Developing Up and not Out: Understanding the Barriers to and Opportunities for Reurbanization along Waterloo's Central Transit Corridor

by

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AUTHOR'S DECLARATION

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

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Abstract

This thesis assesses factors affecting Region of Waterloo's progress toward key reurbanization objectives mandated in the Growth Plan for the Greater Golden Horseshoe, 2006, and the Regional Official Plan, 2010. While concepts such as reurbanization and smart growth have been popularized as best practice planning, the implementation of smart growth ideals remains limited in many communities due to a myriad of barriers. To date, the Growth Plan, 2006, has been implemented unevenly across the Greater Golden Horseshoe (GGH) and planners are just beginning to understand the issues faced by local municipalities in their attempts to facilitate the Growth Plan's reurbanization objectives.

The Region of Waterloo has implemented many best practice growth management initiatives, and building permit data demonstrates a shift from ground-oriented, greenfield development patterns towards more compact, centralized development. As such, this study explores factors that have either facilitated or obstructed the intensification of under-utilized property in the Region of Waterloo through a qualitative case study that employs semi-structured interviews to capture the attitudes, opinions, and beliefs of planners, developers, and municipal politicians who have been actively engaged in the process of reurbanization.

Research findings challenged our understanding of the Kitchener CMA as a prototype for urban dispersal. Progress towards key reurbanization objectives were attributed to cooperation and collaboration between planning and development agencies, financial incentives, progressive policy and regulation, the influence of Light Rail Transit, and labour market restructuring. However, the investigation also revealed that many of the easiest sites have already been redeveloped and what is leftover now are the complicated, challenging sites that were previously avoided by private developers. The most commonly cited impediments to redeveloping remaining properties include brownfield remediation, land acquisition and assembly, accommodating the automobile, market dynamics and consumer preferences, development regulation, and building/maintaining community support. This study confirms that infill and intensification involve greater risk and uncertainty compared with traditional greenfield developments, but demonstrates that many of these challenges can be dealt with through integrated planning strategies. To address development barriers and reinforce existing strategies, this thesis recommends forming strategic public-private partnerships, providing financial incentives geared to the development process, facilitating reduced parking standards, prioritizing urban form over land use in zoning regulations, and managing incremental growth to facilitate lot consolidation.

Overall, this research demonstrates the opportunities for and constraints to reurbanization in a Canadian, mid-sized city context. More specifically, it advances our understanding about planners' and developers' experience implementing the reurbanization mandate in the Region of Waterloo.

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Chapter 1 - Introduction

1.1 Introduction

The intent of this thesis is to understand how the challenges to reurbanization have and continue to affect the feasibility of redeveloping under-utilized property in core areas along the Region of Waterloo's Central Transit Corridor. The rationale for addressing this point stems from findings in academic literature that suggest smart growth is a desirable, but poorly implemented planning ideal. As several studies have demonstrated (Allen & Campsie, 2013; Filion, 2007), just because Growth Plan (2006) policies are in place to support compact, transit-oriented growth patterns does not mean that growth is or will continue to happen as intended. Policy planners set the stage for how cities ought to evolve, but plans will not come to fruition unless they are implementable from the perspective of private sector stakeholders bringing development sites into the marketplace (Bourne, 1976; Hayek, Arku, & Gilliland, 2010). The Growth Plan (2006) delegates local municipalities significant responsibility over policy development and implementation, yet the Neptis Foundation (2013 n.p.) notes that "the Province has released little cumulative information on the progress of 21 single- and upper-tier municipalities and 89 lower-tier municipalities as they adopt and implement the Plan's requirements." Given the gaps in academic literature on Canadian, mid-sized cities combined with a theorized weakness in implementing smart growth, there is a significant need to understand the factors have both facilitated and obstructed local efforts to implement Growth Plan (2006) policies thus far.

1.2 Context

Centred around the City of Toronto, spanning from Peterborough to the Niagara Region, the *Greater Golden Horseshoe (GGH)* is Canada's largest urbanized area (roughly 32,000 square kilometers) and has been deemed Ontario's "economic engine" (Allen & Campsie, 2013, p. 4). The GGH is one of the fastest growing hubs in North America (Ministry of Infrastructure, 2006b) with a population forecasted to grow

to 13,476,000 by 2041, a 49% increase since 2011 (Hemson Consulting Ltd., 2013). However, research commissioned by the Neptis Foundation in 2003 found that if business-as-usual development patterns continue across the Greater Golden Horseshoe, over 1,000 sq km of primarily agricultural land will be consumed by 2031 – an area twice the size of Toronto (IBI Group & Dillon Consulting Ltd., 2003). This highly consumptive growth pattern is characteristic of what planners have termed *urban sprawl*.

The phenomenon of urban sprawl gripped North American city-regions in the decades following World War II as people and jobs migrated out from the city centre to suburban districts. Suburbanization was fueled by a rapid expansion of highway networks, changing technology, and automobile dominated travel patterns, among other factors (Gillham, 2002; Solomon, 2007; Soule, 2006c). Urban sprawl is commonly described as low-density, automobile dependent development that has drawn people and jobs away from the central city (Blais, 2010; Frumkin, 2004; Gillham, 2002; Soule, 2006a). Cervero (2001, p. 30) uses the seven S's to define sprawl: "spread-out, skipped-over, segregated, shapeless, scattershot, strip-commercialized, and subsidized land development." Unconstrained levels of urban sprawl have been linked with traffic congestion (Burchell, Downs, McCann, & Mukherji, 2005); degradations to the natural environment (Benfield, 1999; Gardner, 2006); inefficient spending on municipal infrastructure and services (Blais, 2010; Skaburskis & Tomalty, 2003; Smart Growth America, 2013); and unsafe, undesirable pedestrian environments (Duany, Plater-Zyberk, & Speck, 2010; Talen, 2009).

To avoid perpetuating patterns of urban sprawl, the Province of Ontario established five multidisciplinary smart growth panels to prepare a preliminary report on growth management strategies (Ministry of Infrastructure, 2013b), which was used to issue the Provincial Policy Statement (2005) and to enact the Greenbelt Plan (2005) and the Growth Plan for the Greater Golden Horseshoe (2006). The *Places to Grow Act* (2005) is the supporting legislation for the Growth Plan for the Greater Golden Horseshoe (2006), which was enacted to help the Province of Ontario control growth and development over 25 year time periods (Ministry of Infrastructure, 2013a). The Growth Plan (2006) aims to revitalize downtowns, direct new growth to designated Urban Growth Centres (UGC), to create complete

communities with a greater range of housing types and transportation choices, and to limit sprawl and protect farmland and green space (Ministry of Infrastructure, 2013a). The Province of Ontario's approach to growth management follows many of the principles of *smart growth* and *reurbanization*.

Smart growth and reurbanization may be considered the antithesis of urban sprawl. Smart growth strives to limit growth on environmentally sensitive land, increase residential and employment densities in core areas through compact mixed-use development, capitalize on existing infrastructure to accommodate new development, provide a greater range of housing and transit options, and revitalize downtowns as place for social and economic activity (Blais, 2010; Downs, 2005; Ye, Mandpe, & Meyer, 2005). Due to its near universal acceptance as a best-practice planning movement, smart growth and reurbanization have received considerable attention in academic literature. In support of policy interventions to curb urban sprawl, a large body of literature has attempted to quantify the costs of sprawl along with the associated benefits of the smart growth alternative (Blais, 2010; Burchell et al., 2005; Carruthers & Úlfarsson, 2008; Frumkin, 2004; GTA Task Force, 1996; Smart Growth America, 2013; Soule, 2006c; TCRP, 2002).

Although the balance of academic literature suggests that smart growth is a more socially conscious pattern of urbanization than sprawl, many studies suggest policy interventions face myriad barriers to implementation and often fail to alter existing patterns of urban dispersal (Blais, 2010; Filion, 2003; Talen & Knaap, 2003). As such, many studies have attempted to demystify the factors that either impede or facilitate smart growth and reurbanization (Brunt & Winfield, 2005; Bunting & Curic, 2006; Downs, 2005; Farris, 2001; Filion, Bunting, & Warriner, 1999; Filion & McSpurren, 2007; Hare, 2001; Searle & Filion, 2010; Suchman, 2002; Talen, 2013).

In the context of southern Ontario, planners are just beginning to understand how local municipalities have responded to the Growth Plan (2006) (i.e. are targets being met? what is or isn't working?). The Neptis Foundation has been a leading research institution on the study of smart growth and the Province's progress towards implementing Growth Plan (2006) objectives. Prominent research

commissioned by the Neptis Foundation includes Filion (2007), White (2007), Taylor and Nostrand (2008), Burchfield (2010), and Allen and Campsie (2013). Overall, in one of the most comprehensive studies on Growth Plan (2006) implementation to date, Allen and Campsie (2013) concluded that the Growth Plan is *not* being fully implemented and that at present, it's unclear whether the Growth Plan's policies have limited the amount of land to be urbanized over the next 30 years in the Greater Golden Horseshoe.

The Region of Waterloo is the fourth largest CMA in Ontario (Statistics Canada, 2012c) and is expected to capture 7% of the total population growth across the GGH between 2001 and 2041 – the largest share amongst Outer Ring municipalities (Allen & Campsie, 2013). Like many mid-sized cities in Canada, the Region of Waterloo experienced tremendous growth during the Postwar era and evolved to accommodate automobile dominated travel patterns and rural-like housing preferences, which has been characterized as a dispersed urban form (Bunting & Filion, 1999). Reurbanization has been on the planning agenda since the 1960s (Bunting & Filion, 1993) and the Region of Waterloo has been recognized for its progressive growth management policies (Hare, 2001). However, Bunting et al. (2007, p. 1340) suggested that "there is presently little prospect for a reversal of dispersion in metropolitan regions such as Kitchener CMA where this form of urbanization is particularly advanced."

Despite the mounting difficulties of reversing entrenched patterns of urban dispersal, the Region of Waterloo solidified its intentions to reurbanize through the Regional Growth Management Strategy (2003), which included plans to implement higher-order transit along the Central Transit Corridor (CTC) and to facilitate growth and development within core areas through more intensive development forms. As of April 2014, the Region confirmed plans to construct Rapid Transit infrastructure along the CTC from Conestoga Mall in Waterloo to the Ainslie Street Terminal in Cambridge (Desmond, 2014). Additionally, the Region has set reurbanization objectives that surpass many of the Growth Plan's (2006) minimum reurbanization targets (Allen & Campsie, 2013). This level of transit-oriented intensification is unprecedented in the Region and sharply contrasts findings from previous studies that propose little

prospect of reversing its deeply rooted patterns of urban dispersal (Bunting et al., 2007). The Region of Waterloo was selected as a case study location as its progressive reurbanization mandate along with its $818 million investment (Desmond, 2014) in Rapid Transit infrastructure creates a significant impetus to study the logistics of redeveloping under-utilized property in core areas along the Central Transit Corridor.

1.3 Study Purpose and Research Objectives

While there is no shortage of research on smart growth and reurbanization, there are several deficiencies in the literature that merit investigation. First, the topic is frequently covered in an American context (Such as Farris, 2001; Smart Growth America, 2013; Suchman, 2002; Talen, 2013), which fails to account for different patterns of urbanization (Bunting et al., 2002; Mercer, 2006) and governance structures (Cobban, 2003; Hare, 2001; Sancton, 2011; Tindal & Tindal, 2009) that have shaped planning decisions/outcomes in Canada. Additionally, planning literature is generally deficient in its coverage of mid-sized cities, as the majority of urban-oriented research tends to focuses on larger CMAs (Bunting et al., 2007; Hare, 2001; Robertson, 1999). This lack of research on mid-sized cities is particularly problematic as Bunting et al. (2007, p. 28) suggest that "initiatives such as 'smart growth' will probably confront circumstances that are different in mid-sized communities from those in large metropolitan areas." Further, the body of research on Canadian mid-sized cities (Brunt & Winfield, 2005; Bunting & Filion, 1993, 2000; Bunting et al., 2007; Filion et al., 1999; Filion, Hoernig, Bunting, & Sands, 2004; Hare, 2001) is dated and does not account for significant provincial planning policies such as the Growth Plan (2006). Lastly, efforts to monitor the local implementation of Growth Plan (2006) objectives (Allen & Campsie, 2013; Burchfield, 2010) have provided inventories of data that depict *what* has happened, but offer little insight into the experience of local municipalities and fail to explain *why* certain outcomes have transpired.

The purpose of this study is to develop an in-depth understanding of the barriers to and opportunities for implementing reurbanization objectives in the Region of Waterloo from a development planning perspective. Since smart growth and reurbanization are vast concepts, this study focuses on local "on the ground" issues that affect real estate developers' ability to build the vision that planners have put into policy. The **first objective** of this study is to assess the Region's progress towards key reurbanization targets mandated in the Growth Plan (2006) and the Regional Official Plan (2010). The **second objective** is to explore development opportunities in core areas along the Region's Central Transit Corridor and to highlight under-utilized properties with an active potential for reurbanization. The **third objective** is to understand factors that have either facilitated or obstructed the intensification of under-utilized property along the Region of Waterloo's Central Transit Corridor and to compare these findings with evidence from prior research. The **fourth objective** is to propose practical recommendations that assist planning practice in creating a better development climate for reurbanization in the Region of Waterloo.

These objectives were addressed through a qualitative case study on the Region of Waterloo that employed semi-structured interviews to capture the attitudes, opinions, and beliefs of planners, developers, and municipal politicians who have been actively engaged in the process of reurbanization. Case study findings were further supported through additional data sources such as a review of academic literature and planning documents, visual observations, and an online survey of other mid-sized cities in the GGH.

This study will contribute to the body of academic literature on smart growth and reurbanization from the under-studied perspective of Canadian mid-sized cities. This research captures in-depth perspectives of both planners and developers actively engaged in reurbanization to provide a greater understanding of how existing conditions and the nuances of under-utilized property shape land development decisions. Case study findings highlight the most pervasive barriers to implementing the Region's reurbanization mandate and offer practical suggestions for improving the development conditions along the Central Transit Corridor. These findings are significant to planning practice both in

the Region of Waterloo and provincially as finding ways to redevelop, reuse, and intensify, under-utilized property within the existing urban fabric is fundamental to sustaining long-term rates of reurbanization.

1.4 Thesis Organization

Chapter 2 provides a review of relevant literature on reurbanization including key definitions, benefits, drawbacks, facilitation strategies, barriers to implementation the key determinants of plan implementation. **Chapter 3** provides background information on the Region of Waterloo, including population and locational characteristics along with a review of the current planning framework and initiatives to support reurbanization. **Chapter 4** introduces the key research questions, research design, study methodology, and data collection/analysis procedures used to address research objectives. **Chapter 5** offers an analysis of case study findings from key informant interviews supplemented by evidence from relevant literature and visual observations along with web survey results from other mid-sized cities. **Chapter 6** elaborates further on findings from key informant interviews and compares results across various data sources. Lastly, **Chapter 7** draws final conclusions and provides recommendations to improve the development climate along the Central Transit Corridor.

Chapter 2 – Literature Review

2.1 Introduction

The purpose of the following literature review is to establish a foundation of evidence to support my research questions, which seek to understand factors that impede and facilitate reurbanization and how this interplay affects development patterns. This chapter begins with definitions of key terms such as reurbanization and smart growth and discusses both the merits and drawbacks of these prominent concepts. The following sections discuss methods of facilitating reurbanization as well as the barriers that most commonly impede such initiatives. This chapter concludes by reviewing more generic factors that are considered drivers of plan implementation along with an overview on the Growth Plan (2006) implementation to date.

2.2 Reurbanization and Smart Growth

The phenomenon of urban sprawl is widely documented across planning literature as an unsustainable growth pattern that ought to be curbed in favour of more compact forms of development (Benfield, 1999; Burchell et al., 2005; Frumkin, 2004; Solomon, 2007; Soule, 2006c). The concept of "reurbanization " and "smart growth" have emerged as the antidote to urban sprawl; however, these terms often lack a clear definition consistent among peers and academics. Glaster et al. (2001, P. 682) describes literature on sprawl and smart growth as being "lost in a semantic wilderness." Therefore, this section provides a definition of these key terms to ensure clarity of meaning.

Haase, Bischoff, and Kabisch (2008, p. 1076) characterize reurbanization as "the stabilization of inner-city areas by means of stopping out-migration and encouraging present residents to stay as well as the influx of new residential groups." Bourne (1996, p. 398) suggests that reurbanization has six key dimensions:

1. "**Repopulation**—a reversal of past declines, or at least a stabilization of populations resident in older urban and suburban areas.

2. **Intensification**—creating a different land-use mix, new dwelling units, capital investment flows, and increased building occupancy ratios.
3. **Replacement**—-the physical replacement of older buildings and vacant or underused land by either private and public means.
4. **Conversion and adaptive reuse**—the transfer of nonresidential structures to residential use, and vice versa, and the retrofitting of older underused buildings to accommodate a wider range of activities and residents.
5. **Economic renewal and restructuring**—that is, adapting the local economy, local institutions, and the labor force to a new competitive economic environment, without which there would be little demand for redeveloped and recycled sites.
6. **RevitaUzation**—in terms of increasing public and private investment in the quality of the existing built environment, public infrastructure, amenities, cultural facilities, and local social services."

More simply put, the Region of Waterloo (2010d) describes the concept of reurbanization as "growth and development that helps increase the number of people living and working within urban areas,"

Spatial characteristics of reurbanization include high population and employment densities, centrally concentrated densities, and high continuity of development patterns (Galster, 2001; Ingram, Carbonell, Hong, & Flint, 2009; Soule, 2006a, 2006b). Several fiscal/economic indicators have also been used to characterize reurbanization. McMillen (1991) and Ingram et al. (2009) suggest that reurbanization can be characterized by centrally concentrated levels of employment growth, personal income growth, retail sales growth, tax base growth, and housing value growth.

Early uses of the term reurbanization are often attributed to research in Europe by Klaassen (1987), Lever (1993) and Cheshire (1995). However, the use of the term reurbanization in North American literature is rather limited (Bourne, 1996) and research on the topic must therefore be expanded to include the literature on "smart growth," which draws many similarities and has dominated popular planning discourse in North America.

Smart growth is a rather elusive term with diverse proponents and a plurality of principles; as such, several studies have attempted to summarize the core aspects (For example, see Downs, 2001, 2005; Environmental Protection Agency, 2012; Ingram et al., 2009; Ye et al., 2005). Downs (2005, p. 368) concluded that the most common principles of smart growth include:

1. "Limiting outward extension of new development in order to make settlements more compact and preserve open spaces
2. Raising residential densities in both new-growth areas and existing neighborhoods
3. Providing for more mixed land uses and pedestrian friendly layouts to minimize the use of cars on short trips
4. Loading the public costs of new development onto its consumers via impact fees rather than having those costs paid by the community in general
5. Emphasizing public transit to reduce the use of private vehicles
6. Revitalizing older existing neighborhoods"

The smart growth movement gained momentum in the late 80s/early 90s due to growing concerns over the negative externalities of extensive post-war urban sprawl (Benfield, 1999; Blais, 2010; Filion, 2003; Fodor, 1999; Frumkin, 2004).

