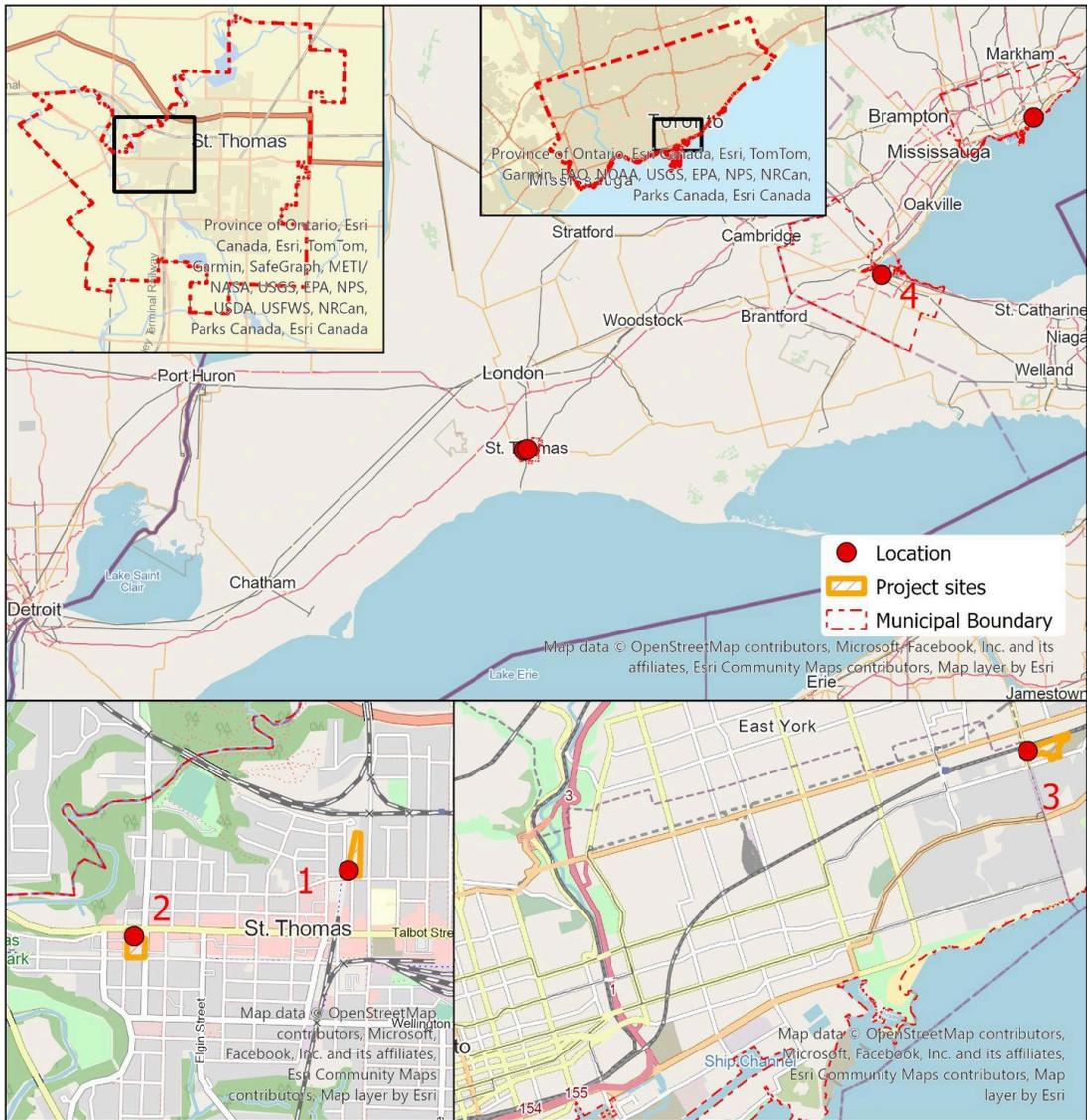
The City of St. Thomas, a smaller municipality with a population of around 40,000, located south of London, Ontario, mid-way between Toronto and Detroit, has a strong industrial history. It was an important railway junction in the early 20th century, and as railways declined, automobile manufacturing began to dominate the local economy. Toronto is Ontario's capital city and Canada's chief economic hub. Industries once dominated the city, but most operations have moved to the nearby suburbs, while many former industrial sites are already repurposed or undergoing redevelopment (Careless, 2022). Hamilton, Ontario, is a mid/large-sized city located west of Toronto. The City has a rich industrial past, still serves as a major port along continental shipping routes, and is Canada's largest steel producer. Together, they represent the different-sized industrial cities that once dominated Canada's Great Lakes.

The implementation of municipal incentives varies between the three cities. The latest Community Improvement Plan for the City of St. Thomas includes several funded brownfield and affordable housing programs: an Environmental Site Assessment Grant Program equal to 50% of the costs of environmental studies for a maximum grant of \$2,000 for a Phase I ESA; \$7,500 for any other eligible environmental study up of two (2) studies and \$10,000 per property/project; and a Residential Program grant for 50% of the cost of affordable housing units up to \$12,000 per unit and \$100,000 per project and an equal amount of no interest 7-year loan. Although not specific to affordable housing and brownfields, there are other programs that can incentivize such redevelopment in the Primary CIP Area (i.e. strategical areas that the City designated) and brownfield sites developed for employment use (not residential) as the CIP also consists of: a Development Charge Grant Program (up to 100% rebate), a Tax Increment Grant Program, and a Planning and Building Fees Grant Program (City of St. Thomas & RCI Consulting, 2021).

Brownfield Remediation Tax Assistance (BRTA) - the brownfield initiative in the City of Toronto is unfunded as it is a tax-increment-based incentive program. Only development into employment-generating uses is eligible for the BRTA, and thus residential uses are not covered (City of Toronto, 2025a). For affordable housing, Toronto offers funding through the Rental Housing Supply Program (RHSP): rental housing projects with at least 20% affordable units may be eligible for capital funding of up to \$260,000 per affordable rental home unit, 15% reduction of the municipal portion of New Multi-Residential Property property tax, and exemption from municipal fees such as Development Charges, Community Benefit Charges, Parkland Dedication fees Planning Application Fees, Building Permit Fees, and Residential Property Taxes (City of Toronto, 2024).