2.2.1 Use of Terms

Similarities between *smart growth* and *reurbanization* objectives include limiting outward growth beyond urban boundaries, increasing residential and employment densities in core areas through compact mixed-use developments, capitalizing on existing infrastructure to accommodate new development, providing a greater range of housing and transit options, and revitalizing downtowns as place for social and economic activity. The notable distinction between the two terms is that reurbanization is often used descriptively (are cities actually experiencing a return to the core) whereas smart growth has more normative connotations (this is why cities should reurbanize and here is how it should happen).

This study maintains the use of the term reurbanization as it is the language used in the Region of Waterloo's planning documents. However, the term smart growth will also be used variably in reference to academic literature. Further, the terms *intensification, infill, redevelopment, and adaptive reuse* refer to development within existing built boundaries through which reurbanization is implemented while the term *greenfield development* refers to development on undeveloped land beyond built boundaries. Lastly, the term *under-utilized property* generally refers to low-density developments with higher zoning permissions that have a reasonable expectation to transition in the short, medium or long-term; this particular definition is espoused by the City of Waterloo (2014).

2.3 Forces of Change

In order to understand the process of reurbanization, it is important to recognize the macro-level demographic, labour market, and socio-economic forces of change that shape spatial patterns of growth and development. This section highlights the evolving urban landscape from a Canadian perspective and discusses the implications for reurbanization.

The widespread labour market shift from a resource or manufacturing-based economy towards a post-industrial, knowledge-based economy has had a tremendous impact on the locational dynamics of employment and housing (Hutton, 2010; Vinodrai, 2010). Daniel Bell is credited with popularizing some of the earliest theories about the post-industrial society. Bell (1976) argued that service-oriented, information-driven industries would replace industrialism as the dominant system. Further, Bell identified three components of the post-industrial society: "in the economic sector, it is a shift from manufacturing to services; in technology, it is the centrality of the new science-based industries; in sociological terms, it is the rise of the new technical elites and the advent of a new principle of stratification" (p. 487). Florida's (2002) 'creative class' taxonomy is frequently used to describe workers in the new, post-industrial, knowledge-based economy. Ley (1994) suggests that economic growth and activity is driven by the highly educated, largely professional individuals with occupations in the quaternary sector.

The process of deindustrialization has been witnessed in most developed nations, marked by a dramatic decline in manufacturing jobs[1] (Knox & McCarthy, 2005). Several trends exemplify this shift in the Canadian context. Between 1976 and 2008, employment in the services-producing sector grew by 105.5% or 2.5% annually while employment in the goods-producing sector only grew by 19.3% or 0.6% annually (Vinodrai, 2010). Between 1971 and 2006, the number of professional occupations grew by 294.6% while the number of construction, trades, and transport-equipment operating occupations only

[1] The author specified that deindustrialization resulted in a decline in manufacturing jobs, but not manufacturing production

grew by 19% (Vinodrai, 2010). Between 1976 and 2007, the percentage of the labour force with a Bachelor's degree or higher grew from about 7.5% to roughly 19.5% (Vinodrai, 2010).

While technological advances in telecommunication have resulted in both the concentration and dispersion of business activities to some extent (Hutton, 2010), it is believed that economic activity in the knowledge-based economy remains spatially concentrated, or "clustered" in many cities as firms are able to benefit from local information networks and minimize transaction costs(Ley, 1986; Vinodrai, 2010). Florida (2004) posits that creative workers prefer to live and work in vibrant, mixed-use, urban areas as the concentration of people, jobs, and amenities in the central city act as a catalyst for information sharing, which is an integral component of the knowledge-based economy. Alternatively, with the influx and intensification of service-producing industries in the core, manufacturing industries and distribution centers have retreated to suburban locales leaving behind tracks of vacant land and warehouses that have been repurposed for office and residential uses (Hutton, 2010). Overall, the growth of the knowledge-based economy and its affinity for centrally located urban environments is a driving force behind reurbanization and plays an important role in our understanding of modern society.

The demographic shift towards decreasing household size is another Canadian-wide phenomenon that has massive implications for both spatial and built form characteristics of the housing market. Demand for inner city housing is largely driven by small, childless households and single individuals who value the convenience, connectivity, and cultural amenities of the central city (Kaplan, Wheeler, & Holloway, 2009; Skaburskis & Moos, 2010). This target market represents a growing segment of the Canadian population as smaller household sizes and single living is on the rise. For instance the average number of persons per private household in Canada decreased from 3.9 in 1961 to 2.5 in 2006 (Statistics Canada, 2013e). Additionally, between 1981 and 2006, single-person households in Canada grew by

98%[2] and by 2006, smaller households (one and two persons) represented 60% of the Canadian population (Townshend & Walker, 2010).

Shrinking household sizes are considered to be the product of various underlying socio-demographic trends such as lower fertility rates, delayed marriages and divorce, and an aging population. Lower fertility rates have decreased the number of large family households as more couples are refraining from having children (Gober, 1981; Rose & Villeneuve, 2006). The total fertility rate (number of children per woman) fell from 3.4 in 1926 to 1.5 in 2006 (Statistics Canada, 2007). Delayed marriage and instability in conjugal unions have increased the number of people that are making a later transition into parenthood, which often goes hand in hand with decreased fertility rates (Townshend & Walker, 2010). Increased divorce rates, currently at 40.7% in Canada and 42.1% in Ontario (Statistics Canada, 2011) along with liberal divorce laws have resulted in more one parent families and adults living alone (Rose & Villeneuve, 2006). Compared with lone parents and common law couples, the proportion of married couples in Canada decreased from 91.6% in 1961 to 67% in 2011 (The Canadian Press, 2012). An aging population is another important contributor to the rise in single-person occupied dwellings as reduced mortality rates increase the chances of living beyond parenthood to the "empty nest" and widowhood (especially for females due to longer life expectancy) (Rose & Villeneuve, 2006). Lastly, changing cultural values have reduced the stigma associated with living alone, especially for females. As more females enter the professional workforce, it has become more socially acceptable to prioritize career interests above marriage, and single living is no longer associated with financial instability (Hampson, 2012).

Skaburskis and Mok (2006) suggest that decreasing household sizes have two major implications for land markets and housing location. First, they posit that smaller families will demand smaller dwelling units, which are typically in greater supply towards the Central Business District (CBD). Second, they

[2] The authors contrast the growth of single-person households (98%) to 74% growth in two person households, "marginal" growth in three and four person households, and a decline in five or more person households (p. 139).

explain that smaller dwelling units require less land per unit of housing, thus making the city more compact. The recent condominium boom in Canada's largest metropolitan areas provides some evidence for this hypothesis. For example, In Toronto's Liberty Village, a 45-acre brownfield site west of Downtown (Catungal, Leslie, & Hii, 2009), single living has intersected with transformations in the knowledge-based economy to create a "microcosm of the greater demographic shifts in Canada (Bielski, 2012 n.p.)". In Liberty Village, 55% of the population (2,200 people) live alone and of the 1,600 units that are under construction or recently developed, 70% will cater to singletons (Bielski, 2012).

Overall, the spatial structure of a city is shaped by many macro-level demographic and socio-economic forces of change that influence where people choose to live and work. This section highlighted prominent demographic shifts, such as decreasing household size, along with labour market shifts, such as the rise of a knowledge-based economy, that are considered to be catalysts for reurbanization. This section also identified segments of the population who typically create demand for new urban developments, which include couples without children or single-person households who are highly educated, employed in the quaternary sector, and financially affluent. Although the majority of cities in North America have accommodated growth and development through suburbanization and urban dispersal since World War II, emerging socio-demographic and labour market shifts indicate that a more centrally concentrated pattern of urbanization may be on the horizon. The following section discusses the associated benefits of reurbanization.

2.4 Benefits of Reurbanization

The literature on smart growth and reurbanization suggests that urban sprawl has led to an unsustainable consumption of land along with automobile dependent lifestyles that pose a significant threat to the environment, the economy, and to human health (For a full discussion on the costs of sprawl, see Burchell et al., 2005; Frumkin, 2004; Soule, 2006c; TCRP, 2002). The following discussion expands on how reurbanization can mitigate many of these costs.

Urban sprawl is heavily criticized for uneconomically expanding municipal infrastructure and service networks that are less efficient compared with compact development forms (Bourne, 1996; Burchell et al., 1998, 2005; Kotval & Mullin, 2006; Talen, 2013). In this regard, reurbanization is said to improve public finance by capturing economies of scale for infrastructure, such as roads and sewers, and for public services, such as snow and garbage removal, police, and other emergency services (Smart Growth America, 2013). The underlying assumption behind these assertions is that the cost of infrastructure and public services is positively correlated with spatially expansive low-density development and negatively correlated with more compact, cohesive development patterns (Blais, 2010; Carruthers & Úlfarsson, 2008; Skaburskis & Tomalty, 2003).

Several studies have tested the relationship between government spending and urban form to address conflicting opinions in academic literature. Two different American studies by Carruthers and Ulfarsson (2008) and Smart Growth America (2013) employed a national, empirical, analysis of the fiscal implications of high-density versus low-density development. Smart Growth America (2013, pp. 5–8) concluded that smart growth development

- "costs 38% less than conventional suburban development for upfront infrastructure;"
- "saves municipalities an average of 10% on ongoing public services such as police, ambulance and fire service costs"
- "generates ten times more tax revenue on a per-acre basis than conventional suburban development"

Similarly, Carruthers and Úlfarsson (2008, p. 1816) found that there was a strong positive relationship between municipal expenditures on key public services and infrastructure development and low-density urban forms, concluding that "sprawl, as a cost factor, nearly always increases per-capital spending" and that "the reasoning behind fiscally motivated, anti-sprawl smart growth policy frameworks is sound." Overall, the balance of academic literature suggests that municipalities can reduce costs and raise revenues through smart growth.

Evidence in academic literature attributes excess levels of traffic congestion to automobile dependent lifestyles and market failures that underprice the cost of congestion to individual drivers (Anas

& Pines, 2008; Behan, Maoh, & Kanaroglou, 2008). Failure to charge the true price of automobile dependence is often seen as both a cause and a result of urban sprawl (Blais, 2010; Downs, 1999; Solomon, 2007). Gillham (2002, p. 111) writes, "The increasing traffic congestion the nation is experiencing is a direct result of an unbalanced transportation system that is heavily skewed towards automobiles and trucks." Smart Growth America (2014) estimates that 69% of increased traffic is attributable to urban sprawl and that traffic congestion in most cities would be 15% worse without accessible public transit.

Research consistently demonstrates a strong negative correlation between density and both automobile travel distances and fossil fuel consumption. For instance, Newman and Kenworthy (1989) reported that a strong negative correlation between density and annual gasoline use per capita. Further, Kenworthy (2007) found that urban density was responsible for 83% of the variance in per-capita car use in 58 major global cities and that high urban densities were negatively correlated with automobile usage per capita. Newman and Kenworthy (1989), Gillham (2002), and Kenworthy (2007) conclude that automobile dependency and traffic congestion are best mitigated through higher urban densities and public transit service, which are core elements of reurbanization.

Environmentally, growth through reurbanization requires less land per dwelling unit than growth through sprawl, which decreases consumption of sensitive green space and agricultural land. Encouraging growth on existing land decreases the demand for rural land conversions and improves the utilization of existing infrastructure (Bourne, 1996). The conservation of open space amenities through reurbanization is essential for maintaining natural ecosystems, biodiversity, farm land, and sufficient municipal water supplies (Benfield, 1999; Cieslewicz, 2002; Gardner, 2006; Gillham, 2002). As mentioned earlier, development through reurbanization reduces automobile usage, which is associated with environmental and ecological benefits such as decreased air and water pollution. Reurbanization can improve air and water quality through a reduced need for extensive expansions of impervious roadway surfaces that contribute to high levels of runoff water and nonpoint source pollution (Frumkin & Gaffield, 2004) and

through reductions in greenhouse gas emissions per capita related to decreased automobile travel (Gardner, 2006; Gillham, 2002; Newman, 2007; Newman & Kenworthy, 1989).

Further, reductions in automobile dependency associated with reurbanization have been related to numerous improvements to human health such as safer pedestrian environments and healthier active lifestyles (Frumkin & Gaffield, 2004; Gardner, 2006) along with greater social equity (Moynihan, 2006; Rusk, 2006). Gardner (2006, p. 253) summarizes a study on Seattle by Montgomery (2001) that found

> "People living in communities built before 1947, which tend to be high-density mixed-use neighborhoods with gridlike streets, traveled by bike or by foot more than three times every two days, whereas people living in areas built after 1977 walked or bicycled barely once every two days."

Compact, walkable communities reduce the distance between essential destinations and eliminate safety barriers such as busy intersections and poorly designed pedestrian environments, which enables personal mobility for elderly residents, young children, and others who are unable to drive due to age and/or financial restrictions (Duany et al., 2010; Gardner, 2006; Madden & Spikowski, 2006; Talen, 2009).

2.5 Drawbacks of reurbanization

Although the balance of contemporary planning literature affirms that smart growth and reurbanization are more environmentally conscious growth models than urban sprawl, reurbanization still has several caveats that merit discussion. The following section highlights prominent critiques of reurbanization in academic literature.

One of the primary criticisms of reurbanization and smart growth is that it increases housing prices and displaces low-income residents. There is varying evidence in academic literature that that growth management efforts may be overly restrictive on greenfield land, which limits housing supply and consequently inflates housing prices (Nelson, Pendall, Dawkins, & Knaap, 2002). For instance, speaking about the Ontario's Growth Plan for the Greater Golden Horseshoe (2006), Gregoris and Sjogren (2012, p. 3) state

> "Some of the unintended consequences [of the Growth Plan] include increased land costs, and shortage of building lots and blocks which has led to rising home prices, putting home ownership beyond the means of many young Ontarians."

Reurbanization policies that restrict leapfrog development (development that skips over vacant land) tend to restrict housing on the cheapest, and thus most affordable, pieces of land (Burchell et al., 2005; Downs, 2005; Holcombe, 2001; Slack, 2002). Holcombe (2001) argues that planners are often overly critical of leapfrog development and fail to consider the future infill opportunities that are created as land in between eventually gets developed.

Housing price inflation is frequently cited as drawback of reurbanization (Anthony, 2003; Gilroy & Staley, 2007); however, empirical analyses of housing affordability as a function of urban form and growth management efforts yields mixed results. Downs (2004) provides a helpful summary of the wide-ranging literature on this topic. He notes that reurbanized, and thus centralized growth patterns do tend to increase the cost of urban land, but that increasing land costs don't necessarily translate to increased housing prices. Further, Downs (2004) suggests that reurbanization policies will likely increase the cost of low-density housing while increasing the availability of high-density housing.

Downs' (2004) hypothesis on growth management and affordable housing is supported by several other studies, which demonstrate that growth management practices don't necessarily increase median housing prices, but do change what types of units become more or less affordable or available. Both Aurand (2010) and Nelson et al. (2002) suggest that land supply restrictions do tend to increase land prices, but that achieving greater densities can mitigate the impact of rising land prices. Additionally, studying Seattle and Portland, OR, Aurand (2010) found that housing affordability was more statistically correlated with housing variety than with growth management practices, suggesting that housing inflation is more common in areas with a lack of housing variety than in places with growth boundaries. Wassmer and Baas (2006) also support the notion that growth management changes the availability of housing types but does not necessarily increase housing costs. Following a regression analysis of 452 census-

designated urbanized areas in the U.S., Wassmer and Baas (2006) found that centralized urban areas actually had lower median housing costs and a smaller percentage of homes priced above $3000,000, which was attributed to the prevalence of smaller houses on smaller lots in centralized areas. Overall, the literature on growth management and housing affordability suggests that maintaining affordable housing under a constrained land supply requires the development of higher-density dwelling units and the willingness of residents to substitute larger homes on larger lots for more compact dwellings. Therefore, the relationship between reurbanization and housing affordability demonstrated in the literature appears to be highly dependent on the elasticity of local housing preferences.

One must look past aggregate housing figures to fully understand the consequences of smart growth's return to the core ideology. Bunting et al. (2004) suggest that there is an uneven geography of housing affordability in many Canadian CMAs, and that planners must also consider spatial patterns of affordability. Policies that promote infill housing and downtown revitalization often displace existing low-income residents due to the process of gentrification, whereby influxes of wealthier households increase the value of inner city land along with the shops and services that accompany their wealth (Lehrer & Wieditz, 2009; Skaburskis & Moos, 2010; Wyly & Hammel, 1999). Skaburskis and Moos (2010, p. 236) suggest that "the return of higher-income households to the inner city is perhaps the most important change in the structure of cities in the last half-century." For example, increasing income polarization among Toronto's neighbourhoods has created three prominent class-based subgroups within the GTA, which has important implications for perceptions of equality (Hulchanski, 2010). The gentrification of downtown Toronto has created "de facto landscapes of exclusion where public spaces (waterfronts for example) are privatized and where shops and services integrated into the developments cater only to the rich" (Rose & Villeneuve, 2006, p. 23). Patterns of urban gentrification are well documented in many other Canadian CMAs as well (Meligrana & Skaburskis, 2005). Minority and poor communities are frequently disadvantaged by the distributional effects reurbanization strategies and have traditionally been excluded from the planning process in America (Kushner, 2003).

The displacement of employment lands is also a concern. Smart growth and reurbanization policies support the redevelopment of under-utilized industrial and manufacturing property to facilitate high density residential and office/retail uses in core areas (Chakrapani & Hernandez, 2011). While redeveloping these old industrial sites often leads to environmental cleanups and greater concentrations of urban populations, planners are starting to worry about the consequences of removing large tracts of employment land. Howland (2010) notes that many metropolitan areas are struggling to balance the competing interests for older industrial land as growth in the office and retail sectors along with demand for urban condominiums have outpaced growth in the industrial sector in North America.

Hills and Schleicher (2010) explain that concentrations of residential populations in older warehouse and industrial districts places large burdens on existing urban industrial plants due to the growing number of nuisance complaints related to noxious noises and smells. There appears to be a growing number of industrial plants that have been displaced by nuisance claims due to the costs of retrofitting old equipment and processes to meet modern standards – for example, see Alamenciak (2012). Leigh and Hoelzel (2012) refer to this situation as smart growth's "blind side" and claim that the smart growth movement has failed to introduce policies for revitalizing urban industrial land. Leigh and Hoelzel (2012, p. 87) recognize that some older industrial sites are no longer functional and should be converted to more productive uses, but hold that excessive employment land conversions "can weaken the urban economic base, reduce the supply of good-job producing land, and contribute to industrial-sector suburban sprawl."

In terms of consumer preferences, smart growth policies that support reurbanization place restrictions on certain lifestyles and activities that have increased the quality of life for segments of the population. For instance, Holcombe and Staley (2001b, p. 6) claim that lower density lifestyles and access to the automobile are attributes that increase one's quality of life and that smart growth policies create "a lower standard of living for people who are forced out of their cars and pushed into more crowded living conditions." Suburban development on the fringe offers larger portions of land with greater access to open

space amenities at rates far more affordable than similar housing arrangements in the inner city (Burchell et al., 2005; Holcombe & Staley, 2001c). Other perceived benefits commonly attributed to suburban lifestyles include neighbourhoods with lower crime rates and better-quality public schools (Burchell et al., 2005). While smart growth and reurbanization may work against the perceived benefits of suburban lifestyles, many of the benefits to individual home owners are routed in very exclusionary behavior, impose significant social costs on the rest of society, and are premised on a false economy (Blais, 2010; Burchell et al., 2005) and therefore should not necessarily be protected by public policy.

2.6 Barriers to Implementing Reurbanization

Despite strong support from academics and professionals, efforts to promote smart growth and reurbanization face many challenges. Filion (2003, p. 49) writes "given the succession over the last thirty years of planning models promoting alternative forms of development, and their weak effect on predominant urbanization tendencies, it is difficult not to be more than a little cynical about the smart growth concept." The following discussion explores prominent barriers to implementing smart growth and reurbanization objectives.

2.6.1 Politics

The degree to which smart growth initiatives have been tied to party politics in Ontario has hindered the long term commitment to planning initiatives (Searle & Filion, 2010). Filion and Kramer (2011) cite the proliferation of neoliberal ideologies in provincial and local governments as a major barrier to the implementation of smart growth initiatives. For example, between the mid-90s and early 2000s, a worsening fiscal climate combined with the election of Mike Harris's Conservative administration led to a priority shift in provincial politics away from metropolitan scale planning, which inhibited the province's capacity to implement smart growth initiatives (Filion, 2003).

In addition to difficulty among party politics, the structure of local government and city council, which is party neutral, is susceptible to backlash from stakeholders who represent large voting blocs. Coban's (2003, p. 241) study of London ON demonstrated that City Council had "significant difficulty balancing the objective of downtown redevelopment with the pressure for suburban growth and development, all within the overarching political constraint of maintaining stable levels of property taxation." Searle and Filion (2010) chronicle Toronto, Ontario's, and Sydney, Australia's attempt to adopted intensification policies that permitted the development of mid-rise buildings and accessory apartments on suburban lots. The negative reaction stemming from the suburban communities was so great that in the Sydney case, a number of anti-development candidates won council positions in the local government election of 1999, and in the Toronto case, the policy was completely revoked by the ensuing Conservative 1995 administration (Searle & Filion, 2010). One does not have to look much further than the election of Toronto Mayor Rob Ford to witness the power of suburban voting blocs. Representing a largely suburban voting bloc, Rob Ford vowed to end the "war on cars" (Kalinowski & Rider, 2010) and promptly cancelled the City's Transit City plan on his first day in office (CBC News, 2010), which further demonstrates the capacity of local politics to limit core area investments. Overall, Filion (2003), Downs (2005), and Forester (2008) recommend that in order to avoid political barriers to implementation, policies must avoid direct confrontation with large numbers of politically powerful opponents and avoid making financially unrealistic demands.

2.6.2 Community Opposition

Dear (1992, p. 288) defines NIMBY (not-in-my-backyard) as "the protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighborhood." Residents generally understand that noxious or unwanted land-uses must be placed somewhere in the city, but do not want them near their homes (Dear, 1992). Farris (2001), Downs (1996) and McConnell and Wiley (2010) explain that it is quite normal for long-standing residents to be

suspicious of change in their neighbourhood, "especially if that change involves the introduction of new uses, new neighbours, and higher densities (Bourne, 1996, p. 706).

Downs (2005, p. 369) cautions that smart growth policies create winners and losers among key urban stakeholders, which often fosters systematic opposition as "a loss of a potential future benefit tends to be felt more intensely than the gain of such an uncertain benefit." Smart growth and reurbanization can be unappealing to local residents and politicians as the negative externalities of growth are borne locally by individual neighbourhoods while the perceived benefits of smart growth are enjoyed at a regional scale (Cinyabuguma & McConnell, 2013; Holcombe, 2001; Holcombe & Staley, 2001a). Downs (2005) argues that most residents understand the merits of reducing sprawl, but holds that concerns over real or perceived adverse impacts arising from intensification often prevail.

Adverse impacts at the neighbourhood scale include increased traffic and noise, decreased service levels due to overcrowding, loss of open space, and disruptions during construction (Bunting & Curic, 2006; A. W. Evans, 2004; Green & Malpezzi, 2003; Suchman, 2002; Vallance, Perkins, & Moore, 2005). For instance, Bunting and Curic (2006) found neighbourhood residents to be very protective of existing open space, in this case a hydro corridor, and quite hostile to any form of proposed infill development in its place. Both McConnell and Wiley (2010) and Mildner (2001) found that existing residents viewed infill development detrimental to the neighbourhood because smaller apartment units generate less tax revenue but receive the same services, forcing the higher value homes to pay disproportionately more for a degraded level of municipal service.

On a more individual, site-by-site basis, common concerns in the literature regarding infill and intensification included loss of privacy and home value depreciation. For example, Vallance et al. (2005) surveyed residents in a New Zealand town where infill had been actively promoted and discovered a variety of concerns; of these concerns, loss of privacy was one of the most striking. Vallance et al. (2005) highlights one participant's resentment of the new infill development.

> "We used to have perfect privacy. Now we've got apartments which have full-length windows and bedrooms that look down over our garden and into our house . . . I hugely resent the loss of privacy. I hugely resent it!"

Vallance et al. (2005) and McConnell and Wiley (2010) note that other major NIMBY concerns often relate to the character, attitudes, and ethnicity of incoming residents. Participants in Vallance et al. (2005) described the newcomers as busy people with peculiar lifestyles who wouldn't give you the time of day.

Regarding home value depreciation, Downs (2005) suggest that concerns over adjacent infill development is driven mostly by perception, but that perception is often enough to motivate home owners to protect their investment and oppose new development. McConnell and Wiley (2010) summarized the findings from nine studies on a variety of American municipalities that examined the effects of infill development on local property values and found that in most cases infill developments did not adversely affect property values. They also noted that the evidence is difficult to generalize.

Local political culture and dynamics can create a NIMBY reaction to infill development and intensification generally. Many cities have large suburban voting blocs with strong desires to maintain property values and the sanctity of their neighbourhoods (Downs, 2005), which often pressures city council to oppose controversial infill projects. For instance, Farris (2001, p. 23) cites an instance in Portland, OR where the Planning Commission "suspended plans to add 7,500 apartments, row houses, and homes in Southwest Portland after residents protested and requested less aggressive housing densities."

2.6.3 Development Regulation

The literature on infill and intensification frequently claims that inner city developments are subject to a greater number of regulating agencies and more rigorous design standards than greenfield projects on undeveloped land. For a typical small-scale infill development, a developer may need to obtain separate approvals for demolition, environmental cleanup, heritage preservation, construction scheduling, and site plan/urban design (Bourne, 1996; Downs, 2005; Farris, 2001; Suchman, 2002). Additionally, it may be

unrealistic for adaptive reuse projects to conform to building and fire codes that were designed to regulate new construction (Suchman, 2002). Suchman (2002, p. 198) states "myriad requirements can take a significant amount of time, impose additional costs, and constrain innovation – and the outcome is not always predictable." Bourne (1996, p. 5) echoes Suchman's point, stating that large webs of conflicting regulations "tend to freeze landscapes in their current state."

Lehman (2007, p. 349) refers to zoning as "the quintessential Canadian control . . . the institutionalization of the form of our neighbourhoods." However, the literature on smart growth widely criticizes traditional zoning standards for being an inadequate planning tool, for promoting urban sprawl, and for inhibiting compact, mixed-use developments. Planners have been criticizing traditional zoning by-laws for over fifty years (Talen, 2013). Zoning is often considered to be an outdated institutional response to societal issues (Ritzdorf, 1985) that creates unnecessary impediments to competition and innovation in the housing market (Siegan, 1972).

The major problem with zoning by-laws is that they respond poorly to social and demographic changes: many zoning by-laws code for problems that no longer exist and fail to code for the ones that do (Talen, 2012a). Many zoning by-laws are complex, lengthy, seemly abstract, overly political, and often cease to address the initial concerns (Babcock, 1985; Geller, 2010; Rangwala, 2012). Barnett (2011, p. 201) writes "Current codes no longer represent shared social objectives, they are almost blind to environmental issues, and they are out of step with the way that the real-estate market works today." As a result, zoning by-laws often produce uncertain physical outcomes and do very little to help developers build the community vision (Davis, 1999; Katz, 2004; Talen, 2012a).

Traditional zoning by-laws reportedly foster urban sprawl by promoting large consumptions of space, separated land uses, and automobile-oriented design standards. Traditional zoning often includes large minimum lot sizes and buffer/setback requirements that cumulatively require large amounts of land to accommodate low density development (Talen, 2013). Zoning's historic focus on separating land uses (Barnett, 2011; Talen, 2013) creates pockets of low density homogeneous neighbourhoods that are

separated by great distances to the central business district (CBD) and many other everyday land uses (Geller, 2010; Talen, 2012b). Lastly, traditional zoning by-laws frequently employ design standards that create large city blocks with wide roads that encourage automobile travel and discourage walking and cycling (Calthorpe, 2009; Geller, 2010; Talen, 2013; Talen & Knaap, 2003).

Available parcels of land for intensification may be zoned for uses that are no longer economically feasible (Suchman, 2002) or with performance standards that are not geared to accommodate compact, mixed-use development (Fader, 2000). Even if a developer wanted to build pedestrian-friendly, compact, mixed-use projects, they would almost certainly require a zoning amendment (Krasnowiecki, 1980) and the procedure to amend zoning by-laws is often rigid and costly to overcome (B. Lehman, 2013; Talen, 2009; Talen & Knaap, 2003). Talen (2012a) identifies these regulatory hurdles to intensification as a constant drain on the implementation of smart growth.

2.6.4 Market Demand

Traditional housing preferences are not easily accommodated through reurbanization efforts such as infill development. Several sources highlight household preference surveys from the early1990s to characterize the norm for American housing preferences. Farris (2001, p. 7) highlights the findings from a 1991 Ohio household survey, which found that the top five reasons for moving were to "(1) seek a larger house, (2) seek a better school, (3) change jobs, (4) seek a better-styled home, and (5) seek a safer neighborhood." Downs (1994) reports the findings from a 1993 American National Housing Survey, which highlighted that 73 percent of American households preferred a single-family detached home with a yard. More recent, Canadian, studies such as DeFields (2013) examined property size preferences and the value of outdoor space in Kitchener-Waterloo. DeFields (2013, p. iii) found that although buyers may favour smaller sized properties and yards as they age, "homes and yards of medium size would be the most commonly preferred options if residents were to move (considering their household size, health, finances, etc.)." Additionally, the Region of Waterloo's (2010) Market Study found that despite 40% of survey

respondents said they are at least considering moving, less than 10% of respondents reported being unsatisfied with their current dwelling or neighbourhood. Therefore, reurbanization developments must accommodate this group of otherwise satisfied residents' housing preferences in the core to compete with their existing arrangements.

Traditional housing preferences, such as yard space, parking accommodations, and privacy can be very difficult to provide in the urban core due to physical and economic constraints on land (Aryeetey-Attoh, Costa, Morrow-Jones, Monroe, & Sommers, 1998; Downs, 1994; Suchman, 2002). Cities with large tracts of vacant land may have the physical space to accommodate housing preferences through infill, but the surrounding blight often inhibits the necessary market conditions (Downs, 1997). Accommodating traditional housing preferences in cities with a strong market for urban infill generates another set of challenges. Steinacker (2003) uses Harlem, NY as an example of a gentrifying neighbourhood where high-end infill developments provide residents with yard space and safety, but are gated from the rest of the community, displace adjacent residents, and further segregate socio-economic classes. Grant et al. (2004) and Grant (2005) suggests that with gated urban communities, planners often struggle to balance the competing principles of compact urban form and social connectivity.

Overall, reurbanization efforts must therefore attempt to accommodate traditional housing preferences through infill development, or transform housing preferences to align with traditional infill conditions – a challenging task for suburban city-regions.

2.6.5 Land Economics

In city-regions with opportunities for both infill and greenfield development, efforts to promote reurbanization are often undermined by underlying land economics that favour dispersed urban expansion (Bird & Slack, 1993; Blais, 2010; Skaburskis & Tomalty, 2003; Slack, 2002). Supporters of sprawl often claim that the dispersed urban form is the result of the development industry responding to market demand (Gordon & Richardson, 2001; Holcombe & Staley, 2001c). Conversely, many urban economists

hold that market failures have artificially enabled low-cost suburban development beyond what the market would otherwise demand (Blais, 2010; Brueckner, 2001; Downs, 1999; Slack, 2002). Market failures and subsidies that encourage sprawl can consequently deter infill and intensification as these types of development become comparatively worse investments for developers and homebuyers (Slack, 2002). Steinacker (2003, p. 495) supports this notion, explaining that "private actors will not become involved until profitability and risk are equal to their other investment opportunities." Slack (2002) and Blais (2010) suggest that Ontario's property tax and development charge system perpetuates uneven land economics by charging flat rates that fail to distinguish between high and low cost development locations.

Additionally, it is often assumed that core area developments are able to use existing infrastructure and services. However, the capacity of existing utilities (e.g. water mains, hydro, storm water sewer capacity**)** and other infrastructure may be obsolete, at capacity, or simply unknown (Farris, 2001; Simons & Sharkey, 1997; Suchman, 2002). The responsibility for funding unanticipated upgrades to existing infrastructure may be unclear and outside budget considerations (Suchman, 2002). Kramer and Sobel (2014, p. 7) caution that if municipalities do not have infrastructure improvement strategies, than the cost for essential upgrades will fall on the first development in the area, "creating a disincentive for any developer to act first."

2.6.6 Momentum of the Status Quo

Bunting et al. (2007) explain that, in most mid-sized cities, large portions of city growth occurred during the postwar era to accommodate automobile travel, and as such, major employment nodes and travel routes were planned to support a dispersed urban fabric. As a result, these development patterns have not only been entrenched in the urban form, but in the business model of development as well. For instance, Bourne (1996, p. 705) writes,

> "All of the arrows point in the same direction—toward maintaining the existing system and "culture of development." Builders know how to build on greenfield sites. Financial agencies feel more comfortable and

> secure with new—rather than old—property assets in their investment portfolios. Regulatory agencies jealously guard their existing levers of power, while households prefer the space, privacy, and assumed security of the suburbs over the perceived uncertainties and risks of the central city."

Both Alexander and Tomalty (2002) and Hayek et al. (2010) found that plans to facilitate private sector investment in core areas were frequently undermined by development industry preferences to build on greenfield land where property is cheaper, easier to develop, and more cost competitive.

The idea that greenfield development is more cost competitive than infill, intensification, and adaptive reuse is well documented (De Sousa, 2000, 2006; Hayek et al., 2010; McCarthy, 2002). Infill projects tend to be innovative, unique, and sometimes unusual rather than routine (Kramer & Sobel, 2014; Wyly & Hammel, 1999), and have less proof of concept and fewer market comparables, which makes it difficult for financers to evaluate risk (Farris, 2001; Steinacker, 2003; Suchman & Sowell, 1997). As a result, reurbanization efforts are frequently more capital intensive, more complicated, and more risky compared with traditional greenfield development (Kramer & Sobel, 2014; Steinacker, 2003; Suchman, 2002). Therefore, without significant restrictions on the availability of greenfield property, there seems to be little prospect of redirecting growth to the core.

2.6.7 Land Assembly

Analyzing the urban morphology and land parcel characteristics of several Ontario municipalities, Williamson (2013) found lot splitting or parcel fragmentation to be highly prevalent in urban nodes and along prominent arterial and side streets. Unfortunately, small, fragmented parcels of land cannot accommodate high-density development in a piecemeal fashion, so large blocks of land must be assembled to achieve the necessary critical mass for urban intensification projects (Farris, 2001; Stegman, 1979; Steinacker, 2003). Consequently, developers pursuing intensification must often purchase land from multiple buyers and consolidate properties (i.e. land assembly). Conventional wisdom and theoretical models of economic behaviour suggest that land assembly creates numerous challenges for

land developers due to strategic bargaining and greater transaction costs (Cadigan, Schmitt, Shupp, & Swope, 2011). As Farris (2001, p. 13) puts it, "When one considers the risk of failure to assemble property compared with the opportunity costs for time and effort expended, the sheer volume of acquisition transactions is a deterrent to infill development."

Due to the potential inefficiencies of delayed land acquisitions and increased transaction costs, there is a large body of literature that examines the "land assembly game" or "the holdout problem" and its economic implications (See Cadigan et al., 2011; Eckart, 1985; Farris, 2001; Menezes & Pitchford, 2004; O'Flaherty, 1994; Strange, 1995; Suchman, 2002). These studies use land market models and theories of economic behaviour to simulate various transaction scenarios.

Cadigan et al. (2011) tested economic behaviour models in scenarios ranging from one to four land owners (sellers) and found that the developer's profits decreased as the number of sellers increased from one to four. Menezes and Pitchford (2004) found that many land owners see a perceived benefit of being the last to sell in order to capture a larger share of the joint consolidation; this strategy frequently increased both the cost and duration of the land assembly. In addition to holding out for higher land prices, Suchman (2002) cites the desire to avoid tax consequences of selling, disputes with other owners, and low cost of holding land as other reasons why a landowner may be reluctant to sell. Both Strange (1995) and Eckart (1985) found that land owners with smaller property ask for disproportionately higher land prices per acre, which creates a positive relationship between the cost of land acquisition and the number of land owners. Additionally, Strange (1995) found that with a higher number of landowners, the developer has a greater probability of failing to reach a collective agreement.

To summarize, land ownership in urban areas tends to be more fragmented than in suburban areas, which means that developers must acquire several parcels of land from multiple different owners who may or may not be motivated to sell. Studies show that developments requiring land assembly cost more per acre to purchase, take longer to assemble, have a greater risk of failure, and may be politically unpopular. Overall, the land assembly process can be a significant impediment to reurbanization because

there are greater transaction costs associated with core area development compared with greenfield development.

2.6.8 Brownfields

Ontario's Ministry of Municipal Affairs and Housing (MMAH) defines brownfields as "lands that are potentially contaminated due to historical, industrial or commercial land use practices, and are underutilized, derelict or vacant (MMAH, 2007)." De Sousa (2000) suggests that the abundance of brownfield sites in Canada is related to the migration of the industrial sector from the inner city to the suburbs and overseas. Further, De Sousa (2000, 2006) and Hayek et al. (2010) note that the total inventory of brownfield sites in Canada is unknown, but that previous estimates suggest 25% of land in major Canadian cities is occupied by brownfield sites and there could be between up to 30,000 brownfield sites nationally**.**

Brownfield redevelopment is an important aspect of reurbanization because brownfield sites are often located in strategic locations throughout downtown areas and urban waterfronts (MMAH, 2007), and they provide a key source of land for large-scale urban redevelopment opportunities (Bowman & Pagano, 2000; Lang, Hughes, & Danielsen, 1997). However, evidence in the planning literature suggests that the development industry faces many challenges in the effort to redevelop brownfield properties (De Sousa, 2000, 2006; Hayek et al., 2010; NRTEE, 1998; Simons, 1998) such as:

- Uncertainty over cleanup requirements and obligations due to a myriad of environmental laws and approval authorities
- Direct costs related to preliminary studies and the scientific processes required to remediate contaminants
- Inability to predict and quantify the full extent of remediation costs prior to site purchase
- Developer inexperience with complex remediation methods
- Lack of information, guidance, and financial assistance from the public sector
- Liability issues related to long-term impacts of contamination and legal implications
- Negative stigmas associated with depressed urban areas
  Evidence in the literature demonstrates that environmental hazards often crop up

De Sousa (2000, 2006) and McCarthy (2002) suggest that due to these issues, the private sector finds brownfield opportunities less cost effective to redevelop than similar suburban greenfield development opportunities. Hayek et al.'s (2010) assessment of London, Ontario's brownfield efforts confirm this notion. Hayek et al. (2010, p. 395) found that

> "The abundant supply of greenfield land in London is a major barrier to brownfield redevelopment, and many [key informants] noted that the immense supply of greenfield decreases the demand for brownfield redevelopment while providing a safer option for development."