In Hamilton, there are two CIPs concerning brownfields and affordable housing development. The Environmental Remediation and Site Enhancement (ERASE) CIP is the first brownfield Community Improvement Plan in Ontario and is one of the most comprehensive incentive programs throughout municipalities in the province. Thus, it is selected as part of the case study. The details will be discussed in the next section. The Housing for Hamilton CIP, implemented in 2024, includes a range of programs targeting different typologies of affordable housing with a grant for eligible projects and a forgivable loan component for each unit meeting affordability requirements. Additional Dwelling Unit and Multi-Plex Housing Incentive (ADU-MHI) Program supports the creation of garden suites and additional dwelling units, Rapid Transit Multi-Residential Rental Housing Incentive (RTMRHI) Program supports new rental units near transit corridors and the Housing Acceleration Incentive (HAI) Program supports housing development in general (City of Hamilton, 2024).

The map below illustrates the locations of the project/program, and a project overview for each case is synthesized from news articles, reports, information given by interviewees, and grey literature such as planning documents, remediation records and council documents.



**Figure 3. Location Plan of Cases**

**Case #1 Project Tiny Hope, St. Thomas**

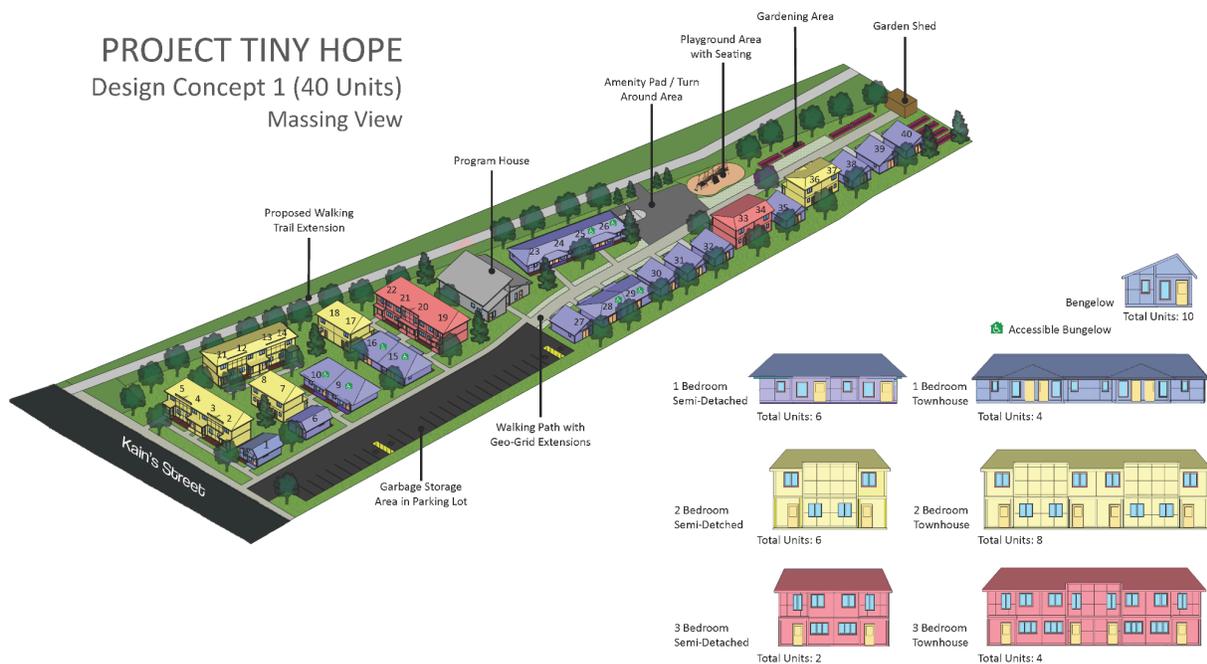
Project Tiny Hope in the City of St Thomas is led by the Young Women's Christian Association (YWCA) St Thomas-Elgin, a long-standing charity that has been delivering and managing affordable and supportive housing since 1928 in the region. The project lands were historically used as railways, and woodwork manufacturers/factories. Currently, 40 homes are under

construction on a downtown St. Thomas brownfield site. By partnering with the City of St Thomas, the 40 supportive/affordable homes will go to residents on the centralized waitlist and who are prioritized by the YWCA. The project is a collaboration with Sanctuary Home, another local faith-based non-profit, and Doug Tarry Homes, a local builder that acts as the project's development partner. As of September 2024, 1 prototype model home with interior furnishings and 8 other houses were completed, and the project is anticipated to be completed by July 2026 (Irvine, 2024).

The project's total cost is projected at CAD\$14 million. With an initial donation of \$200,000 from a community organization and a \$280,000 donation pledge from their development partner to fund the remediation process (The London Free Press, 2021). YWCA purchased the property in 2021 and initiated site investigation and subsequent remediation of the site. From 2021 to early 2023, the charity accumulated over \$2 million from donations and other forms of support, including free building supplies and services, which snowballed into another \$3 million in support from the City council. The YWCA then applied for the CMHC Rapid Housing Initiative for an \$8 million grant to top up the cost, but the application was declined (Harvey, 2023), and the CMHC offered to finance the remaining gap through the Affordable Housing Fund which includes repayable and forgivable loan components. Later in November 2024, Federal and provincial representatives announced \$2.4 million in further funding (Williams, 2024).



**Figure 4. Tiny homes under construction in a community blitz build event (Freeman, 2024), Source: 94.1 myFM News.**



**Figure 5. Project Tiny Hope Design Concept, Source: YWCA St. Thomas-Elgin.**

Case #2 230 Talbot Street, St. Thomas

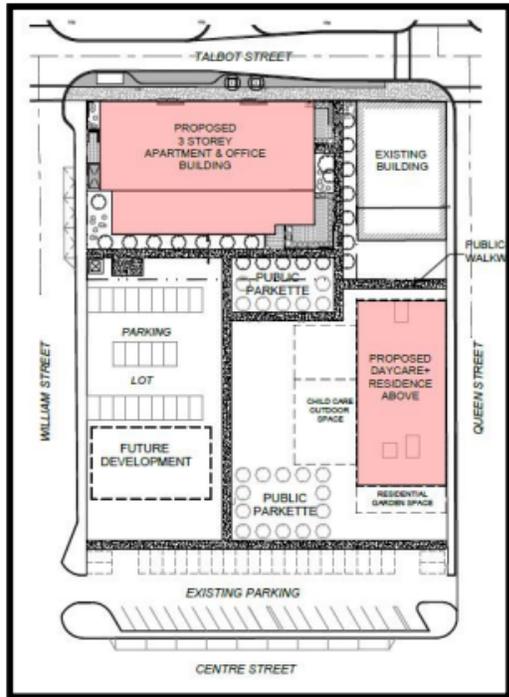
A 28-unit affordable housing building in the heart of the City, with the City's St. Thomas-Elgin Social Services department office on the ground floor, was completed in late 2019 on a remediated former railyard as the first phase of a series of city-initiated developments (LeBlanc, 2021). 14 of the units are rent-geared-to-income units, 8 affordable rentals and the remaining 6 average market rental apartments. In consideration of housing the Public Health and Social Service departments, the City strategically acquired the downtown site in 2017 for \$1.4 million with a donation refund of \$400,000 from the owner (McCallum, 2017), and later included an affordable housing component as it was a mounting and growing issue.