Overall, the literature shows that private sector interest in brownfield redevelopment remains limited without significant support from the public sector. Consequently, the impediments to redeveloping brownfield sites create significant barriers to reurbanization as brownfield sites are a primary source of land within the existing urban areas of Canadian municipalities.

2.7 Facilitating Reurbanization

The process of reurbanization involves a return to the core in terms of population, employment, and economic growth. Due to the myriad barriers that perpetuate status quo patterns of urban sprawl, facilitating reurbanization often requires significant planning interventions. Hare (2001) posits that planning strategies must incorporate an "arsenal" of tools that utilize both regulatory and market-oriented approaches. While the process of reurbanization is shaped by an array of macro-level social, demographic, and economic forces, this section focuses on the micro-level drivers of reurbanization that planners may harness through municipal/regional level policy and regulation. The ensuing discussion outlines key tools and strategies available to planners and assesses the role of plans, planners, and developers in plan implementation.

2.7.1 The Importance of Downtowns

Since the postwar era, there have been innumerable attempts to maintain the preeminence of downtowns in cities across North America. Notable studies on downtown revitalization include Faulk (2006), Filion

et al. (2004), Birch (2002), Bunting and Filion (1993, 1999, 2000), and Robertson (1995). Prominent downtown revitalization tactics discussed in these studies include:

- Large-scale affordable housing project such as Regent Park in Toronto, ON; Jeanne Mance in Montreal, QC; and Pruitt Igoe in St. Louis, Mo.
- Pedestrianization strategies such as sidewalk improvements, public safety measures, and indoor malls/shopping centres
- Waterfront redevelopment programs
- The establishment of Central Business Districts (CBD) and Business Improvement Areas (BIA)
- Special activity generators such as sports arenas and convention centres
- Transportation enhancements such as downtown expressways, parking structures, and public transit
- Public sector financial assistance such as tax increment financing, brownfield redevelopment programs, and municipal fee exemptions
- Marketing/promotional strategies to improve perceptions of downtown
- Downtown housing strategies aimed at repopulating the core

Revitalization tools such as large-scale affordable housing projects (Calthorpe, 2009; Freidrichs, 2011; Laughlin & Johnson, 2011) and downtown malls/indoor shopping centres (Faulk, 2006; Filion, 2007; Filion et al., 2004) have received substantial criticism in academic literature and are frequently considered failed approaches to revitalization. However, there is considerable variance in the literature in describing the strategies have been successful. Filion et al. (2004) attribute this variance to a dearth in the literature on downtown revitalization efforts in small to mid-sized cities. Filion et al. writes

> "Whereas the revitalization strategies of large-city downtowns can benefit from extensive public transit systems, national- and world-scale attractions, the enduring presence of mainstream retail, large office space concentrations, and the key role of big corporations, most CBDs of small metropolitan regions cannot count on such advantages." (2004, p. 340)

Bunting et al. (2007) note that planners have a habit of trying to downsize big-city solutions or to replicate the conditions of the suburbs in mid-sized city contexts, which often falter. Filion et al. (2004) suggest that successful small metropolitan downtowns typically rely on modest, rather than large-scale, revitalization strategies and that attention should be given towards creating a hospitable environment for workers and residents.

2.7.2 Land-Use Controls

Policy tools may be used as a broad method of implementation. Regional Plans and local Official Plans are the backbone for plan implementation; they typically state a vision for how the city ought to develop and provide mechanisms to regulate development. At the most basic level of implementing smart growth, Official Plans may establish targets that the municipality ought to achieve. Next, municipalities may develop strategies to further guide growth and development in specific locations. For example, Filion and Kramer (2012) outline how cities such as Toronto, ON and Sydney, Australia have effectively implemented a Nodes and Corridors strategy for achieving intensification. Hodge and Gordon (2008) outline the use of other commonly used strategies such as Special Area Initiatives and Business Improvement Areas (BIA), both of which may be used to focus growth and development in core areas.

Establishing regulatory policies take implementation a step further by actually preventing certain types of undesirable development. Although regulatory policies do not guarantee that development will actually happen in desirable areas, it limits other possibilities. Both Alexander and Tomalty (2002) and Hayek et al. (2010) suggest that the availability of greenfield land must be limited in order to facilitate core redevelopment. The use of urban growth boundaries has been a very popular approach among cities pursuing reurbanization (Brunt & Winfield, 2005; Ding, Knaap, & Hopkins, 1999; Hare, 2001; Knaap & Hopkins, 2001; Morris, 2009). Portland Oregon's urban growth boundary, established in 1981, is perhaps one of the most prolific examples of limiting outward growth (Ozawa, 2004; Phillips & Goodstein, 2000). As Morris (2009) explains, the purpose of an urban growth boundary is to prevent urban growth beyond a designated containment area through land use policies that protect green space and promote reuse of existing property. Another viable alternative to the use of urban growth boundaries is the implementation of urban service districts which simply limit the delivery of subsidized public services beyond a certain point (Kushner, 2003). Calthorpe and William (2001) advocate for the use of urban service districts rather than urban growth boundaries as they can often achieve the same effect without directly confiscating

home builders' and home owners' right to develop the land; development is limited due to its economic feasibility rather than to government regulation.

The Ontario Planning Act (1990) establishes the following regulatory by-laws: Section 34 : Zoning by Law; Section 36: Holding by law; Section 37: Bonus Zoning; Section 38: Interim control by law; and Section 39: Temporary Use by law. Zoning by-laws are the chief regulatory tool for neighbourhood development in Canada (Lehman, 2007) as standards such as land use, building height, density, setbacks, open space, and parking ratios set the parameters for the potential development capacity on any given site (Hosack, 2001). Pursuant to *section 26(9)* of the *Planning Act*, municipalities must amend all zoning by-laws to be in conformity with the Official Plan no later than three years after the Official Plan comes into effect. Land must be zoned for intensification if actual densities are expected to reach their theoretical capacities (McConnell and Wiley, 2010). For a comprehensive analysis of best-practice smart growth zoning codes, see Morris (2009).

The Smart Code design manual by Duany et al. (2008) is one of the most commonly referenced guidelines for implementing smart growth objectives through zoning by-laws. The Smart Code employs form-based codes (FBC) as a means to curb sprawl and facilitate compact, mixed-use development (Parolek, Parolek, & Crawford, 2008; Talen, 2009, 2013). The major difference between FBCs and conventional zoning by-laws is that building form, rather than land-use, is the primary organizing principle (Katz, 2004; Parolek et al., 2008; Rangwala, 2012; Talen, 2009, 2013). Form-based codes facilitate compact, mixed-use development by permitting reductions in lot sizes, setbacks, block lengths, parking requirements, and street widths, and also permitting accessory buildings for residential use, which are absent from most conventional zoning codes (Parolek et al., 2008; Talen & Knaap, 2003). Talen (2013) stresses that form-based codes are a powerful regulatory tool that should replace traditional use-based zoning by-laws to promote intensification and good urban design.

2.7.3 Fiscal Tools

Blais (2010), Skaburskis and Tomalty (2003), Slack (2002) and Hare (2001) suggest that reurbanization cannot be achieved through regulation alone and that a market-oriented approach to urban finance coupled with fiscal tools should be used to align price signals with planning objectives. Blais (2010, p. 173) writes "more efficient infrastructure and urban form could be realized through greater use of marginal cost pricing in appropriate circumstances." The literature highlights the importance of applying true cost pricing principles to development charges and property taxes and realigning the balance between urban and suburban development through financial incentives.

Skaburskis and Tomalty (2003, p. 144) note that "a well-designed development charge system can reinforce planning goals by steering development away from high-cost sites to more efficient locations." Table 1 summarizes suggestions in the literature for how a development charge system should be structured to support reurbanization objectives.

Table 1 - Structuring a Development Charge System

Steps
1. Establish different cost zones (e.g. urban, suburban, rural, and possibly DC exempt) that reflect the true costs associated with infrastructure and service provision
2. Charge dwelling types that make more efficient use of space such as apartments less per unit than dwelling types that use land less efficiently such as single-family homes
3. Establish a relationship between cost and lot size so that smaller, compact residential lots, aren't forced to subsidize larger lots that use land less efficiently
Sources: (Blais, 2010; Skaburskis & Tomalty, 2003; Slack, 2002)

The literature suggests that these development charge principles would help to facilitate reurbanization by financially rewarding compact, centrally located developments for using land efficiently.

Blais (2010) and Slack (2002) also identify ways in which property taxes could be restructured to support reurbanization objectives. They suggest that the current assessment method in Ontario, which considers the market value of both the land and building, could be replaced by a land value taxation method that taxes only the value of the land. Blais (2010, p. 187) writes "by switching the tax burden to land only, improvement, investment, and densification are encouraged, resulting in more efficient land

development patterns." The land value taxation method creates a disincentive to hold vacant or under-utilized property and would encourage existing property to be put to the highest and best use, thus reducing pressure for development on undeveloped greenfield sites (Slack, 2002). These authors recommend that planners consider the application of a land value property taxation method to stimulate development on under-utilized property.

Due to the greater risks and complications associated with intensification and adaptive reuse, financial incentives are often required to create suitable development conditions in the core. In a case study on six municipalities,[3] Hare (2001, p. 40) found that "all of the precedent cities used significant financial incentives as a key component of their growth management strategies." Similarly, in a case study on the City of Kitchener, Bunting and Filion found that

> "Development industry representatives mentioned the need for the City to offer incentives to developers in order to narrow the gap between suburban and core area development conditions and thus 'level the playing field', especially as regards land costs." (2000, p. 16)

Financial incentives geared towards reurbanization typically include grants, tax abatements, fee exemptions, brownfield remediation programs, gap financing, etc. that are available to developers building in the core.

Given the prevalence of brownfield sites across Canada's urban landscape (See De Sousa, 2000, 2006; Hayek et al., 2010), brownfield remediation programs have become a pillar of many reurbanization strategies. Brownfield programs typically involve financial tools such as incentives, grants, and rebates; regulatory tools such as liability protection and streamlined reviews; and management tools such as public education and inventories of contaminated property (De Sousa, 2006). The importance of financial incentives is well documented as a critical component brownfield strategies (Adams, 2010; De Sousa, 2000, 2006; Hayek et al., 2010; Wernstedt, Meyer, Alberini, & Heberle, 2006). However, Hayek et al.

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[33] Portland, Oregon; Baltimore, Maryland; Calgary, Alberta; Town of Cobourg, Ontario; London, Ontario; and the City and Region of Waterloo

(2010, p. 397) assert that financial incentives are necessary but not sufficient to support brownfield redevelopment as market conditions ultimately determine the viability of core area redevelopment. De Sousa (2006) also found that cities with weak real estate markets and suburban housing preferences had difficulty facilitating redevelopment even with financial incentives, which highlights the importance of downtown revitalization efforts that increase market demand for urban settings.

Tax Increment Financing (TIF) is another investment strategy that may be used to stimulate private development in vacant or dilapidated areas where redevelopment is currently uneconomic (Hodge & Gordon, 2007). With TIF, the municipality develops the infrastructure on debt and repays the loan with the increase in property tax revenue that the redevelopment generates (Squires, 2012). TIF is an innovative approach to targeted development; however, the municipality takes on a greater degree of risk in the investment, which must be accounted for when determining cost/benefit calculations.

2.7.4 Transit as a Catalyst for Reurbanization

Scholars have been debating whether or to what extent rapid transit investments can be used as a tool to stimulate urban revitalization and growth management for many decades (For early examples, see Cervero, 1984; Cervero & Landis, 1997; Knight & Trygg, 1977). There is considerable evidence in academic research to suggest that greater levels of transit service combined with transit-oriented development (TOD) policies are related to land use change indicative of reurbanization such as greater core area densities and increased property values. In these instances, neighbourhood change and regeneration is largely associated with the accessibility benefits of transit improvements (Fan & Guthrie, 2013; Mejia-Dorantes & Lucas, 2014). This section will outline the ways in which transit acts as a catalyst for reurbanization and the necessary conditions to achieve these results.

The impact of rapid transit (heavy rail, light rail transit (LRT), or bus rapid transit (BRT)) on adjacent communities is frequently measured through hedonic price models that determine whether station areas are associated with property value premiums. For instance, studying the Hiawatha Light Rail

Line Minneapolis–Saint Paul, Ko and Cao (2010) found that both commercial and industrial properties had an increasing price gradient extending 1400m away from the transit line. Cervero and Duncan (2002) found similar results in Santa Clara, California, concluding that commercial-retail and office properties accrued value premiums within a quarter mile or transit stations ($25/square foot for commuter rail stations and $4/square foot premium for light rail). Similar hedonic property value premiums have also been observed for residential properties within walking distance to rapid transit stations (E.g. Debrezion, Pels, & Rietveld, 2007; McMillen & McDonald, 2004; Pan, 2012; Wang, 2010). The onset of rapid transit has also been linked with greater urban vibrancy (Breen & Rigby, 2004) and a higher-income labour force (Priemus & Konings, 2001). There is also evidence to suggest that rapid transit investments have the ability to redirect growth towards the core and facilitate compact development. Handy (2005) highlights the positive correlation between land values and density, and explains that light rail may bring about greater density simply due to its positive impact on land values. While, in many cases, these economic spinoff may contribute to downtown revitalization efforts, Grube-Cavers and Patterson (2014) suggests that these revitalization indicators also signify gentrification, and reasserts the need to consider the consequences of gentrification when implementing transit plans.

As more and more city-regions have implemented rapid transit systems, researchers are beginning to understand the conditions under which transit is an effective catalyst for reurbanization. The overwhelming majority of studies indicate that investing in rapid transit *can* facilitate reurbanization, but that these impacts are highly dependent on a number of pre-conditions and planning decisions.

A strong economic trajectory is recognized as one of the most important pre-conditions required to support successful rapid transit investments. In a review of eight different rapid transit systems across Canada, the US, and the UK, Babalik-Sutcliffe (2002) concluded that a strong regional economy and economically viable CBD was a significant predictor of success for urban rail. Others insist that to support rapid transit, cities must have a buoyant real estate bubble with high employment rates (Mejia-

Dorantes & Lucas, 2014), strong population growth with an underlying demand for high-density development (Handy, 2005), and a strong and growing regional economy (Cervero, 1984).

Density is another important pre-condition. Many studies have demonstrated that the economic viability of various transit systems (e.g. bus, light rail, heavy rail) is heavily related to minimum density thresholds (Bertaud & Richardson, 2004; Holtzclaw, 1994) and that urban densities are inextricably related to travel mode choices (Kenworthy, 2007). Holtzclaw (1994) summarizes a broad range of literature on density thresholds and suggests the following transit-supportive density benchmarks: 30 people per hectare (p/ha) for bus service, 35 p/ha for light rail and about 50 p/ha for higher order metro transit. Bertaud and Richardson (2004) assert that transit investments will not be a successful catalyst for reurbanization in city-regions that are well below these minimum density thresholds.

Leveraging transit to facilitate reurbanization also requires significant integration between land use and transit planning decisions (Belzer & Autler, 2002; Calthorpe, 1993; Cervero, 2001; Kulmer, Koland, Steininger, Fürst, & Käfer, 2014; Lin & Gau, 2006; Suzuki, Cervero, & Iuchi, 2013). Transit-Oriented Development (TOD) policies facilitate this connection between planners, transit providers and development agencies. TOD policies typically allow greater as-of-right densities and promote pedestrian improvements within walking distance to transit stations (J. E. Evans & Pratt, 2007). The Transit Cooperative Research Program (TCRP)[4] is a leading contributor to TOD research and has published notable review articles such as (Arrington & Cervero, 2008; Cervero, 2004; Cervero, Ferrell, & Murphy, 2002; J. E. Evans & Pratt, 2007).

Literature on best-practice TOD strategies (Arrington & Cervero, 2008; Cervero, 2004; Cervero et al., 2002; Curtis, Renne, & Bertolini, 2009) and contemporary TOD guidelines (City of Calgary, 2004; City of Ottawa, 2007; City of Winnipeg, 2011; Ministry of Transportation, 2012) suggests that planners should establish TOD overlay zones within walking distance (generally considered to be between 400 and 800

[4] http://www.tcrponline.org/SitePages/Home.aspx

metres) of major transit stations, which incorporate strategic policies to increase density, pedestrian activity, and transit ridership. Within these overlay zones, provisions to spur intensification and transit ridership generally include

- **Pedestrian-oriented design**: design standards such as shorter block lengths that promote connectivity and walkability between destinations and transit stations
- **Transit-supportive land uses**: regulations that give preference to transit-supportive uses generating high volumes of pedestrian activity while restricting or prohibiting automobile-oriented land uses
- **Greater density and mixed uses:** regulations that establish mandatory minimum densities and concentrate high density office and retail uses closest to transit stations
- **Parking management:** regulations that discourage excess parking spaces within TOD zones through lower minimum parking standards and pricing mechanism to control demand
- **Transportation Demand Management policies:** Development approvals that require major employers and landowners to adopt trip reduction measures such as a care share, carpooling, and subsidized transit passes
- **Adaptable urban morphology:** Development approval provisions that ensure site plans are compatible with additional densification over time
- **Financial incentives:** public incentive programs offered within TOD overlay zones that assist development via grants, sliding scale impact fees, tax abatement, gap financing, and other means of financial support

Overall, the literature has demonstrated that transit investments can be a powerful catalyst for reurbanization under the right circumstances. However, it is important to recognize that transit alone cannot revitalize a declining CBD or curb urban sprawl. Research on prior rapid transit systems indicate that a strong economic trajectory leading up to a transit investment and supportive policies governing transit implementation are absolutely crucial to realizing smart growth objectives.

2.7.5 The Role of Plans, Planners, and Developers

There appears to be an overall dearth in understanding the variables that drive plan implementation (whether plans are actually fulfilled and why certain outcomes prevail), which is a major deficiency in the planning profession (see Berke, 2006; Brody & Highfield, 2005; Laurian, Day, Berke, & Ericksen, 2004; Talen, 1996). Laurien et al. (2004, p. 471) writes "planning professionals know little about the implementation of plans and their effects on land development practices." Therefore, understanding the forces that both enable and inhibit plan implementation is fundamental to demonstrating the value of

planning interventions and to improve the planning process (Loh, 2011). Laurian et al. (2004) highlights four significant drivers of plan implementation: the quality of the plan, characteristics of the planning agency, characteristics of development agencies and their consultants, and the interactions between planning agencies and developers.

The relationship between plan quality and implementation outcomes/processes is one of the most studied variables among plan implementation literature (see Baer, 1997; Berke, 2006; Berke & Godschalk, 2009; Brody & Highfield, 2005; Dalton & Burby, 1994; Laurian, Day, Backhurst, et al., 2004; Loh, 2011; Talen, 1996). Laurian et al. (2004, p. 555) found that "plan implementation is mainly driven by the resources of the planning agencies and by the quality of the plans," and that variance in implementation was most attributed to plan quality. However, although high quality-plans, by definition, will always yield greater plan implementation than low quality plans, there literature does not offer extensive evidence as to whether improving the plan writing process and developing high-quality plans are the most worthy investments to boost plan implementation.

Planning agencies are thought to influence plan implementation based on their resources, internal commitment, and knowledge/skill. Studies such as Berke (2006) and Laurian et al. (2004) reported that greater staff resources, both financial and personal, have a positive effect on plan implementation. Earlier studies such as Dalton & Burby (1994) and Mazmanian & Sabatier (1983; 1979) also found that internal commitment to policy goals was a key factor in successful plan implementation.

The literature also notes that development agencies tend to influence plan implementation through their commitment to plan ideals and their capacity to act. Laurian et al. (2004, p. 559) highlight that "the commitment of land developers to plan objectives (e.g. environmental protection), and their capacity to meet these objectives in practice, can directly affect plan implementation." Although Laurian et al. (2004) only found a modest relationship between developers' commitment/capacity and plan implementation, they acknowledge that findings varied depending on the types of plans to be implemented. For instance, Bunting and Filion (2000) found that urban revitalization in the City of

Kitchener, ON, was limited in part by local developers' limited interest in infill opportunities and their lack of experience with infill techniques.

In terms of interactions between planning agencies and developers, Laurian et al. (2004, p. 573) suggest that "agencies with flexible and facilitative interactions implement the plan better than councils with strict and coercive relationships with developers." Strong communication and good working relationships between agencies and major stakeholders are also thought to be a driver of plan implementation. Studying the critical success factors of urban regeneration projects, Yu and Kwon (2011) found that "minimization of conflict between stakeholders" and "good communication and information sharing" were among the top five critical success factors for long term construction projects. Although dated, Mazmanian & Sabatier are prominent authors on policy implementation. They also suggest that successful implementation is largely determined by

> "[The] Ability to develop good working relationships with sovereigns in the agency's subsystem, to convince opponents and target groups that they are being treated fairly, and to mobilize support among latent supportive constituencies, to present the agency's case adroitly through the mass media, and so forth." (1979, p. 495)

Overall, regardless of the plans, strategies, or projects under consideration, good working relationships and strong communication channels seems to be a universal success factor for implementation.

2.8 Implementing the Growth Plan for the Greater Golden Horseshoe

The Growth Plan (2006) is a significant policy document in the context of reurbanization in southern Ontario. Following its enactment, the Growth Plan (2006) set off a flurry of policy development activities in municipalities across the province (Thorne, 2013). As a primary implementation strategy, the Growth Plan required upper and lower tier municipalities to update their Official Plans to be in conformity with the Growth Plan's reurbanization policies and objectives (Ministry of Infrastructure, 2006b). Additionally, Section 26(9) of *The Planning Act, 1990*, was updated to require municipal zoning by-laws to be in conformity with their newly amended Official Plans no later than three years after coming into

effect. A key objective of the new provision in Section 26(9) of *The Planning Act, 1990,* was to encourage municipalities to support greater residential and employment densities in their zoning by-laws (McDonald, 2013; Thorne, 2013).

While the Growth Plan has been praised for its "unprecedented" efforts towards regional growth management (Ministry of Infrastructure, 2006a), others caution that it is premature to celebrate its success as "impressive plans can quite easily become unimplemented plans (White, 2007, p. 49)". Since the introduction of the Growth Plan in 2006, the Neptis Foundation [5] has published a series of research studies that present mixed results as to whether the Growth Plan's targets and objectives are being implemented.

For instance, Filion (2007) studied several of the designated Urban Growth Centres to determine whether they are meeting the Growth Plan's policy goals and to identify barriers that may be preventing future development. Filion (2007) found that only four of the 25 nodes designated as Urban Growth Centers had achieved substantial density levels and that development remains limited in the remaining nodes. Part of the discrepancy between policy objectives and existing densities was attributed to contemporary office and retail development trends that have shifted to big box business models located in suburban business parks that consume large quantities land, which cannot be accommodated in the Growth Centres (Filion, 2007). Additionally, Filion (2007) noted that many of the smaller suburban nodes have been developed to suit high rates of automobile usage at the expense of public transit and walkability, which detracts from the synergistic energy created in more vibrant nodes.

In one of the most comprehensive reviews of Growth Plan implementation to date, Allen and Campsie (2013) reviewed upper and lower-tier Official Plans across the GGH to assess compliance with three key elements of the Growth Plan: Population and employment forecasts, minimum intensification

[5] According to www.neptis.org, "The Neptis Foundation is an independent, privately capitalized charitable foundation located in Toronto, Ontario, Canada. Neptis conducts and disseminates nonpartisan research, analysis and mapping related to the design and function of Canadian urban regions to inform and to improve policy- and decision-making around regional urban growth and management."

targets, and Designated Greenfield Area minimum density targets. Allen and Campsie (2013) found that the minimum intensification rate of 40% and the minimum Designated Greenfield Area density of 50 people and jobs per hectare had been treated as a maximum rather than minimum requirement by most municipalities and that over half of the Outer Ring municipalities had actually adopted reduced targets. Additionally, their report found that the amount of land available for new development designated across all upper and single-tier Official Plans totalled 107,100 hectares, which is roughly the same amount as the "business-as-usual" condition that were deemed unsustainable by the (2003) IBI Group and Dillon Consulting Ltd. report sponsored by the Neptis Foundation. Allen and Campsie (2013) concluded that the Growth Plan is *not* being fully implemented and that local efforts to implement growth management practices have suffered from unclear guidelines and legal battles over the language of the Plan.

Although local implementation efforts appear to be a significant source of uncertainty, the Neptis Foundation (2013 n.p.) notes that "the Province has released little cumulative information on the progress of 21 single- and upper-tier municipalities and 89 lower-tier municipalities as they adopt and implement the Plan's requirements." Overall, the Province of Ontario's experience implementing the Growth Plan for the Greater Golden Horseshoe seems to bear resemblance with much of the planning literature on reurbanization. The Growth Plan has established a fundamental need to curb sprawl and make better use of existing land; however, local municipalities have inconsistently implemented key policies and it is unclear whether planning interventions will alter the trajectory of status quo development trends in the long-term.

2.9 Summary

This chapter has provided an overview of the various concepts and bodies of knowledge applicable to the study context. Smart growth and reurbanization as a concept and a process seek to mitigate many of the environmental, economic, and social costs inflicted by urban sprawl, which are deeply rooted into the urban morphology, consumer preferences, and business practices that guided urbanization in the postwar

era. While smart growth has the potential to improve public goods such as air and water quality, traffic congestion, and public infrastructure, the literature theorizes a disconnect between policy and practice in the implementation of smart growth objectives. This disconnect has been linked to factors such as political distortions, community opposition, development regulation, brownfield contamination, suburban lifestyle preferences, land assembly, and land economics that support sprawl. Together, these factors perpetuate status quo patterns of urban sprawl by making it cheaper, easier, and less risky to accommodate growth and development in greenfield locations than in urban areas. Overall, the literature highlights a dearth in smart growth/reurbanization implementation along with an inadequate understanding of how municipalities in the GGH have responded to the Growth Plan (2006) mandate. Thus, this research assess factors affecting the Region's progress towards key Growth Plan (2006) targets and explores the opportunities for and the barriers to redeveloping under-utilized property in the Region of Waterloo. Topics discussed within this chapter act as a framework for comparison and as a reference guide for recommendations. The following chapter provides an introduction to the case study location.

Chapter 3 – Case Study Background on the Region of Waterloo

3.1 Introduction

This chapter serves as a detailed description of the case study location, the Region of Waterloo. The chapter begins by highlighting locational and demographic characteristics, followed by an outline of the Regional planning framework and implementation initiatives, and finishes with an assessment of the Region's current progress towards key reurbanization targets.

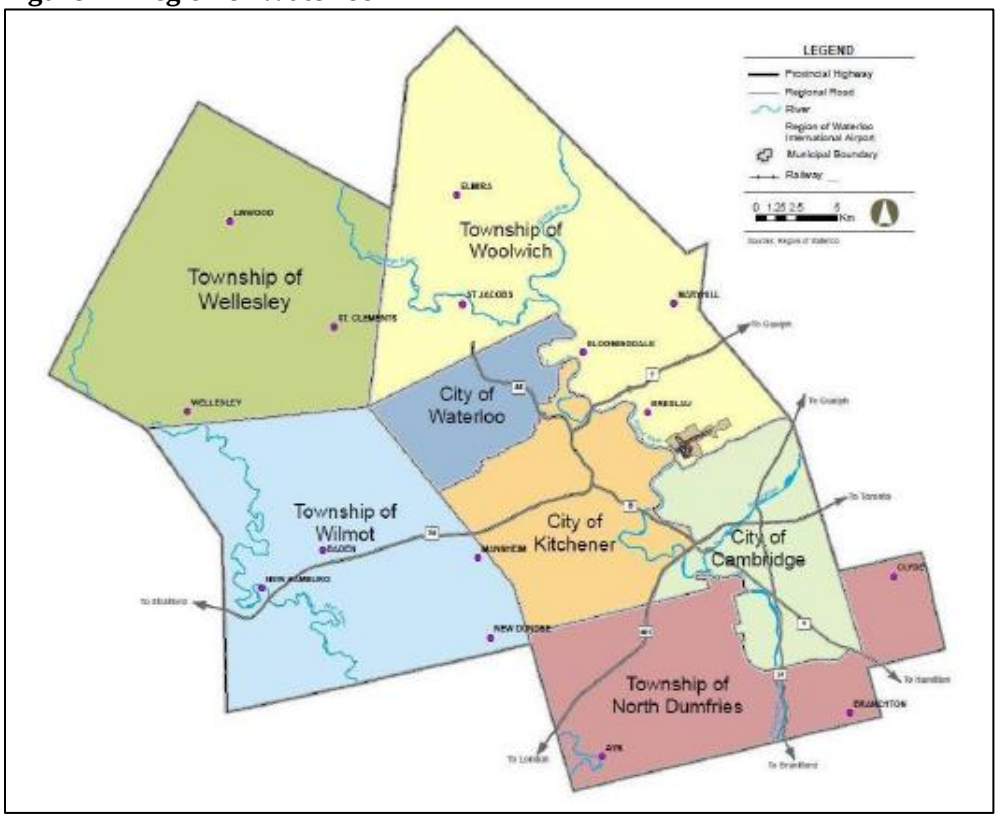
3.2 Community Profile

Located approximately100 kilometers south-west of the City of Toronto, the Region of Waterloo is considered an "Outer Ring" municipality in the context of the Growth Plan (2006) (see Figure 1). The Regional municipality of Waterloo was established in 1973 (Region of Waterloo, 2010a) as the upper-tier municipality in a two-tier governance system, which includes the lower-tier municipalities of Waterloo, Kitchener, and Cambridge and the rural townships of Wellesley, Woolwich, Wilmot, and North Dumfries (See Figure 2). The Kitchener CMA includes the cities of Kitchener, Waterloo, Cambridge, and the townships of Woolwich and North Dumfries, which have a land area of 827.43 square kilometers and a population density of 576.7 people per square kilometer (Statistics Canada, 2012c). The Region of Waterloo is part of the Grand River watershed and relies on groundwater supplies for approximately 75% of its drinking water (Region of Waterloo, 2010a).

Figure 1 - Provincial Context: Inner and Outer Ring Upper and Single-Tier Municipalities in the Greater Golden Horseshoe

Note: Map taken from Allen and Campsie (2013, p.7), published by the Neptis Foundation. Map was modified to highlight the Region of Waterloo.

Figure 2 - Region of Waterloo



Note: Map taken from the Region of Waterloo Official Plan (Region of Waterloo, 2010c, Map 2)

According to the 2011 Census, the Kitchener CMA (Kitchener-Cambridge-Waterloo) had a population of 477,160, making it the fourth largest CMA in Ontario (Statistics Canada, 2012c). Additionally, Growth Plan (2006) forecasts for the Region demonstrate considerable population and employment growth (See Table 2). According the Growth Plan's population forecast distributions, the Region of Waterloo is expected to capture the largest share of population growth amongst the Outer Ring municipalities with 7% of the total population growth across the entire Greater Golden Horseshoe between 2001 and 2041 (Hemson Consulting Ltd., 2013).

Table 2 – Region of Waterloo Population and Employment Forecast 2001-2041 (Figures in 000s)

Year	2001	2006	2011	2016	2021	2026	2031	2036	2041
Population	457	499	528	573	624	681	742	789	835
Employment	230	259	269	296	321	343	366	383	404

Source: Hemson Consulting Ltd. (2013)

Table 3 provides descriptive population data for each separate municipality compared with the province of Ontario. The City of Kitchener exhibited the strongest growth since the 2006 census in total population (7.1%), in total private households (8.7%), and in the number of census families (7.3%), which was greater than that of the Waterloo, Cambridge, and Ontario averages. The population of the Kitchener CMA appears to be slightly younger than the Ontario average. The median ages for Kitchener (37.2); Waterloo (37.6); and Cambridge (38.0) are all slightly less than Ontario's (40.4), and the proportion of the population aged 65 and over is about two percentage points less in each municipality compared with provincial averages. Perhaps one of the starkest contrasts between Kitchener, Cambridge and Waterloo is education and income. The percentage of the population with a Bachelor's degree or higher in Waterloo was 42.5%, which is more than double that of Kitchener and Cambridge and substantially higher than Ontario. Further, Waterloo's median after tax income for economic families was $83,247, which is 21.7% higher than Kitchener, and 17% higher than both Cambridge and Ontario.

Table 3 - Census of Canada 2011 Community Profile Overview

	Waterloo	Kitchener	Cambridge	Ontario
2011 Population	98,780	219,153	126,748	12,851,821
% Increase since 2006 Census	1.3	7.1	5.3	5.7
Total Private Households	37,520	86,375	46,460	4,887,505
% Increase since 2006 Census	2.0	8.7	7.4	7.3
Number of Census Families	26,775	61,225	36,255	3,612,205
% Increase since 2006 Census	0.9	7.3	5.5	5.5
Median Age	37.6	37.2	38.0	40.4
Population aged 0-14(%)	17.0	17.6	19.2	17.0
Population aged 15-64(%)	70.4	70.1	68.6	68.4
Population aged 65 and over (%)	12.6	12.3	12.2	14.6
University degree bachelor's level or higher (%)	42.5	21.9	15.2	26.0
Median after tax income for economic families ($)	83,247	68,369	71,130	71,128
Median after tax income for persons not in economic families ($)	25,876	27,711	27,596	27,319
Land area (Km^2)	64.02	136.79	113.00	N/A
Density (people/Km^2)	1,542.9	1,602.1	1,121.7	N/A

Note: All data were obtained from Statistics Canada (2012 b,c,d) Census Profiles, and Statistics Canada (2013b,c,d) National Household Survey

The Region's dominant industry sectors include advanced manufacturing, automotive, business and financial services, food processing, health and life sciences, information and communication technologies, logistics and transportation and water technologies (Canada's Technology Triangle, 2013).The geographic area between the Region of Waterloo (Waterloo-Kitchener-Cambridge) and the City of Guelph is known as Canada's Technology Triangle. While the Region's economy and labour force has long-standing ties to the manufacturing sector (Bunting et al., 2007), there has been significant

growth in knowledge-based industries and the technology sector, which has diversified the Region's employment base and gained significant media attention. There are over 30,000 tech sector jobs concentrated within the Technology Triangle (City of Kitchener et al., 2013) and the Region of Waterloo has been widely recognized for its startup ecosystem. Startup incubators such as the Accelerator Centre, the VeloCity program, and the Communitech Hub have gone a long way in retaining local talent and fostering successful startup companies and the Technology Triangle is now home to 1,188 registered startup companies (City of Kitchener et al., 2013). This transition towards a knowledge-based economy is heavily supported through the City of Kitchener's Economic Development Strategy (KEDS) (City of Kitchener, 2011) and Economic Development Investment Fund (EDIF) (City of Kitchener, 2014b), which have provided significant resources towards leveraging economic investment in Kitchener's Innovation District. The Region is also home to the University of Waterloo, Laurier University, and Conestoga College, which contribute to its reputation as a research centre.

Travel patterns amongst the employed labour force are still quite automobile-oriented as the share of trips via car, truck, or van as the driver or as the passenger significantly outnumber all other modes and are roughly 8% higher than the Ontario average (See Table 4). Additionally, the proportion of trips via public transit in Kitchener CMA is less than half of the Ontario average. While the City of Kitchener has the highest percentage of trips via public transit across the CMA, the City of Waterloo has the greatest share of active transportation via walking and bicycling.

Table 4 - Mode of Transportation by Employed Labour Force, 2011 (NHS)

Mode of Transportation	Kitchener %	Waterloo %	Cambridge %	Ontario %
Car, truck or van as driver	80.8	78.5	83.7	72.5
Car, truck or van as passenger	6.5	7.0	7.1	6.1
Public transit	6.6	5.4	4.5	14.0
Walked	4.3	5.8	3.2	5.1
Bicycle	0.9	2.1	0.6	1.2
Other	0.9	1.2	0.9	1.1

Source: Data taken from Statistics Canada (2013b,c,d)[6]

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3.3 Regional Planning Framework

Reurbanization is not a new item on the Region's planning agenda, but most previous initiatives did not come to fruition. Filion and Bunting's (1993) content analysis and review of planning documents gives a historic account of Kitchener's urban renewal efforts between 1960 and 1990. Filion and Bunting (1993) found that major efforts to revive the CBD as the focal point for shopping and retail were generally unsuccessful. Later, Filion and Bunting (1999) documented patterns of urban dispersal throughout the Kitchener CMA and concluded that throughout the 1990s, the momentum of urban dispersal was exacerbated by unconstrained suburban growth, a dominant local manufacturing sector with suburban housing preferences , firmly entrenched automobile dependence and travel patterns, and negative perceptions of downtown. Beginning in 2000, Filion and Bunting (2000) noted a shift in thinking on urban renewal away from retail revitalization in favour of downtown housing strategies. Surveying residents in Kitchener-Waterloo, Filion and Bunting (2000) discovered that there was actually a latent demand for downtown housing; however, focus group discussions with real estate developers revealed several barriers to fulfilling this latent demand. They found that local developers were admittedly unaware of the demand for downtown housing, that housing demand was still very ground-oriented, and

[6] Note: The 2011 NHS is a voluntary survey that in 2010 replaced the long-form census. There are various data reliability issues with the NHS due to increased non-response rates; as a result, NHS 2011 data should not be compared with previous long-form census data

that development opportunities were challenged by fragmented parcel ownership and reluctance from banks to finance untested, smaller scale infill projects.