As a part of the Affordable and Social Housing Strategy, the delivery of the building was mainly funded by the City's Investment in Affordable Housing (IAH) Program funds, a liquidation sale of 14 dated single-family houses in the social housing stock owned by St. Thomas (Municipality of Central Elgin & Tim Welch Consulting, 2018), and another \$400,000 was covered by the Canada Community Building Fund (formerly Federal Gas Tax Fund (GTF)) to support the over \$800,000 remediation of the site (Association of Municipalities of Ontario, 2023).

A 45-unit city-owned supportive housing apartment and fire hall complex (16 Queen Street) on phase 2 of the railyard site was completed in October 2023. Indwell, a Christian charity in southwestern Ontario, is partnering with the City to manage and operate the housing (94.1 myFM News, 2023). Indwell and the City of St. Thomas first collaborated on the Railway City Lofts in 2021, which houses another 15 individuals leaving homelessness above a transit building. The remaining portion of the land parcel is envisioned to be home to affordable townhouses for single adults and couples in the near future.



**Figure 6. Housing/social service department complex at 230 Talbot St, St. Thomas (LeBlanc, 2021)**



**Figure 7. Conceptual Site Plan, Long Term St. Thomas-Elgin Affordable & Social Housing Strategy; the eastern block was developed into a supportive housing/fire hall complex in 2023. (Municipality of Central Elgin & Tim Welch Consulting, 2018)**

Case #3 Birchley Park, Toronto

The site is located at 411 Victoria Park Ave, the East End of the City of Toronto, near the Victoria Park subway station and Danforth Regional GO Transit train station. Birchley Park is a 19-acre development on a former sand and gravel quarry site, consisting of more than 1050 residential units to be delivered under a PPNP model by private developer Diamond-Kilmer, not-for-profit developer Habitat for Humanity GTA (Habitat), and the City of Toronto’s real estate portfolio manager CreateTO (former Build Toronto). A site divested from the City’s portfolio.

Diamond-Kilmer will be developing 870 units of market-priced housing over three phases at Birchley Park (McLean, 2024). The remaining two blocks of the site were conveyed in fee to Habitat and CreateTO for the purpose of constructing at least 58 affordable housing townhomes, comprising 19 two-bedroom and 39 three-bedroom units, and a 124-unit mid-rise

purpose-built affordable rental housing (City of Toronto, 2023). The partnership has been an ongoing relationship as Diamond Kilmer is also working with Habitat GTA on three other projects in Toronto (Reunion Crossing at 383, 423 and 425 Old Weston Road, also divestments from the City, and Wellesley and Keele).

Following the closure of the quarry in the 20th century, the City purchased the lot in 2006. Between 2013 and 2017, CreateTO (then Build Toronto) conducted a series of assessments and studies and obtained environmental approvals to bring the property to a potential market stage to permit a new mixed-use development of up to 300 residential units, including affordable units. The plan of low-rise residential, parkland, and a retail store did not materialize as the City was unable to get a commitment for the retail component. In 2018, the agency selected Diamond Kilmer Developments as the preferred proponent to redevelop the property through land disposal, and the current PPNP redevelopment plan was introduced in 2019 (Shackleton, 2019). On November 12, 2021, the City Council enacted By-law No. 958-2021 to adopt Official Plan Amendment No. 551, which consolidated the block configuration and the affordable housing components (City of Toronto, 2021). Remediation works and site servicing work were then initiated. As of October 2024, the site saw the first building permit approved and issued, with the first residents projected to move in by late 2026.



Study Grant (ESG), ERASE Redevelopment Grant (ERG), ERASE Tax Assistance (ETA), ERASE Commercial District Remediation Loan (ECDRL), and the latest additional EAHG, they target all stages of development, from preliminary study and assessment, construction, and tax cost post-completion (City of Hamilton, 2025).

Apart from the financial incentives for developers, the ERASE Municipal Acquisition and Partnership Program (EMAP) authorizes the city to acquire and partner with the private sector to clean up and redevelop contaminated sites. The ETA program generates the funds for EMAP, as the ETA program waives 80% of the increase in the municipal portion of property taxes (the tax increment) that results from redevelopment for up to 6 years for commercial projects and 10 years for residential development. The 20% retained by the City is then put into the reserve for EMAP, which is later expanded to cover the EAHG in 2023.

Self-sustaining finance is the key to the continual success of the program (City of Hamilton, 2023). Since 2001, the ERASE Programs have leveraged approximately \$18.00 in private sector investment for every \$1.00 provided in remediation assistance; ERASE assisted the creation of over 3,300 new residential units and over 1,900,000 sqft of Industrial/Commercial/Institutional floor area, generating over \$11,000,000 annually in new municipal property tax revenue and growing. The newly introduced EAHG is self-funded as the City expanded the function of the reserve built off from the tax increments to cater to both the EMAP and EAHG in 2023.

### *Discussion*

The findings align with the proposed conceptual framework of benefits, barriers and enablers. All the development cases encountered and acknowledged certain pieces within the framework.

Below is a detailed discussion section of the findings from the case studies that relates to the affordable housing context, and relevant quotes from interview respondents are included in text boxes.

#### Benefits delivered through policy synergy

When asked about the reasoning behind supporting brownfield redevelopment, actual site selection, and outcomes achieved, respondents cited how underutilized brownfield sites present significant opportunities for housing provision, community revitalization, and urban intensification. Given Southern Ontario's industrial past, brownfield sites, specifically infill sites in historical downtown areas, are usually already well-served by existing social infrastructure, such as medical access, transit, amenities, and support services vital to potential residents.

*“The property was a perfect location for us, because of its downtown location, it's close to multiple services, grocery stores, medical, child care, library, public transit, and it just happens to be a brownfield.”* - respondent from a non-profit organization

*“It's better for the residents to have access to transportation and jobs and services that they require, and having those kinds of affordable housing units located within areas that have that, as opposed to suburban greenfield areas where that type of social infrastructure is not in place, just makes sense.”* - respondent from a municipality

A key lesson identified by Tsenkova (2022) in developing affordable housing projects was to foster the neighbourhood model of ‘*complete communities*’ to secure optimal people-based and place-based outcomes by involving synergies of physical, social and environmental measures. ‘*Complete communities*’ have been pursued by the Ontario planning regime as a planning policy goal as early as 2006 through the Growth Plan for the Greater Golden Horseshoe. The latest

Provincial Policy Statement (PPS) defines them as: *places such as mixed-use neighbourhoods or other areas within cities, towns, and settlement areas that offer and support opportunities for equitable access to many necessities for daily living for people of all ages and abilities, including an appropriate mix of jobs, a full range of housing, transportation options, public service facilities, local stores and services (Provincial Planning Statement, 2024, 2024)*. In the context of locating affordable housing on infill sites, it checks multiple boxes of more equitable access to jobs, transportation and services in a mixed-use urban environment, and most importantly, the provision of a full range of housing. This is best illustrated by Case #2 and other projects in St. Thomas through the co-location of social services, transit, and public services like fire halls with affordable housing in a mixed-use downtown area.

The brownfield redevelopment process and inclusion of affordable housing synergize together and deliver place-based and people-based outcomes in the built-form format of a “*complete community*”. It is evident that a properly executed brownfield residential redevelopment meets many preferred infrastructure and economic goals, while the affordable housing component can enhance the people-based communitarian outcomes. Spearheading or at least including a socially oriented not-for-profit component in brownfield redevelopment adds a layer of security to the dual policy challenge McCarthy (2002) coined by engaging parties beyond private actors to deliver public good.

#### Barrier: Upfront remediation cost

The nature of brownfield redevelopment is that there is an upfront cost of site investigation and remediation prior to any redevelopment activity. This has proven to be a hurdle to many for-profit developers, let alone non-profit projects. All cases studied have access to mechanisms that address the initial cost: Case #1 had a development partner that pledged to cover the cost,

Case #2 had access to city and federal funding, and the PPNP model in Case #3 leveraged the expertise and private equity from a for-profit brownfield developer to cover remediation and site servicing before transferring to a not-for-profit developer. Case #4, as a municipal grant, was also designed to compensate costs for assessments through the ESG Program, and the EAHG only required the filing of the RSC to proceed (i.e. grants can be issued by the completion of remediation to a Ministry-approved level, regardless of the rest of the development timeline).

To supplement Case #3, the City of Toronto has shifted gears towards unlocking the value of city-owned assets for residents. As CreateTO was founded in 2018 to replace the former Build Toronto, a new approach to managing assets for the City of Toronto was thus introduced. Recent council directions have moved away from land disposition to the retention of ownership of city lands. Housing partnerships are preferred through a ground lease model. Putting into the context of brownfield management, CreateTO now manages the environmental due diligence, i.e. filing the RSC before any ground lease. With consideration as the owner of the land resources, the city agency now handles and advances preparatory works to mitigate risks for future development. While partnering developers may have the obligation to complete remediation work following the RSC, having filed an RSC means the extent of contamination and remediation recommendations are already known; this minimizes the extra work and uncertainty that a development partner would have to undertake versus an untapped brownfield.

Municipalities, while said to be financially constrained in the grand scheme of housing, have the capacity to handle part or all of the remediation activities, in turn reducing the overall risk throughout the entire development process. Similar to this approach, the City of St Thomas in Case #2 remediated the entirety of the land parcel before implementing a full range of housing in phases, including affordable and supportive housing, all while preparing another lot for future

townhouse development. However, for non-governmental non-profit organizations, the barrier of upfront remediation costs is still a major hurdle, and it only adds to the already complicated equation of building affordable housing.

#### Enabler: Diverse funding mechanisms

Two interview respondents acknowledged the importance of federal support in two different cases they were involved in, suggesting that the NHS launched in 2017 has played a significant role in supporting the creation of affordable housing in the province and nationwide. While there is undoubtedly support from all levels of government, not-for-profit organizations and municipalities have to be creative about funding affordable housing projects. This can range from community support through donation of capital, goods, and services to effective management of assets owned.

Tax increment-based funding programs are the most common tool in CIPs to help fund revitalization and brownfield redevelopment in Ontario (De Sousa & Ridsdale, 2021). However, pure affordable housing projects without any market unit components often are not required to pay property taxes due to exemptions through municipal programs, or the *Assessment Act*, which governs property tax collection in Ontario. According to Section 3(1)(9) and Section 3(1)(12)(iii) of the *Assessment Act*, *municipal properties* and land owned by *any charitable, non-profit philanthropic corporation organized for the relief of the poor* can be exempted from paying any municipal property taxes. Hence, such projects generate little to no property tax revenue uplift for the municipalities, and they are less likely to take advantage of brownfield CIPs and have to be funded through other housing initiatives or even more creative ways. The investigated cases showcased a variety of funding that might be deployed in a non-profit charity or municipal social housing context.

Case #1 displayed the wide range of capital sources that a charity organization has to access in order to deliver affordable housing. To make up for the \$14 million cost, YWCA started with donations from local partners that wanted to give back to the community, launching the land acquisition, site investigation and remediation work. Propelled by the initial funds, the charity was able to commence the project and a fundraising campaign to the wider community, the community responded with generous donations of cash, building materials, interior furnishings etc. After accumulating more than \$2 million, they moved forward with the planning applications and rallied for support at the city council, which the strong community support and initial development timeline already stabilized through the above finances translated into a big \$3 million investment from the City (Leon, 2023). Although the application for the CMHC grant through the Rapid Housing Initiative did not go through, the federal agency was able to help finance and fund through the new Affordable Housing Fund (AHF), which includes repayable and forgivable loans. With all these pledges and support in place, the province and federal government came together to give an extra boost to the project. Respondents and city councillors in reviewed news articles highlighted the longstanding history and track record of success of the non-profit organization as a community partner in St. Thomas; the proven organizational capacity attracted substantial support and funding from the community and the City Council.

The delivery of the 28 housing units in Case #2 is a part of the review and optimization of the city-owned social housing stock. As a part of the Long Term St. Thomas-Elgin Affordable & Social Housing Strategy, it was identified that the City should better manage its real estate portfolio and leverage assets to build more affordable housing. A total of 14 single detached units were declared surplus by the city to provide capital funding for /the housing-social service

complex. Single detached houses were considered the most valuable to be leveraged due to their attractiveness in the local market, simpler transactions and the higher cost of upkeep as social housing. The decision was supported by several opportunities, including adjusting to demographic changes from an aging population and downsizing, improving accessibility by replacing older housing stock that does not meet modern requirements and might require costly retrofits in the future, reducing operating costs through increasing the portion of multi-unit dwellings, and lastly reduce future capital expenditures by updating the aging housing stock (Municipality of Central Elgin & Tim Welch Consulting, 2018). Operating on the same principle, CreateTO in Case #3 is a designated city agency that conducts this real estate management work at a different scale due to the size and complexity of Toronto compared to a small- to mid-sized city like St. Thomas.