Beginning in 2001, the Region of Waterloo initiated a public consultation process to develop a proactive growth management strategy that addressed contemporary issues of sustainability and livability. Regional Council adopted the Regional Growth Management Strategy (RGMS) (2003) to initiate a balanced approach to environmental planning; limiting outward development; reurbanization; transportation choice (including the creation of a rapid transit system); targeted greenfield development; and quality of life initiatives (Region of Waterloo, 2003). With direction from the Provincial Policy Statement (PPS) (2005) and the Growth Plan for the Greater Golden Horseshoe (2006), The Regional Official Plan (ROP) (as approved, with modifications on Dec. 22, 2010)[7] introduces numerous policies to implement both the Growth Plan (2006) and the RGMS (2003).

The ROP (2010) outlines the framework for the Planned Community Structure and establishes focal points for reurbanization within the Built-Up Area (Map 3a-3e). The ROP (2010, Sec. 2.B.2., Map 3a) establishes the Urban Area and Built Boundary that has been planned to accommodate the majority of the Region's population and employment growth, and will be used for monitoring and evaluation purposes. Within the Built Boundary, the Central Transit Corridor (CTC) connects Waterloo-Kitchener-Cambridge and has been identified as the primary focus area for reurbanization since 1976 and provides the future location of the Rapid Transit system (Regional Official Policies Plan, 2006, Map 8; Region of Waterloo 2007). The ROP (2010, p. 9) lists the following six main objectives:

1. Establish a Countryside Line to contain future urban growth and protect farmlands and sensitive natural areas.
2. Support the development of a Planned Community Structure based on a system of nodes, corridors and other development areas linked together by an integrated transportation system.
3. Promote Transit Oriented Development with a diverse mix of land uses, housing types and open spaces in close proximity to each other.

[7] As of January 24, 2011, this Plan in its entirety, is currently under appeal before the Ontario Municipal Board (OMB). Before using this document, care should be taken to check the updated status of the appeal process on the Region of Waterloo's website.

4. Meet or, where feasible, exceed Provincially-directed density and *reurbanization* targets to make better use of land and *infrastructure*.
5. Anticipate and plan for growth in Urban and Township Designated Greenfield Areas and the Countryside/Future Urban Expansion Area other areas within the Countryside Line as appropriate to ensure sufficient lands are available for future residential, employment and other needs.
6. Strengthen the economic vitality of the region's townships by directing most of their growth into the Township Urban Areas.

The ROP (2010, Sec. 2.B) establishes five focal points for reurbanization that are consistent with the Growth Plan's (2006, Chapter 2) policies for Where and How to Grow. These include:

1. Urban Growth Centres
2. Major Transit Station Area
3. Reurbanization Corridors
4. Major Local Nodes
5. Designated Greenfield Areas

Figure 3 highlights these key focus areas for reurbanization established in the ROP (2010, Chapter 2). The following sections will highlight key objectives/targets within select reurbanization focus areas.

Figure 3 – Region of Waterloo Reurbanization Focus Areas

Note: Map image taken from the Regional Growth Management Strategy (2003, p. 10)

3.3.1 The Built-Up Area/Boundary

The purpose of the built boundary is to implement and monitor reurbanization objectives. The ROP (2010, Sec. 2.C) outlines the Region's general reurbanization target in accordance with the Growth Plan. The ROP states that

> "Area Municipalities will establish policies in their official plans and other supporting documents to ensure that by 2015 and each year thereafter a minimum of 45 per cent of all new residential development occurring annually within the region as a whole will be constructed within the Built-Up Area." (2010, Sec. 2.C.1)

With exception to the City of Toronto[8] and the Region of Peel, the Region of Waterloo was the only other municipality in the GGH to implement a general reurbanization target beyond the Growth Plan's (2006) 40% minimum (Allen & Campsie, 2013). See Appendix A for a graphic comparison of Growth Plan policy targets amongst upper and single-tier municipalities in the GGH.

3.3.2 Urban Growth Centres

The Growth Plan (2006) designated 25 Urban Growth Centres (UGC) across the GGH, which Filion (2007) refers to as a major plank in the overall provincial growth management strategy. UGCs are defined as mixed-use, high density, transit-oriented nodes that are meant to accommodate a significant share of population and employment growth and act as primary centres for business, commercial, and cultural activities and civic engagement (Filion, 2007; Region of Waterloo, 2010c). The ROP states that the Region's UGCs are to

> "Achieve, by 2029 or earlier, a minimum gross density of 200 residents and jobs combined per hectare for each of the Downtown Kitchener and Uptown Waterloo Urban Growth Centres, and 150 residents and jobs combined per hectare for the Downtown Cambridge Urban Growth Centre." (2010, Sec. 2.D.3.e)

Of note, although the Region did not set UGC density targets above the Growth Plan's (2006) minimum requirements, an earlier target deadline of 2029 was chosen rather than the Growth Plan's (2006) suggested deadline of 2031. Appendix B displays map images for each UGC according to the most recent Official Plans.

3.3.3 Urban Designated Greenfield Areas

The ROP (2010, Sec. 2.D.16) defines Urban Designated Greenfield Areas as "lands within the Urban Area that are located outside the *built boundary* as identified by the Province." In conformity with the Growth Plan (2006, Sec. 2.2.7), the ROP (2010) implements several policies to improve neighbourhood

[8] The City of Toronto is completely built-out, so all development is therefore considered intensification

linkages via pedestrian networks and transit stops, to ensure road networks are designed to efficiently accommodate transit service, and to encourage the development of municipal urban design guidelines for greenfield areas. The Region of Waterloo was the only municipality in the entire GGH that implemented a Minimum Designated Greenfield Density target above the Growth Plan's (2006, Sec. 2.2.7) minimum target of 50 people and jobs combined per hectare. Table 5 Summarizes the Region's Minimum Designated Greenfield Area Density Targets.

Table 5 - Minimum Designated Greenfield Area Density Targets (People/ Jobs Combined per Ha)

Type of Land	Urban Designated Greenfield Area[1]	Township Designated Greenfield Area[2]
Lands serving primarily a residential function	55 p+j/Ha	45 p+j/Ha
Lands serving solely an employment function	40 p+j/Ha	40 p+j/Ha
lands designated as Prime/Industrial Strategic Reserve (Serviced)	25 p+j/Ha	25 p+j/Ha

Source[1]: Region of Waterloo (2010c, sec. 2.D.17)
Source[2]: Region of Waterloo (2010c, sec. 2.E.6)

Additionally, Table 6 summarizes the land inventory of each municipality's Designated Greenfield Area. As the table demonstrates, the City of Waterloo designated zero hectares towards New Designated Greenfield Area after 2006, while Cambridge designated 223 hectares - a significant difference in greenfield availability.

Table 6 - Land inventory of Built-Up Area and Designated Greenfield Area (in hectares)

	Built-up Area (as of 2006)	Designated Greenfield Area (as of 2006)	New Designated Greenfield Area (added after 2006)
Region of Waterloo	**25,122**	**6,576**	**259**
City of Waterloo	5,333	963	**0**
City of Kitchener	10,148	2,038	**36**
City of Cambridge	7,271	1,790	**223**

Source: Allen and Campsie (2013, Appendix C)

3.3.4 Major Transit Station Areas

The ROP (2010, Sec. 2.D.6) defines Major Transit Station Areas as the "lands typically within a 600 to 800 metre radius of a *rapid transit* station." Through Official Plan policies, the Region has identified 22 Major Transit Station Areas along the CTC that correspond to the locations of the future Rapid Transit station platforms. The King/Victoria station in the City of Kitchener has been designated as the primary multi-modal transit hub along the Rapid Transit line that will integrate all of the Region's rail and bus services along with other forms of transportation such as car share and pedestrian networks.

3.4 Implementing Reurbanization

Integrating land use and transportation planning decisions has been a fundamental component of the Region's long-term reurbanization strategy. Rapid Transit infrastructure was identified by the RGMS (2003) and the Growth Plan (2006) as an important catalyst for limiting sprawl and concentrating growth and development within major nodes and corridors. The Region's Rapid Transit initiative includes a collaborative $1.9 billion contract over thirty years with Grand Linq to construct an LRT and aBRT network along the CTC, which is being supported through a wide range of plans, strategies, and facilitation tools. The Station Area Planning process includes both the City of Kitchener's PARTS (Planning Around Rapid Transit Station) strategy and the City of Waterloo's Rapid Transit Station Area Planning project, which phase in policies to implement reurbanization objectives through transit-oriented development (TOD). Additionally, the ROP (2010, Sec. 2.D), City of Waterloo Official Plan (2012, Sec. 6.3), City of Kitchener Official 'Plan (2014, Sec. 13), and City of Cambridge Official Plan (2012, Sec. 5.3) have established interim TOD policies to regulate compact, mixed-use development that enhances connectivity, walkability, and the pedestrian environment within Rapid Transit Station Areas. Other initiatives to facilitate reurbanization through integrated land use and transit planning decisions include the Central Transit Corridor Community Building Strategy (2013), the King/Victoria Transit Hub plans

(2013), the Regional Transportation Master Plan (2011), and the Regional Parking Management Strategy (2009).

Several Official Plan policies and zoning by-laws have been implemented to support greater densities and limit outward development. Since the introduction of the ROP (2010), all three urban municipalities have adopted revised Official Plan policies and zoning by-laws that provide flexible, as-of-right, land use designations along the CTC and within the UGCs that allow for a mix of land uses and increased height and density. In Waterloo, findings from the Land Supply, Height and Density Study (2003) were used to implement several new, flexible, mixed-use zoning categories (such as the C8-25 zone in Uptown) along major nodes and corridors and to stabilize existing residential neighbourhoods. Similarly, the City of Kitchener developed a Mixed-Use Corridors strategy that has been incorporated into their Official Plan policies since 2001 (City of Kitchener, 2014d). Seven Mixed-Use Corridors have been zoned to permit "a wide range of transit-supportive land uses, and include regulations that promote a compact built form with variations in density and design criteria (City of Kitchener, 2014c)." Additionally, the Region of Waterloo is considered a leader in environment-first policy planning (Hare, 2001) and has implemented several measures to limit growth and development on environmentally sensitive lands. Chapter Six of the ROP (2010) establishes policies for the *Protected Countryside Line*, which creates a long-term growth boundary between the existing *Urban Area* and the countryside. Where the Countryside Line overlaps with the Protected Countryside land designation, the boundary is to be upheld permanently.

Financial incentives have also been a critical component to the Region's implementation toolbox. The Region of Waterloo offers a Brownfield Financial Incentive Program, a Core Area Regional Development Charge Exemption, and a Property Tax Class for Multi-Residential (rental) Developments. Through the implementation of Community Improvement Plans (CIP), the cities of Kitchener, Cambridge, and Waterloo also support reurbanization through downtown financial incentives. Table 7 summarizes the financial incentives available in each municipality.

Table 7 – Summary of Municipal Financial Incentives (as of 2014)

City of Waterloo	City of Kitchener	City of Cambridge
- Uptown Façade Improvement Loan Program - Brownfield Incentive Program - Stormwater Credit Program	<u>Downtown</u> - 3-Year Tax Exemption - Planning Application and Building Permit Fee Rebates - Exemptions from Parkland Dedication Fees - Exemptions from Development Charges - Façade Improvement Grant Program <u>City-Wide</u> - Brownfield Financial Incentive Program - Heritage Tax Rebates and Grants	<u>Core Areas</u> - Design Guide Program - Building Revitalization Program - Contaminated Sites Grant Program - Application Fee Exemptions - Development Charge Exemptions <u>City-Wide</u> - Tax Incentive Grant Program - Heritage Grant Program - Employment Land Development Charge Reduction - Development Charge Exemptions

Appendix C summarizes the full inventory of inventory of initiatives that have been used to support reurbanization objectives in the Region of Waterloo.

3.5 Progress Towards Reurbanization

This section starts by outlining the characteristics of the Region's existing housing stock and then highlights progress towards reurbanization targets based on three indicators: distribution of residential units by housing-type, percentage of units constructed inside the built-up area (reurbanization rate), and the number of people and jobs combined per hectare in the Urban Growth Centres.

The existing housing stock in Kitchener CMA is predominantly ground-related as single-detached and semi-detached dwellings are the majority structure type in all three cities. Both Waterloo and Cambridge have a higher proportion of single-detached houses than the Ontario average, while Kitchener's proportion of single-detached houses is 5.7% less than the Ontario average (See Table 8). Ground related housing such as single and semi-detached dwellings take up the greatest amount of land per unit and are typically only built in new greenfield areas while apartment dwellings are more commonly developed within existing urban areas (Hemson Consulting Ltd., 2005). When paired with

population forecasts, assumptions about future housing-type mixes have large implications about the spatial location and land requirements of future growth as compact growth scenarios require greater proportions of apartment dwellings.

Table 8 - Structural Type of Dwelling as a Percentage of Total Units, 2011 Census

Structural Type of Dwelling	Kitchener %	Waterloo %	Cambridge %	Ontario %
Single-detached house	49.9	57.9	59.2	55.6
Semi-detached house	6.3	5.2	8.2	5.7
Row house	11.3	12.1	11.4	8.5
Apartment, building that has five or more storeys	14.2	10.7	4.9	16.2
Apartment, building that has fewer than five storeys	15.2	11.2	12.7	10.2
Apartment, duplex	3.0	2.3	3.2	3.3
Other single-attached house	0.1	0.1	0.5	0.2
Movable dwelling	0.0	0.5	0.0	0.3

Note: Data taken from Statistics Canada (2012 b,c,d)

Hemson Consulting Ltd. (2005, p. 55) explains that "achieving more compact growth scenarios begins with a change in housing mix." The Region of Waterloo's Planning, Housing and Community Services division produces an annual report titled "Building Permit Activity and Growth Monitoring" that summarizes various aspects of building permit activity as it relates to reurbanization (See Region of Waterloo, 2014a). The 2014 report found that of all residential permits issued in 2013, 42% were apartments, 33% were single-detached, 20% were townhouses, and 5% were semi-detached. The report also noted that the construction of single-family dwellings fell from a peak of 78% in 1998 to a low of 33% in 2013. In the past four years, the number of building permits issued for apartment dwellings outpaced that of single-family dwellings, which marks a significant departure from the existing housing mix (see Table 8) towards more compact housing preferences.

In terms of intensification rates, the percentage of residential units created inside the built-up area has been above the Growth Plan's 40% target and the Region of Waterloo's 45% target for the last four years in a row (see Table 9). This trend demonstrates significant progress towards fulfilling

reurbanization objectives. The Region of Waterloo (2014a) also shows that over the past four years, roughly 50% of the units inside the built up area have also been within Major Transit Station Areas.

Table 9 - Residential Units Constructed Inside the Built Up Area (BUA)

Year	Total units in the Region of Waterloo	Units inside the built-up area	Percent of units inside the built up area	ROP (2010) target
2006*	1,392	597	43%	45%
2007	3,102	1,430	46%	45%
2008	2,969	974	33%	45%
2009	2,765	1,028	37%	45%
2010	4,004	2,237	**56%**	**45%**
2011	3,586	1,952	**54%**	**45%**
2012	2,421	1,164	**48%**	**45%**
2013	2,564	1,412	**55%**	**45%**
*Since effective date of Places to Grow, June 16, 2006				

Data Source: The Region of Waterloo (2014a)

Recent reports released by the City of Waterloo (City of Waterloo, 2014) and the City of Kitchener (City of Kitchener, 2014a) indicate significant progress towards reaching Urban Growth Centre density targets as well. The City of Kitchener reached 167 people and jobs combined per hectare in 2013 with several other projects underway, while the City of Waterloo reached 197 people and jobs combined per hectare as of 2014 (Table 10).

Table 10 - Urban Growth Centres (UGC)

Urban Growth Centre Name	2006 Density p+j/ha[1]	Growth Plan Density Target by 2031	Municipal Density Target for 2029[2]	Required Increase (2006 – 2029) to Meet Target	Current Density P+j/ha
Uptown Waterloo	99	200	200	102%	197 (as of 2014)[3]
Downtown Kitchener	135	200	200	48%	167 (as of 2013)[4]
Downtown Cambridge	71	150	150	111%	Not available

Data Source 1: Allen and Campsie (2013, table 3.8); 2: ROP (2010); 3: City of Waterloo (2014); and 4: City of Kitchener (2014a)

3.6 Summary

This chapter has summarized the demographic and policy details relevant to reurbanization in the Region of Waterloo. The Region of Waterloo is forecasted to attract the greatest share of population growth amongst all of the Outer Ring municipalities and plans to be accommodate this growth through compact, mixed-use, transit-oriented development patterns rather than greenfield expansions, which has been the norm over many decades. The Regional Official Plan (ROP), local municipal Official Plans, and Central Transit Corridor Community Building Strategy provide a detailed and comprehensive vision for integrating transit and land use planning to facilitate reurbanization. The Region of Waterloo's approach to policy planning has been recognized as being quite progressive, as it is one of the only upper or single-tier municipalities that implemented reurbanization targets surpassing the Growth Plan's minimum requirements. Reurbanization objectives are well supported through a wide range of regulations, financial incentives, and infrastructure investments that seek to maximize the growth potential of Transit Station Areas and Urban Growth Centres. Overall, this chapter provides reasonable evidence to assert that the Region is undergoing a significant transition towards a more compact, transit-oriented community. This research looks to build on these findings by investigating success factors behind current initiatives along with the challenges of sustaining intensification.

Chapter 4 – Methodology

4.1 Introduction

This study employs a qualitative case study approach to answer the fundamental research question: What are the barriers to and opportunities for implementing the reurbanization objectives in the Region of Waterloo? Sub questions include:

- Is the Region of Waterloo meeting its reurbanization targets?
- What factors have positively contributed to reurbanization efforts in the Region of Waterloo?
- What locations and what types of property have an active potential for reurbanization in the Region of Waterloo?
- What are the greatest difficulties with accommodating reurbanization through infill, intensification, and adaptive reuse developments?

4.2 Research Methods

This research uses qualitative, case study methods to explore the logistics of implementing reurbanization objectives. While both qualitative and quantitative methods may be used in case study research, the qualitative approach is often useful when the objective is to uncover in-depth, contextual information (Creswell, 2012). Numerous works offer definitions of qualitative research (See Carpenter & Suto, 2008; Creswell, 2007, 2009; Denzin & Lincoln, 2000, 2005; Flick, 2007; Liamputtong, 2013). The definition most frequently cited throughout the above literature appears in Denzin and Lincoln's (2005, p. 3) *Handbook of Qualitative Research:*

> "Qualitative research is a situated activity that locates the observer in the world. . . They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them."

Creswell (2012) and Yin (2012, 2014) describe case study research as a methodology, a type of research design, and a product of inquiry. Creswell (2012, p. 97) provides a frequently cited definition of case study research:

> "A qualitative approach in which the investigator explores a bounded system (a case) over time, through detailed, in-depth data collection involving *multiple sources of information* (e.g. observations, interviews, audiovisual material, and documents and reports), and reports of a case *description* and *case themes*."

Case study research is appropriate when asking descriptive questions (what is happening or what has happened) or explanatory questions (how or why did something happen) (Yin, 2012). These types of questions are useful when studying contemporary issues where the context and the phenomenon are relatively inseparable (Yin, 2014). The primary advantage of the case study approach is that it allows the researcher to investigate phenomena in an in-depth, holistic manner. Case study research is unique from sampling research; we study a specific case not to understand other cases but to explore the phenomenon at play within the chosen case (Stake, 1995).