Case #3 illustrated the PPNP model (Tsenkova, 2022), which leveraged private equity to develop a large-scale site. While the private partner helped unlock the vast site's potential, the public sector asserted control through legal contracts and liaised requirements through the former section 37 bonuses, securing a city-owned affordable rental apartment block and a not-for-profit affordable ownership townhome site for potential not-for-profit developers. The way that the City of Toronto funds the construction of rentals can be observed through another city-led affordable housing initiative, Housing Now, also managed by CreateTO. Since its launch in 2019, the City has included 22 properties across Toronto and is estimated to produce over 15,000 new homes, with over 5,000 being affordable rental homes (City of Toronto, 2025b). CMHC programs, namely the Apartment Construction Loan Program (ACLP, previously known as the Rental Construction Financing initiative (RCFi)) and the AHF, are the key funding and financing mechanisms utilized by the Housing Now initiative to construct the deeply affordable rental units (City of Toronto, 2019). The non-profit organization Habitat GTA is

responsible for the development of another affordable ownership portion of the project. Like the YWCA, their funding sources include significant donations, government grants, and occasionally donated goods such as land, materials, and other services. As a dedicated organization of developing homes with a unique affordable ownership model, another stream of revenue is through home sales and mortgage payments received as fees for service (Charity Intelligence Canada, 2020; KPMG, 2024).

The cases also supported the hypothesis that the funding methods utilized usually have a clearly designated purpose of either brownfield remediation works or meeting affordable housing objectives, with little connection between them. It is also clear that while they have little connection, they occur in different timeframes in development timelines. Hence, funding sources incorporating both elements might not necessarily aid such projects. However, as they operate in two separate dimensions, disconnections may disrupt potential development.

#### Barrier: Disconnection between funding timeline and brownfield redevelopment timeline

Two respondents expressed concerns over completing the RSC requirements as part of pre-development due diligence to prepare for other funding applications, as a challenge posed to non-profits requiring grants to redevelop brownfields. This is a display of the weakness between different levels of governance (Rauf & Frayne, 2024), or rather a set of conflicting objectives between the brownfield regulatory structure and the affordable housing funding scheme.

Brownfield redevelopment is complex and pertains to unique circumstances, such as environmental regulatory requirements and remediation work that ordinary developments do not encounter. The filing timeline of RSCs is often regarded as lengthy (De Sousa, 2015), and two

respondents mentioned this barrier encountered in two separate cases. On the housing end, federal grants such as the RHI have a short application timeframe and require projects to be ready for groundbreaking to be considered eligible. With brownfields in Ontario, an RSC must be filed with the Ministry when a land use change occurs. This means that if an affordable housing development on a brownfield wants to apply for federal grants, it must complete the RSC process before the final grant application submission. While Case#1 was able to secure capital sources through donations to commence remediation and meet the RHI application timeline, informants suggested their experiences were stressful as they had to wait for the RSC to complete the application to CMHC. A respondent mentioned that other non-profits might not have the financial means to self-fund the remediation of brownfield sites to get them ready for grant application and development, especially without any guarantee that projects will be funded and developed. Given how many affordable housing projects are typically located in urban centers of older cities, the requirements of clean-up work and land development due diligence work for a grant application can lead to a chicken-and-egg situation.

Enabler: Strong political will founded on benefits

The literature has identified the presence of a strong community and social focus and interest, such as the city administration's emphasis on building new housing, as an enabling factor for non-profit housing providers to reuse contaminated or underutilized sites (Dewar, 2009). In the interviews, all respondents agreed that having municipal staff and councils on board and being supportive of their projects or programs is almost essential.

*“(The) mayor and city council are very informed and very willing to help solve homelessness or the need for affordable housing. So that we have a very supportive municipal council, which is huge. You know, not every community across Canada has that political will and*

*political support, and that makes a huge difference.”*

- respondent from a non-profit organization

*“We, like every other municipality in the country, had identified that, you know, we were in serious need of additional (affordable) units... City council, like at the political level, was totally locked in on creating new housing units, affordable housing units.”*

- respondent from a municipality

Understanding the factors that can create this supportive atmosphere to nurture more projects and programs is crucial. Respondents from municipalities showed a great understanding of the communal, infrastructure, and economic benefits of infill development in strategic locations such as city centers. These benefits have been proven in literature and advocated by governments for an extended period, and, in turn, such revitalization projects were used to push the community and social interest of the municipality. In theory, the fact that the policy tool of brownfield redevelopment is tied to benefits to the community can form a positive feedback loop, where such socially oriented goals could be realized through actual projects, and the track record of successful projects supported the use of brownfield reuse as a mechanism to reach the goals of the council. The inclusion of Case#2 in the region's Long Term Affordable & Social Housing Strategy as a pilot project to inform future asset-leveraging decisions of the City is a good example of this. The formalization of sustainability innovation and outcome is often required to reinforce this theoretical feedback loop (Darchen & Poitras, 2020).

On a side note, some respondents mentioned the need for factual information and analysis to back these ambitious political goals. For example, the decision of disposal of assets should be supported by market analysis, projects have to be backed by a financial analysis from city staff

to determine their feasibility, or city staff should provide metrics like key performance indicators of programs to suggest recommendations to councils. On the other hand, city councils should also understand the financial implications, like costs and funding, when setting targets like the proportion of affordable housing to be included in projects.

Enabler: Partnership and working relationship

*“It’s almost like a division of labour or a group project, in a way, where we bring this to the table, they’ll bring that to the table.”*

*“We had collaborative project partners, meeting on a very regular basis, starting weekly, going to biweekly, keeping it top of mind, not going in alone. Going in as a collaborative has been very beneficial, because you automatically triple your resources, your capacity, your brain power, your network and your ability to connect and advocate together.”*

A network of intermediaries supports a strong non-profit housing provider sector (Dewar, 2009). Essentially, partnerships build external capacity for the non-profit developer to tackle barriers to affordable housing delivery. Intermediaries can come in many forms, examples could be: another community organization bringing donations and volunteers to the table, a consultant specializing in grant application, a lending agency that provides financing programs and discounted rates, a private developer that helps leverage assets, or a government partner that provides land, grants, and facilitates the processes through planning instruments that support the vision.

The PPNP model is a good example of understanding the dynamics of partnership. Case#3 is a classic PPNP collaboration that has been copied throughout Canada over the last few decades.