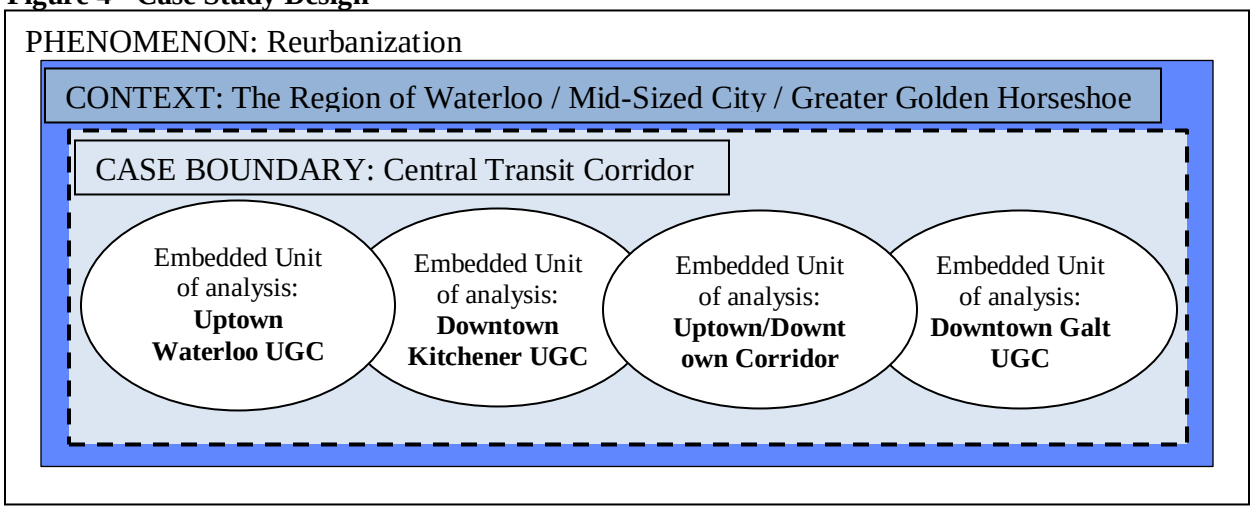
Case study research also has several limitations. Creswell (2012), Liamputtong (2013), and Yin (2012, 2014) explain that common criticisms of case study research include the inability to generalize to other cases, more frequent researcher bias, slow and laborious data collection, and ambiguity in case study boundaries. Considering both the benefits and limitations, it was decided that the case study method was the most favourable approach as many of the limitations could be addressed through proper research design.

4.3 Case Study Design

This study was designed to be a single/instrumental case study with embedded units of analysis. With a single/instrumental case study, the actual case is of secondary interest; the researcher uses it to exemplify and advance our understanding of the emerging issue or phenomenon (Creswell, 2012; Stake, 2008). In this study, the emerging issue/phenomenon is the Region of Waterloo's experience implementing

reurbanization objectives. The bounded system for the case study is the Central Transit Corridor, and the embedded subcases include the Uptown Waterloo, Downtown Kitchener, and Downtown Galt Urban Growth Centres. Early into data collection, it became apparent that the corridor connecting Uptown Waterloo and Downtown Kitchener had several key redevelopment assets, so it was included as an embedded subcase as well. It was important to establish the Central Transit Corridor as the overall case study boundary as reurbanization is largely managed on a regional scale, whereas each local area municipality has slightly different, interrelated, issues that merit an embedded subcase rather than an entirely separate case study for each. Figure 4 depicts the case study design**.**

Figure 4 - Case Study Design



4.4 Data Collection

Data collection was carried out in four steps: 1) Review of secondary sources (literature and municipal documents); 2) Semi-structured interviews with key informants; 3) Direct observation (photography and field notes); and 4) Web survey questions distributed to planners working in other mid-sized city-regions in the Greater Golden Horseshoe. Table 11 summarizes key research questions and data collection methods. The following sections explain the procedure carried out for each collection method.

Table 11 - Summary of Research Questions and Data Collection Methods

Primary research question: What are the barriers to and opportunities for implementing the reurbanization objectives in the Region of Waterloo?	**Methods of data collection**				
Sub questions:	**Literature review**	**Municipal documents**	**Interviews**	**Web survey**	**Observation**
Is the Region of Waterloo meeting its reurbanization targets?					
What factors have positively contributed to reurbanization efforts in the Region of Waterloo?					
What locations and what types of property have an active potential for reurbanization in the Region of Waterloo?					
What are the greatest difficulties with accommodating reurbanization through infill, intensification, and adaptive reuse developments?					

4.4.1 Key Informant Interviews

Key informant interviews were used as the primary method of data collection in this study. According to Corbin & Morse (2003), Taylor (2005), and Low (2007) key informant interviews have many advantages:

- They are valuable for exploring research topics when little is known about them or the issues are complex
- They allow researchers to examine the perceptions of the participants and how they give meaning to their experiences
- The interview is flexible and does not require expensive equipment

Taylor (2005) and Low (2007) also list some limitations of key informant interviews:

- They are time consuming, especially during transcription and data coding/analysis
- The interview format may differ between participants and can be problematic for novice researchers
- Researchers may have difficulty differentiating between evidence and interpretations

Key informant interviews were selected as the primary investigative method for this study because reurbanization is a contemporary issue in many mid-sized cities and many of the barriers are not fully understood. Therefore, it was more appropriate to use key informant interviews for the Waterloo case study in order to get an in-depth understanding of not just what, but how and why certain barriers affect reurbanization.

This study used a purposive or non-probabilistic sampling technique to target potential candidates. A sample size of twelve to twenty interview participants was deemed appropriate based on suggested guidelines in the literature (Bernard, 2000; Guest, Bunce, & Johnson, 2006; Morse, 1994) and accessibility to qualified candidates in the Region of Waterloo. Pre-determining appropriate sample sizes can be difficult with purposive sampling as the selection of participants should be meaningful and strategic (Liamputtong, 2013); however, measuring data saturation is the standard practice for determining appropriate sample sizes in qualitative research (Guest et al., 2006; Liamputtong, 2013). The general notion of data saturation is that there will be a point in data collection when new information begins to replicate the existing data and further data collection produces little or no change to the code book (Denzin & Lincoln, 2000; Guest et al., 2006). To monitor data saturation, I transcribed interviews (See McLellan, MacQueen, & Neidig, 2003) and applied data coding techniques (Bhattacherjee, 2012; Corbin & Strauss, 1998; Weston, 2001) to keep track of key themes and variance between interviews.

Participants interviewed for this study included planners, real estate developers, and municipal councillors. Planners and local politicians set the legal, spatial, physical, and in many instances, economic parameters under which developers allocate capital and initiate structural change in a city. Together, these three agents play a significant role in the implementation of reurbanization objectives and were considered ideal candidates to target for in-depth interviews.

Development industry perspectives on reurbanization are not explicitly discussed in many Regional planning studies, which tend to focus on consumer demand in the housing market (E.g. MKI, 2005, 2010). Therefore, interviews with developers provided a sometimes-unsung perspective on the subject matter. The developers studied in this research are those primarily responsible for infill, intensification, and adaptive reuse along the Region's CTC. I identified recent development projects

within the three Urban Growth Centres that exemplified reurbanization (See Region of Waterloo, 2010d)[9] and traced back the development firms primarily responsible for bringing these projects to market. Contact information for development firms was obtained online from company websites or through referrals from interviews with previous developers. As I discovered, several of the development firms responsible for infill and intensification along the CTC have corporate headquarters located outside of the Region of Waterloo, so extra effort was given to ensure that developers interviewed for this study had first-hand development experience locally. Of the six developers interviewed for this study, four specialized in residential development with projects almost exclusively in the CTC, one specialized in residential development with projects in both the greenfields and the CTC, and one specialized in commercial development with projects almost exclusively in the CTC.

The planners studied in this research included both public sector municipal planners along with private sector planning consultants. Municipal planners with knowledge of and experience with policy planning or development planning related to their city's reurbanization initiatives were targeted for interviews. Several of the studies and policies analyzed in the document analysis contained staff contact information, which was used to select interview candidates. Of the eight municipal planners interviewed for this study, four worked for the Regional Municipality of Waterloo, one worked for the City of Waterloo, one for the City of Cambridge, and two for the City of Kitchener. The selection of private sector planning consultants was based on referrals from other planners, developers, or key informants interviewed for this study. As a result, three planning consultants with working knowledge of reurbanization policies and specific development projects along the CTC were interviewed for this study.

Municipal councillors whose political wards overlapped with the Urban Growth Centres were targeted for interviews. Ward boundaries within the case study area were used to target participants from city council as these individuals were presumed to have a heightened interest in Urban Growth Centre

[9] Link to map displaying examples of reurbanization along the CTC: http://www.regionofwaterloo.ca/en/aboutTheEnvironment/resources/IONAttractsmaplowresv7.pdf

development activity. In Waterloo, this included Ward one; in Kitchener, Wards nine and ten; and in Cambridge, Wards four, five, and six. While all five city councillors were targeted for this study, participation remained limited, as only one councillor agreed to participate in a research interview.

Overall, the range of public and private sector participants allowed me to collect diverse perspectives on the subject matter; however, several limitations or sources of bias should be noted. First, interview participants from all three stakeholder categories were selected because of their experience with, and knowledge of reurbanization-oriented development practices. While individuals involved with reurbanization initiatives hold valuable insights, many of the planners and developers that volunteered for research interviews seemed passionate and optimistic about facilitating reurbanization, which may or may not be representative of the larger professional population. Second, contact information for planners and developers was not readily available in many instances; as a result, snowball sampling was required to recruit a sufficient number of interview participants. The snowball sampling technique involves asking well-situated people to recommend other well-situated individuals (Patton, 2002). This "in-house" method of recruitment may result in like-minded individuals recommending other like-minded individuals; however, the snowball sampling technique is frequently required with purposive, or non-probabilistic, sampling in qualitative research (Morgan, 2008). In my experience recruiting private sector interview participants, response rates were very low without some form of prior introduction or referral, thus necessitating the snowball approach. Table 12 provides a summary of interview participants.

Table 12 - Summary of Interview Participants

Organization	**# of participants**
Regional Planners	4
Municipal Planners	4
Planning Consultants	3
Developers	6
Municipal Politicians	1
Total	**18**

All interview candidates were invited to participate in the research study through a standard recruitment email that included an introduction to the researcher study, procedural information for the interview, and instructions for how to contact the researcher. Additionally, I attached a study summary and sample interview questions to familiarize potential candidates with the subject matter and assist in their decision to participate. A copy of the invitation email and the study summary can be found in Appendix D and E respectively.

With the consent of each participant, all interviews were audio recorded and later transcribed into a Microsoft Word document. A copy of the interview consent form can be seen in Appendix F. Keeping an audio record of in-depth interviews was important because it increases the accuracy of data collection and analysis and allow the researcher to be more attentive to the interviewee (Patton, 2002). A numerical code was developed and each participant was assigned a unique number to ensure direct identifiers were removed from the written transcripts. The participant code list and the transcripts were saved in two different password-protected folders on the researcher's computer. All data are considered confidential.

Through a review of academic literature and municipal/regional planning documents, questions were generated to investigate the perceived barriers to reurbanization along the Central Transit Corridor and the opportunities to facilitate it. A guide was created to conduct semi-structured interviews and each participant was asked questions that fell under five main categories. Table 13 provides an overview of both the interview questions and their rationale.

Table 13 – Semi-structured Interview Questions and Rationale

INTERVIEW QUESTIONS	RATIONALE
Category #1: Background information	
• Please tell me about your experience as a [insert relevant career position] and your involvement with reurbanization initiatives or development projects.	• Introductory "ice-breaker" questions are part of standard interview protocol (Creswell, 2009) and help the researcher to establish comfortable dialog. • Exploring additional background information on interview participants helps to identify specific bodies of knowledge or specializations that the interviewee may possess.

Category #2: Success factors	
• Can you tell me a little bit more about your experience with specific reurbanization projects along the CTC? • With these projects in mind, were there any underlying success factors that facilitated the development process? • The Region has surpassed many of its intensification targets. In your opinion, what factors have positively contributed to greater rates of intensification?	• The Region of Waterloo has met many of its reurbanization targets in the past four years (Region of Waterloo, 2014a), which runs counter to previous trends (Bunting et al., 2007). This contrast between past and present development trends was part of the motivation for exploring success factors.
Category #3: Opportunities for investment	
• In your opinion, what areas, or specific sites within [Downtown Kitchener/Uptown Waterloo/Midtown/Downtown Cambridge] have the greatest potential for reurbanization? • Can you comment on the sites within the Urban Growth Centres that were identified as "opportunities for investment" in the Community Building Strategy? • How do the challenges you mentioned affect the development potential of specific sites under discussion? • What are some of the key differences between in Kitchener, Cambridge, and Waterloo in terms of development opportunities and development feasibility? • How will the LRT affect development opportunities along the CTC?	• Qualitative case study research typically provides an in-depth account of the location under investigation (Yin, 2012). These questions help to relate general discussion about opportunities and constraints to site specific development opportunities. • The Community Building Strategy provides an excellent platform to discuss redevelopment opportunities as it incorporates a wide range of studies, plans, and stakeholder feedback. • These questions provide participants an opportunity to elaborate or add context to the constraints to reurbanization. • Kitchener, Cambridge, and Waterloo are often discussed as a contiguous CMA (Allen & Campsie, 2013; Brunt & Winfield, 2005; Bunting & Filion, 1999); however, each urban area has unique characteristics that merit investigation.
Category #4: Barriers/Challenges	
• In your experience with intensification, infill, adaptive re-use, or redevelopment projects in the Region of Waterloo, what have been the most challenging aspects of the development process? • What are the major issues that cause property with development potential along the Central Transit Corridor (CTC) to remain under-utilized or vacant? • In your opinion, what have been some of the greatest challenges to implementing Region-wide initiatives to direct more of the community's future growth to the built-up areas (reurbanization)?	• The literature theorizes a weakness in the implementation of smart growth objectives (Downs, 2005; Filion, 2003); additionally, urban dispersal in Kitchener CMA has been described as an entrenched pattern of development (Bunting et al., 2007). • Very little is known about the challenges that local municipalities are facing in their attempts to implement the Growth Plan's smart growth mandate (Allen & Campsie, 2013). • Identifying the current obstacles to redeveloping under-utilized property within core areas along the CTC allows for a comparison with previous studies on Kitchener CMA and informs Regional plans to

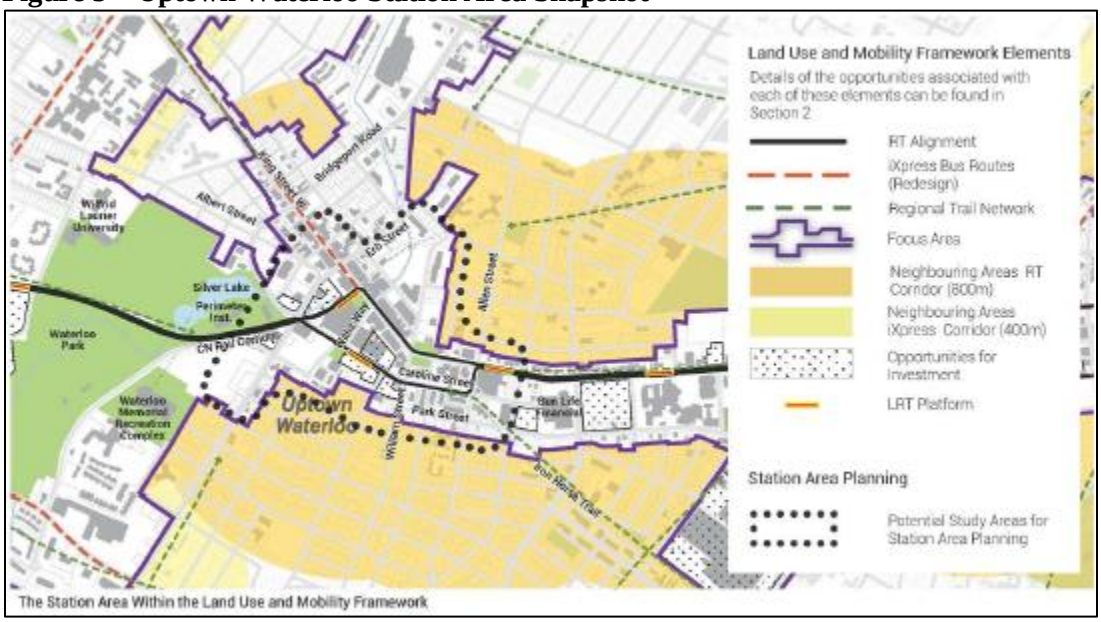
	spur intensification around Rapid Transit Stations (Region of Waterloo, 2003).
Category #5: Recommendations	
• Could you discuss some of the policies/regulations/strategies that are intended to facilitate reurbanization? • In your opinion, what improvements could be made to current planning policy and regulation in order to better facilitate reurbanization?	• The Growth Plan 2006 initiated a flurry of policy development activity across local municipalities (Thorne, 2013) and all three local municipalities are in the process of implementing their respective Rapid Transit implementation strategies (See City of Kitchener, 2014e; City of Waterloo, 2014). Soliciting stakeholder feedback on existing policies and regulations served as a form of evaluation and helped to formulate recommendations.

All interviews occurred in person at a location chosen by the participant. In most cases, I travelled to the participant's work place, which provided a quiet setting and eliminated potential background noise for the audio recording. The duration of interviews ranged between 45 and 90 minutes. Qualitative methods typically allow for a more flexible approach to data collection as the focus of research questions often evolve and change throughout the study to adapt to new information and reflect inductive reasoning (Creswell, 2009).

Questions regarding specific sites and development opportunities were raised with interview participants through both an open-ended question along with a list of pre-determined sites to comment on. Participants were first given the opportunity to comment freely on the areas/sites that they considered favourable for reurbanization. Secondly, I used the Central Transit Corridor Community Building Strategy (Region of Waterloo, 2013) to select pre-determined sites for participants to comment on. Through a series of workshops and consultations with key stakeholders, the Region of Waterloo and local area municipalities commissioned the Central Transit Corridor Community Building Strategy (2013), which suggests how the community should grow around rapid transit stations (Region of Waterloo, 2013). Section 5 of the Community Building Strategy (2013) offers station area snapshots of the proposed

LRT platforms and highlights specific "Opportunities for Investment." Participants were asked to comment on the specific sites that were identified as "Opportunities for Investment" within the Urban Growth Centres and the Midtown corridor. For example, Figure 5 displays the Uptown Waterloo Station Area Snapshot from the Community Building Strategy; as indicated in the legend, the dotted parcels represent "Opportunities for Investment." Using the Community Building Strategy as a reference point may have informed participants' responses to questions about areas with development potential, but it was deemed necessary to spur discussion as the open ended version of the question failed to solicit sufficient responses – participants may have felt it overwhelming to contemplate development opportunities across the entire CTC.