Interestingly, all development cases studied involved some sort of PPNP of different degrees of participation. The property owned by the City of St Thomas which completed the remediation works in Case #2 was divided into three parcels and phases, where the first phase was a city-led public effort, the second phase was a public-nonprofit partnership, and another public-private or public-nonprofit partnership may happen as the last parcel will be transferred to another party to develop into forms of family housing depending on the nature of the partner. Even the fully affordable Tiny Hope project in Case #1 is technically a PPNP, where the non-profit was responsible for the management of operations, the private partner was involved in remediation, planning, and construction, and the municipality's social service agency partnered with the non-profit to move residents into the completed homes.

Through this “division of labour”, three main advantages were identified in the case study:

- 1) Leverage expertise: non-profit organizations excel at the operation and management of housing, and in engaging the public and connecting to the broader community good; public authorities have the power to employ policies such as planning instruments, funding schemes and social housing allocation, municipalities often take a strategic leadership role to coordinate and catalyze development in vital areas of the city, and other levels of government may provide critical funding to projects; the different actors in the private sector have the efficiencies to deliver services, enabled by the niche expertise of developers and consultants engaged in a competitive market (e.g. developers with brownfield expertise and consultants servicing grant applications were seen in the cases).
- 2) Resource management: stakeholders have access to different forms and amounts of resources, for example, municipalities have access to their underutilized land assets and modest amounts of funding, private developers and equity have the capital to leverage

land value, and to design and build projects, and non-profits while short on the funding dimension, have access to broader community support in various forms of capital and material donations and volunteers to provide services. Furthermore, different sectors vary in the efficiency of deploying those resources, as discussed in the expertise point. Having a strong partnership can broaden access to the types of resources and methods, and better utilize those resources for the broader benefit of society.

- 3) Minimization of risks through redistribution: Each stakeholder has its own expertise and resource pool that is best suited to tackle and mitigate certain risks. Hence, careful assignment of duties through contracts helps mitigate risks that might otherwise be highly prone to another actor in the project.

To maximize these advantages, most respondents in the study and literature (Dewar, 2009; Tsenkova, 2022) also noted strong working relationships or leadership among various actors (council, city staff, for-profit and not-for-profit development partners) required to advance projects and best utilize the intermediary network of partnerships because of the sheer complexity and number of parties involved in an affordable housing project.

#### All enablers are key to success

One of the research questions is to probe the significance of each factor that contributed to the success of the cases. While the political will was a substantial factor in facilitating the progress of the cases, it was not the only decisive piece of the puzzle. Respondents generally had difficulty or could not rank the importance of the facilitating factors.

The creation of affordable housing projects requires delicate coordination of all levels of government, developers and other stakeholders involved (Rauf & Frayne, 2024), all while

operating at a minimal profit margin. The findings in the case study suggested that all the factors discussed above played a significant role. If any of the factors were absent, it could very likely make or break projects.

#### Absence of stigma as a barrier

Despite past literature stating the property stigma of brownfields as a barrier to reuse, the case study failed to identify any stigmatization associated with the properties in the sources or through respondents. This result largely aligned with the observation in De Sousa (2015), where it was considered a less significant barrier, suggesting that there might be a change in attitude towards using brownfields and contaminated sites over time in recent years. Overall, most of the public perceived such developments to be positively received based on the review of grey materials and informants in the interviews.

Affordable housing is also said to be associated with stigma. While the case study revealed that it was not a significant barrier to the project's success, some public members displayed questioning attitudes in town hall meetings. Two respondents also acknowledged some degree of stigma attached to affordable housing in Toronto and some other municipalities in Ontario beyond the cases studied, particularly to programs relevant to the broader definition of affordable housing or the nature of occupants.

On this matter, all respondents noted that stigmatization and NIMBYism can be addressed through effective communication. All respondents across public, for-profit and non-profit sectors suggested enhanced public engagement, where multiple sessions with the community in various formats helped to address questions and break down barriers. Elements like the outcomes of the projects, definitions of affordable housing, and environmental and economic

impacts on the site and surrounding neighbourhood should be clearly and openly communicated to the public. Two respondents also noted how non-profit organizations with great local reputations had successes in addressing concerns from the community.

*“It's really about building that relationship, building that connection, making it personal for the person who might have the negative view, trying to find a way to shift their narrative and to understand the benefits, the real benefits for the residents and the benefits for them too. It's a win-win situation.”* - respondent from a non-profit organization

*I think that matters a lot as well, as far as how they (non-profits) can engage with the community in which they're building and their reputation in the community as well, I think goes a long way... It builds the trust and the relationships, and the trust from the community that everything is going to be done well and it's for the best.”* - respondent from a municipality

*“You know, I want to say that we were very conscious of how we were communicating the project and wanting to be open and honest about what we were doing. And we had, like, almost like, I would almost say, zero backlash...”* - respondent from a municipality

One respondent also highlighted the recent changes to policy in Ontario (*Cutting Red Tape to Build More Homes Act, 2024*), which removed the ability of third parties to file appeals to the Ontario Land Tribunal. The legislative changes reduced the actual impact of stigmatization or NIMBYism as a barrier to affordable housing projects by reducing the use of an institutionalized pathway such as neighbour appeals or other frivolous appeals.

Interestingly, one respondent noted that the net positive impact of brownfield redevelopment may even compensate for the possible stigma associated with certain types of affordable

housing. Although the community might object to a certain part of the affordable housing spectrum, revitalizing a derelict or contaminated property into proper residential homes, whether affordable, supportive, or market housing, could be a significant improvement overall that a community may appreciate.

## **Conclusion and Recommendations**

### *Conclusion*

This study identified benefits and developed a conceptual framework to understand barriers and enabling factors associated with brownfield redevelopment and affordable housing development. Case studies were conducted to test the framework, supplement missing pieces and understand the interactions between these elements. It was understood that brownfield sites and affordable housing initiatives have strong synergy, supported by a similar system of facilitation mechanisms and strive for conditions where positive outcomes beyond economic development are appreciated in political entities. Factors that facilitate brownfield reuse into affordable housing include financial incentives, liability tools, institutional process improvements, and community-based support from government and partnerships.

The literature and case study suggested that not-for-profit redevelopments faced similar barriers to for-profit market residential redevelopment projects. Institutional barriers are largely related to regulation complexities, development process and timeline, and political motivations to promote brownfield and/or affordable housing development. Non-institutional barriers include financing and funding the costs incurred in the development process from land acquisition, environmental due diligence, remediation and building, associated technological, market and liability risks, as well as the social barriers of stigmatization, environmental justice and lack of advocacy. Key barriers identified in the study include the additional remediation cost to be paid upfront, and the difficulty of funding affordable housing in a timely manner, given the complexity and the uncertainty in brownfield redevelopment timelines.

The main enabling factor of affordable housing projects was access to diverse funding mechanisms that are unconventional for market-rate developments. Non-profits bridged the cost

barrier from a variety of streams, including government funding programs, restructuring of municipal assets, philanthropic donations, and complimentary services and goods offered from other stakeholders. Projects were driven by strong political will and community-oriented goals, often found on evidence-based policy making through illustrating the feasibility and performance of projects, and the communal and economic benefits of brownfield reuse. The projects were also supported by a strong partnership network of intermediaries to leverage expertise, manage resources and redistribute risks.

The hypothesis that there is little interconnection between brownfield and affordable incentives is largely valid. Incentives were designated to serve the purpose of either brownfield remediation works or meeting affordable housing objectives and funding was released in different timeframes in development timelines. Despite the successes of the examined cases, there are practical concerns and disconnections at the nexus of this topic. Recommendations are proposed to close the gap between brownfield circumstances and affordable housing delivery.

*Recommendations: Ensure implementation of the identified tools and enablers*

The above discussion has highlighted key enabling factors that are also found in the literature. The research results suggested that all the factors are quintessential, with no specific priority to facilitate affordable housing development on brownfields. Thus, the continual implementation of financial, process, and liability tools and embracing community-based enablers are considered the key recommendations of the entire MRP. A brief evaluation of some common facilitation mechanisms is listed below:

### Financial tools

Grants and loans have long been identified as effective mechanisms for brownfield development. In the affordable housing context, they literally make or break the entire non-profit sector, as the history of Canadian social housing clearly demonstrates. This research has identified that initiatives under the NHS have been critical to the success of certain affordable housing projects. However, other research has found that the NHS has been short on addressing people's core housing needs or creating deeply affordable units (ADE et al., 2022).

Fee waivers are fairly straightforward tools that directly alleviate the upfront costs of development. It is at the discretion of municipalities to provide such incentives, waiving off development charges and permit fees etc.

Tax-increment financing is a common component in brownfield CIPs and the recent waves of new affordable housing CIPs in Ontario. However, it should be noted that tax increment financing is more efficient in supporting for-profit housing projects with an affordable housing component than deeply affordable social housing.

### Liability tools

Overall, the RSC process provides limited protection from liability and other external tools like environmental agreements and insurance are required. Obtaining an RSC can minimize the landowner's liability risks from the Ministry. In most circumstances, however, they are still prone to third-party claims and/or off-site migration of contamination. Given the complexities of environmental liability and the diverse parties that can be involved (land vendor, purchaser, long-term site operator, occupants etc), the proper allocation of liability is especially important in a partnership model, which is common in affordable housing delivery. Liability agreements and

environmental insurance are common tools when it comes to the management of liability. While the research did not identify additional concerns about liability in the cases, liability management remains a key piece embedded in the process, and proper protection from liability was considered to be effective facilitation in the literature review (De Sousa, 2015).

#### Process tool - municipal contact point

To navigate through the sophisticated processes of brownfield redevelopment, a respondent stressed the importance of having a key contact at municipalities as a coordinator and connector to programs. This recommendation has long been included in grey literature as a best practice (Canada Mortgage and Housing Corporation, 2004; Ontario Ministry of Municipal Affairs and Housing., 2000). While many municipalities have brownfield incentives through CIPs, the outcomes were unclear, especially in smaller or mid-sized municipalities. More “effective” municipalities all had a defined coordinator for brownfields (De Sousa & Ridsdale, 2021), who could link planning, economic development, city staff across divisions and functionality, and even landowners and developers.

In addition to the above, specific recommendations are proposed to stakeholders often engaged in brownfield redevelopment work, including governments, developers, non-profit organizations, industry associations, etcetera.

#### *Recommendations to all stakeholder groups*

##### Reinstate the opportunities in reusing brownfield sites

It is vital to reinstate and formalize brownfield reuse as an effective measure to deliver multiple city-building goals in urban environments and advocate for continual support at all levels of government. This aims to address the institutional barriers and the non-institutional factor of

lacking advocacy in the affordable housing sphere and provide rapport to consolidate the implementation of the facilitation factors.

The trend in the declining numbers of active brownfield CIPs in Ontario (from 80 municipalities in 2018 to 77 in 2023) (De Sousa et al., 2024; De Sousa & Ridsdale, 2021) suggests a shift of policy focus and a diminishing interest in brownfield sites over other priorities. However, brownfield redevelopment has proven to be an effective planning strategy that meets multiple city building goals, including infrastructure, economic, community, and environmental benefits. This research further suggests that brownfield infill activities have great synergy with affordable housing opportunities; including affordable housing amplifies social outcomes of brownfield reuse, and the net positive outcome of proper revitalization plans to once derelict lands may offset community concerns on certain forms of affordable housing. These are some valuable insights generated from this research that can support this recommendation.

### *Recommendations to the public sector*

#### Aligning federal and provincial affordable housing grants to recognize brownfield redevelopment

Financing and funding are the main non-institutional barriers identified in the conceptual framework. This research identified a disconnection between the brownfield remediation process and funding requirements for affordable housing initiatives. Going back to the conceptual framework, this is a compound effect of the institutional barriers of regulatory processes like clean-up and planning approvals and the non-institutional barriers associated with project costs. This section discusses a possible update to the financial and process tools that may address the barriers.

Deeply affordable projects are typically unable to access tax-increment-based funding at the municipal level. This is the main reason why the City of Hamilton (Case #4), a pioneer in

brownfield reuse and provision of incentives, updated their ERASE program to close the gap (City of Hamilton, 2023). However, the municipal grant of \$200,000 is relatively small even when compared to the costs of small-scale remediation like Cases #1 and #2. Municipalities have limited fiscal capacity to create stable funding streams that can substantially reduce the burden of non-profit developers, unless in unusual circumstances like public-led projects, where municipalities are often the site owners, or through fortuitous donations to particular projects.

Agencies with funding capacity at other levels of government should be proactive in providing funding and carefully design around brownfield development timelines. Funding agencies should provide flexible arrangements in consideration of brownfield sites, which might have an uncertain timeline to be ready for development. Another scenario is to offer additional programs to compensate for clean-up costs for affordable housing projects at other levels of government, in the form of a cost cap or grant. The CMHC can also provide coverage to developers and long-term owners of redeveloped brownfields as pollution liability protection or incentivize reinsurers to offer coverage (Fettig, 2024).

#### Province to streamline and accelerate the Records of Site Conditions process

The other side of the disconnection in funding is in the lengthy RSC process, and streamlining the regulations is one of the process tools identified in the framework. It is unrealistic to speed up the approval by simplifying the actual processes for land use changes from former industrial sites because the health of future residents relies on the proper remediation of brownfields with the possibility of contamination. However, there are some situations where there are no adverse environmental concerns but require filing with the Ministry, which may burden and slow down the RSC for projects that demand real attention. With that being said, the last amendment in 2019 and the newly proposed amendments to the RSC process seem to be moving in the right

direction: by reducing unnecessary triggers of RSC processes that have minimal environmental concerns, like changes in land use on upper floors, the request of RSCs for financing or development purposes that should not be required under the RSC regulation; that might hopefully reduce the burden on the regulatory body, leading to fewer application delays and thus accelerate the projects which demand mitigation of environmental risks due to contamination (Ministry of the Environment, Conservation and Parks, 2019, 2024).

#### Establish clear community-building goals at municipal councils

One way is to materialize the non-profit community-based enablers in the framework, codifying the goals into municipal regulations, plans and strategies. The direction of councils morphs policy and the amount of funding the non-profit development sector can rely on (Dewar, 2009). Since municipalities are executors of planning policies and are responsible for planning communities within their jurisdiction, the focus of councils and mayors determines the overall development direction. Even if brownfield redevelopment provides numerous infrastructure, economic, and community benefits and is a desirable site for affordable housing, none of the outcomes could be materialized if municipalities were not interested in any of these goals in the first place. Hence, council and city agencies should expand their support. In this process, city staff may act as champions in advocating and justifying the implementation of new programs to the council. Policies and goals should be realistic, with trackable performance indicators and developed based on factual records and careful analyses of conditions.

#### Optimization of government-owned real estate portfolio

To deliver the community-building goals enshrined in the above recommendation, municipalities may proactively construct new social housing or affordable rental housing through a thorough assessment of assets, followed by an optimization strategy. This action is usually a part of

municipal planning strategy (e.g. the Long Term St. Thomas-Elgin Affordable & Social Housing Strategy, HousingTO 2020-2030 Action Plan). Multiple city-building opportunities exist in this recommendation: to unlock the potential and leverage the value of city assets, to optimize the efficiency of public social housing delivery, to modernize the affordable housing stock, not to mention the connection to broader city goals such as community revitalization and growth direction.

Interestingly, in the context of brownfield sites, only a minority of municipalities in Ontario have an inventory of municipal-owned brownfields (De Sousa & Ridsdale, 2021). To make the best use of city-owned real estate and to facilitate the necessary environmental due diligence work for future redevelopment, the creation of a municipally-owned brownfield registry should also be included in such a strategy. To expand on this dimension, other levels of government also hold key underutilized land parcels in different urban settlements that could be brownfields, and similar work should be conducted to unlock the potential of these sites.

### *Recommendations to non-profit organizations*

#### Strengthen capacity through partnerships and network building

This study identified the importance of partnership and network of intermediaries as a strong enabling factor that can support the otherwise limited capacity of individual non-profit organizations. It is also integral to develop strong working relationships to back advocacy and development work. Overall, there seems to be a lack of concerted efforts in Canadian communities despite this research identifying stakeholders in the non-profit sector actively involved in brownfield redevelopment, or individual organizations willing to support such projects. Without a working network that can share resources or experiences in the non-profit

sector, these developers or housing providers have to start from scratch whenever engaging in a new project.

### *Limitations of this MRP and future research recommendations*

This exploratory MRP is limited in scope due to the limited interviews conducted and cases included. Time constraints and availability were significant limitations. The researcher could not interview some parties or additional useful contacts introduced through other respondents. Furthermore, some questions were not fully elaborated in time and follow-ups were unavailable.

Expanding on this project, future research would benefit from broader recruitment for a study, adding cases that failed to come to fruition as comparables, interviews with the general industry members, and quantitative surveys/questions that enable analyses of the weights of different barriers and facilitation factors.

Overall, socially-oriented brownfield residential reuse remains critically underresearched (De Sousa et al., 2023). There are several future research directions that might devise strategies and policies that will ensure equitable distribution of benefits from brownfield reuse. Some elements in this study can be expanded into a full research, for example: case studies of other projects in Canada, policy analysis of the performance of certain incentive programs, and survey research on the perception of the not-for-profit redevelopment support and gaps within the industry. It is also important to prevent negative environmental, economic, health and social consequences; understanding and recording the lived experiences of residents and the community impacted by such projects could be another research direction to inform and uphold environmental justice in future development.

### *Concluding Remarks*

An interesting note throughout this study is that many of the barriers and recommendations identified have been present for at least a decade, if not decades. This suggests little advancement in the industry (or improvements have pertained to for-profit development in highly competitive markets). These barriers are particularly hefty burdens on non-profit organizations, requiring additional help by partnering with other agencies to build capacity and facilitation from many of the tools identified. These ongoing recommendations in the grey literature should be recognized and implemented.

Recently, government policies have shifted their focus; affordable housing is now the focus, and interest in brownfield topics is declining. Planners should acknowledge the compatibility of the two, understand the untapped potential of brownfield sites in the inner cities of many former industrial communities in Southern Ontario, and make the smart move of connecting the two dots to meet various planning goals in a single action.

## Appendix - Semi-structured Interview Guide

### Introduction

1. Tell me about your organization's involvement in affordable housing development and brownfields.

### Benefits of brownfield reuse

2. Please tell me your experience with the project and/or the organization.
  - Can you highlight any successes or remarkable achievements?

### Barriers and Enablers

- Describe the challenges and the degree of hindrance.
  - How did you overcome the challenges? Describe any help and/or resources utilized.
  - Was it difficult to reach out for the extra help?
3. Environmental: Why did you select brownfield sites (which are typically more work)?
    - How was the contamination and remediation process?
    - How did you manage the liability and environmental risks?
  4. Financial: Tell me about the financial aspect of the project.
    - How did you make the project viable on the balance sheet?
    - What are the capital sources and financing tools that you find essential to the success of your project?
    - What was the impact on the outcome (e.g. housing mix, unit numbers, level of affordability)
  5. Partnership: How do you find the elements of partnership (e.g. public-private-nonprofit partnership (PPNP) model)?
    - Is it meant to overcome challenges/barriers that would otherwise be a roadblock without a partnership? What are the challenges and does the partnership help to bridge the gaps?
    - In your opinion, how effective is a partnership in incentivizing brownfield development & affordable housing?
  6. Other enablers and enablers that are not mentioned.
  7. Please explain and try to rank the importance of the enablers in your project.
  8. Community: Do you see any backlash, such as stigma or NIMBYism related to the nature of your projects?
    - If you have faced such obstacles, have you taken any measures to alleviate their impact? Were those measures successful?

### Conclusion and recommendations

- Do you have any words for others in the field who might be looking into similar opportunities?
- Do you have any contacts that I could contact to deepen my understanding of your work?
- Any additional information/comments that you want to tell the researcher?

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