Figure 5 – Uptown Waterloo Station Area Snapshot



Map source: Region of Waterloo (2013, sec. 5.18)

The Community Building Strategy was selected as a tool to spur discussion about site-specific development opportunities as it "provides valuable information to investors and developers about the many opportunities that exist throughout Waterloo Region (Region of Waterloo, 2014b, p. 1)." Findings on site-specific development opportunities within each case study location (the three Urban Growth Centres and the Midtown corridor) highlight the property on a municipal parcel map, provide photographs

to illustrate relevant characteristics, and provide commentary on stakeholder feedback. This exercise contributes to the research objectives by identifying the types of property have an active potential for reurbanization along with those that remain challenged to private sector development, which sets the stage for the following section on the obstacles to reurbanization.

4.4.2 Visual Observations

Visual observation is a tool frequently used in multi-method approaches to qualitative research that allows one to unobtrusively collect contextual information (Liamputtong, 2013). I observed many of the reurbanization zones that were identified during the document analysis and key informant interviews. To document the observations, I maintained field notes and photographed characteristics such as the built form, urban design, streetscape, natural environment, and general feel.

Specific sites were observed and photographed following the completion of all eighteen key informant interviews. Throughout the interview process, I maintained a list of noteworthy locations for direct observation. Noteworthy sites included those listed as an "Opportunity for Investment" in the Community Building Strategy along with other development opportunities raised during interviews along with those that exemplified obstacles to reurbanization. The photographs taken during this observational phase have been used as a visual aid to compliment narrative passages in the case study findings on the Region of Waterloo. Additionally, taking the time to revisit case study locations and reflect on the comments from key informants allowed me to view the physical environment through a different lens. This method helped me conceptualize barriers to reurbanization and triangulate data collected during the interview process. All photographs included in this thesis were taking during visual observations and belong to the author.

4.4.3 Online Survey

The purpose of this web survey was to identify the barriers to, and opportunities for reurbanization amongst other mid-sized city-regions in the Greater Golden Horseshoe. Qualitative, case study research often suffers from limited generalizability outside of the case study location, so it was important for this study to survey other mid-sized city-regions in the Greater Golden Horseshoe to offer a comparison and assess the generalizability of the case study. As technology and familiarity with the internet has continued to develop, web surveys are becoming simple and easy to use (Sue & Ritter, 2012). Wright (2005) lists the following advantages and limitations of web surveys (See Table 14)

Table 14 - Advantages and Limitations of Web Surveys

Advantages	Limitations
Access to participants in distant locations	Uncertainty over validity of data
Ability to reach difficult or unique participants	Uncertainty about sampling techniques
Convenience and reliability of automated data collection	Difficulty in tracking non-response rates
Cheap to administer	Self-selection bias

Obtaining information from professional planners in numerous municipalities via key informant interviews was beyond the scope of this study, so the web survey was chosen as the best alternative to efficiently sample other mid-sized cities. The purpose of the web survey was to obtain a compulsory scan of the barriers to and opportunities for reurbanization in other mid-sized cities affected by the Growth Plan (2006); these results were not intended to be statistically significant as statistical significance is not central to qualitative research (Creswell, 2009).

Purposive or non-probabilistic sampling was used to select candidates for the web survey. Purposive sampling is often considered less desirable for surveys because it is less systematic than random sampling and results may not be representative of the total population (Creswell, 2009). However I determined that purposive sampling was necessary in this instance because, like the key informant interviews, questions related to technical information that would be un-suitable for non-professionals.

Potential survey candidates included planners working in mid-sized city-regions in the Greater Golden Horseshoe with knowledge of their municipality's growth management strategies, Official Plan policies, and development planning practices. The selection of mid-sized cities was based on the following criteria:

1. Designated as an Urban Growth Centre in the Growth Plan
2. Mid-sized city population (50,000–500,000 people) (Seasons, 2003)

As a result, the following mid-sized cities were selected for the survey: the City of Guelph, the City of Hamilton, the City of Brantford, the City of Burlington, the Town of Oakville, the City of St. Catharines, the Region of Niagara, and the City of Barrie.

Potential candidates were emailed a standard recruitment letter that included an introduction to the research study, procedural information for completing the survey, and the link to the survey webpage – see Appendix G. When contacting municipal planning departments, the same recruitment letter was used but I also described an ideal candidate and asked the planning department either to distribute the recruitment letter to suitable candidates or to provide the researcher with additional contact information and permission to email the recruitment letter. Table 15 and Table 16 summarize the survey respondents.

Table 15 - Summary of Survey Respondents

Planners	Municipal Staffers	Corporate Manager, Downtown Renewal	Total
13	2	1	16

Table 16 - Summary of Survey Response Count

City/Region	Response Percent	Response Count
Town of Oakville	31%	5
City of St. Catharines	19%	3
City of Barrie	13%	2
City of Hamilton	13%	2
Region of Niagara	13%	2
City of Burlington	6%	1
City of Guelph	6%	1

Survey Monkey™ software was used to develop, administer, and analyze survey results. Upon opening the survey webpage (https://www.surveymonkey.com/s/reurbanization), participants were directed to a welcome screen that reiterated the purpose of the survey and provided key definitions, explained why the respondent was selected for participation, discussed the conditions of anonymity and confidentiality, and provided contact information to learn more about the study. To minimize response time and survey difficulty (Sue & Ritter, 2012), a variety of close-ended questions (dichotomous, multiple choice, rating, and contingency) were used to collect nominal and ordinal data.

The opening questions asked participants for demographic information such as their location of employment and profession. The first series of questions (1-4) contained two contingency questions: 1) participants had to give their consent to continue with the survey voluntarily; and 2) to continue with the survey, participants were required to indicate whether their municipality was reurbanizing or attempting to reurbanize. The second series of questions (5-6) employed multiple-choice questions to collect nominal data about growth characteristics and indicators used to measure characteristics of urban growth in their respective municipalities. The third set of questions (7-8), employed rating questions to collect ordinal data about opportunities for reurbanization and the associated challenges. The fourth set of questions (9-10) employed matrix-style multiple-choice questions to categorize the challenges identified in question 8 and to collect nominal data about facilitation strategies. The final set of questions (10-11) employed open-ended questions to collect final thoughts and feedback about the survey. A full copy of the web-survey can be found in Appendix H.

Data reliability is a measure of data quality that refers to one's ability to repeat data collection with same results (Yin, 2014). One of the limitations of close-ended questions is that the response lists must be exhaustive (Sue & Ritter, 2012). To avoid false-negatives (incorrectly rejecting an item) and false-positives (incorrectly selecting an item), the researcher included close-ended "I'm not sure" options and open-ended "other comments" options for all applicable questions.

Construct validity is another important measure of data quality. According to Yin (2014), the researcher must define and operationalize measures to demonstrate that the survey is accurately measuring the phenomenon. Demonstrating construct validity was difficult under this definition as the survey instrument was created to cover a contemporary issue and few other studies were available for comparison. The researcher took two key steps to improve construct validity. 1) After completing a draft copy of survey questions, I had the questions reviewed by a research consultant at the University of Waterloo Survey Research Centre; and 2) I test piloted the survey with a planning/development industry professional to check for appropriateness/accuracy and the time required to complete the survey.

4.5 Data Management and Analysis

All four methods of data collection were organized individually, so management and analysis techniques are discussed separately.

For the online survey, Survey Monkey™ software used for the web survey allowed the researcher to create the survey on custom templates and distribute the web link for participants to complete. This survey service compiles data into a variety of summary tables and generates descriptive statistics and graphic information. To test the accuracy of preliminary summary tables, survey results were downloaded into excel spreadsheets and reviewed individually, by municipality, and in aggregate.

Participation across all seven municipalities was not even, which made it difficult to summarize findings in aggregate. For example, initial results for "barriers to reurbanization" across all seven municipalities were skewed by the results from municipalities with high response rates. As a result, average responses from each municipality for each question were calculated in Microsoft Excel and were used to replace the summary tables provided by Survey Monkey. This was an important step in the data management/analysis procedure as raw responses could not be used to summarize findings. As such, findings from each municipality have been assigned equal weight in the summary calculations. As the

sample size was rather small and not intended to be statistically significant, results were not further analysed through statistical software.

For key informant interviews, interview transcripts were the major unit of analysis for this study and several steps were taken to carefully analyze the results. Following the interviews, I transcribed the audio recording using Express Scribe™ software. Interview transcripts were reviewed several times throughout data collection to ensure accuracy and to continually measure data saturation. Additionally, to achieve construct validity (Yin, 2014), the researcher used member checking (Creswell, 2009) during the interviews, which involved recapping the participant's thoughts and asking for confirmation to increase the accuracy of the researcher's interpretations. Reviewing transcripts prior to future interviews helped improve question probes and capture new information. The objective here was to obtain a general sense of the information, which lead to a better understanding of differences and similarities in responses across interview participants and to evaluate the credibility of information.

The second stage of analysis involved a more detailed and rigorous coding procedure. Coding is considered by many to be a best practice interpretive analysis method that is used to derive chains of evidence in qualitative research (Bhattacherjee, 2012). Creswell (2009, p. 186) describes coding as "the process of organizing the material into chunks or segments of text before bringing meaning to information." Coding technique such as open coding, axial coding, and selective coding are frequently used in Grounded Theory research (Bhattacherjee, 2012; Corbin & Strauss, 1990, 1998); however, similar coding techniques are also useful for research that utilizes theoretical frameworks and evidence from the literature to guide data collection (McCracken, 1988). Codes can be key words or phrases used by interview participants (called an *in vivo* term) or labels assigned by the researcher (Creswell, 2009).

Before information was grouped into categories or codes, transcripts were reviewed line by line to with an open mind looking for all possible connections to the phenomenon at study. This technique is referred to as open coding as the researcher remains open to information beyond the confines of the

structured interview questions, which helps detect themes or patterns that may have otherwise gone undetected (Bhattacherjee, 2012).

Next, text was grouped into the following three codes: "success factors," "opportunities for investment," and "barriers." Findings naturally fell under these three categories due to the use of semi-structured interview questions. Transcripts from each interview were fractured and reorganized so that all key themes, ideas, and terms expressed by participants were categorized under one of the three codes. The frequency of key codes in each category was recorded to measure data saturation and inter-participant agreement. Codes that were mentioned frequently within and across interview transcripts were identified as important research findings. Narrative passages from interview transcripts are frequently used to explain important research findings from participants' first hand perspectives.

4.6 Summary

This chapter has described the methods and procedure used to explore key research objectives and analyze findings. This thesis employs qualitative research methods such as key informant interviews, an online survey, a literature review, and direct observation to assess the opportunities for and constraints to reurbanization in the Region of Waterloo and other mid-sized cities in the Greater Golden Horseshoe. The primary research focus is on the Region of Waterloo, which is explored through a case study with embedded units of analysis while the online survey is used capture an environmental scan of similar issues in other mid-sized cities. Overall, this research is descriptive in nature and seeks to capture the beliefs, attitudes, and opinions of planners and real estate developers to better understand the policy and practice of redeveloping under-utilized property. The results of this study are intended to establish what Yin (2012) calls analytic generalization where logic is identified that might be applicable to other situations rather than statistical generalization where results are directly inferred or applied to the larger population. The next chapter highlights key findings from both the online survey and the case study from the Region of Waterloo.

Chapter 5 – Findings

5.1 Introduction

This chapter begins with an overview of the survey results from other mid-sized cities in the Greater Golden Horseshoe. Survey questions are presented in chronological order along with a discussion of the results. Secondly, this chapter presents case study findings from the Region of Waterloo. The case study begins with a discussion of success factors that have positively contributed to the development of previous reurbanization projects along with the Region's progress towards key targets. Next, opportunities for investment are discussed with a critical lens based on interview participants' feedback. The case study findings conclude with a thorough discussion of the most pervasive constraints to utilizing available land for reurbanization. This chapter is organized to progress from the general experiences in other mid-sized cities towards more specific case study findings from the Region of Waterloo.

5.2 Survey Findings from other Mid-Sized Cities

Of the eight municipalities targeted for this web survey, seven municipalities participated with at least one respondent and the total number of complete responses came to 16. Within each municipality, the survey targeted regional/municipal planners working in the field of development planning, policy planning, growth management, or downtown revitalization as identified through departmental affiliations. In some instances, municipal planners were targeted directly when email addresses were made available online, and in other cases, an information letter was emailed to departmental addresses for distribution to qualified participants. Participation across all seven municipalities was not even and as a result, average responses from each municipality were used to generate summary tables rather than raw response numbers so that findings would not be biased towards municipalities with more respondents. As such, each municipality has been assigned equal weight in the summary calculations.

To analyze the survey outcome, this section looks at each survey question in chronological order and discusses the results in terms of average findings and notable trends. Respondents were given the option to provide "other" comments for each question; these responses are mentioned in the discussion of results. Recognizing that the web survey may not list all possible options, for questions requiring a Likert scale rating, respondents were asked to include their rating from 1-6 for any "other" responses.

The purpose of this survey was to explore trends in other municipalities (i.e. who's doing what elsewhere) to augment case study findings from the Region of Waterloo. The survey results offer an interesting snapshot of the barriers, opportunities, and strategies for reurbanization in target municipalities. However, participants were asked to answer questions based on their opinions, experience, and best information and the response rate was not high enough to support findings with statistical significance. Ultimately, this survey is descriptive in nature and should not be used for quantitative analysis.

5.2.1 Indicators

Respondents were asked to identify the indicators used in their municipality to measure reurbanization. The results demonstrate that demographic indicators such as census data along with graphic mapping indicators were used most frequently to measure reurbanization. However, "Other" comments suggested that building permit data was another tool commonly used to measure reurbanization rates. Table 17 provides a summary of survey responses across all municipalities.

Survey Question:
What indicators does your municipality use to measure reurbanization? Select all that apply.

Results:

Table 17 - Indicators for Reurbanization

Response choices	Response Percent
Demographic indicators (i.e. census population data)	79%
Graphic indicators (i.e. maps, aerial photography, geographic information systems, or build-out analyses)	76%
Household appreciation rates (inner city vs. suburbs)	39%
Modal share of daily trips (i.e. automobile, train, bus, bike, walk)	13%
I'm not sure	7%
Other comments • "Building permits - central vs. edges." (Planner, St. Catharines) • "Building permit data" (Planner, Region of Niagara) • "I'm not sure what is happening at the Regional level and who is tracking the information." (Planner, Oakville) • "We are currently trying to come up with some reliable indicators to monitor infill and intensification ... a work in progress" (Planner, St. Catharines) • "building permits, unit counts, employment surveys" (Planner, City of Hamilton)	

5.2.2 Absolute vs. Relative Growth

Respondents were asked whether the inner city was growing at a greater rate at the expense of the suburbs (relative reurbanization) or whether the suburbs were growing at a similar or greater rate than the inner city (absolute reurbanization) (Cheshire, 2006). The majority of municipalities reported absolute rather than relative reurbanization, and some survey respondents were unsure. The only two municipalities that reported relative reurbanization patterns were the City of Guelph and the City of St. Catharines, while all other municipalities suggested that suburban greenfield areas were still accommodating large portions of current and future development. However, one participant from the City of Burlington noted that Burlington has almost reached its boundary limits and will likely transition to a more relative model of

reurbanization (at the expense of greenfield development). Table 18 provides a summary of survey results across all municipalities.

Survey question:
Would you describe the process of reurbanization in your municipality as absolute or relative? Please choose the answer that best represents the growth patterns in your municipality.

Absolute reurbanization would suggest that the inner city is gaining regardless of what is occurring in the suburbs, while relative reurbanization would suggest that the inner city is gaining at a greater rate (or at the expense of) the surrounding suburban regions.

Results:

Table 18 - Growth Patterns

Answer Options	Burlington	Guelph	Hamilton	Oakville	Niagara (Region)	St. Catharines	Barrie	Total
	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	**Avg.**
Relative	0.0%	100.0%	0.0%	20.0%	0.0%	100.0%	0.0%	**31%**
Absolute	100.0%	0.0%	50.0%	40.0%	100.0%	0.0%	100.0%	**56%**
I'm not sure	0.0%	0.0%	50.0%	40.0%	0.0%	0.0%	0.0%	**13%**

Other comments

- "We have very little greenfield land and develop almost exclusively through infilling." (Planner, St. Catharines)
- "Burlington almost has reached its urban boundary limits and most new development is achieved through infill and intensification of existing areas." (Planner, Burlington)
- "Neither applies to local context -- planning for reurbanization in several growth centres, but not yet realized. Completed projects are more 'scattered' infill than within a concentrated area." (Municipal Staffer, Oakville)
- "I would suggest that the Greenfield areas (since Oakville still has these) are still building out at a greater rate" (Planner, Oakville)
- "No data to support response, but assume growth is absolute." (Planner, Hamilton)

5.2.3 Opportunities for Reurbanization

On a Likert scale from one to six, respondents were asked to rate several types of land uses based on the opportunity potential to accommodate reurbanization in their respective municipalities. Different types of land uses create different types of challenges for reurbanization efforts; therefore, the types of

development opportunities in a municipality largely influence local initiatives to facilitate reurbanization.

The following land uses were rated four or higher on the six point Likert scale across all municipalities.

- Under-utilized residential property (5.2/6)
- Retail land (4.55/6)
- Commercial land (4.55/6)
- Under-utilized parking (4.36/6)
- Old manufacturing sites (4.2/6)

On average "other under-utilized institutional property" was not rated four or higher on the Likert scale; however, two planners from the Town of Oakville commented that old hospitals presented "several" opportunities for reurbanization in Oakville. Additionally, comments from a Hamilton planner highlight a key difference between availability and feasibility of development opportunities.

> "Many surface parking lots particularly in downtown, however, in the short and potentially medium term, the value of land does not provide a great enough ROI in comparison to the income from the parking lots." (Planner, City of Hamilton)

Local planning efforts should investigate the logistics of successfully utilizing the types of land uses most widely available for reurbanization in order to maximize the impact of policy interventions. Table 19 highlights the results from each municipality.

Survey question:
In your opinion, what land uses provide the greatest opportunities for future reurbanization in your municipality?

Please rate the following land uses from 1-6; 1 indicating no opportunities and 6 indicating many opportunities. The same rating may be used for multiple answers.

Results:

Table 19 - Opportunities for Reurbanization

1) No opportunities	2) Very few opportunities	3) Few opportunities	4) Some opportunities	5) Several opportunities	6) Many opportunities

Opportunities	St. Catharines	Burlington	Hamilton	Guelph	Oakville	Niagara	Barrie	Total
	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.
Under-utilized residential property[10]	5.33	6.0	6.0	4.0	4.6	4.5	6.0	**5.20**
Retail land	4.33	4.0	5.5	5.0	4.0	5.5	3.5	**4.55**
Commercial land	4.33	4.0	5.5	5.0	4.0	5.5	3.5	**4.55**
Under-utilized parking	4.33	5.0	4.5	6.0	4.2	4.5	2.0	**4.36**
Old manufacturing sites	4.67	4.0	3.5	6.0	3.2	4.5	3.5	**4.20**
Other under-utilized institutional property	3.33	3.0	4.0	4.0	4.0	4.0	5.0	**3.90**
Vacant land	2.67	3.0	2.0	3.0	4.8	5.0	5.5	**3.71**
Closed schools	4.33	2.0	3.0	3.0	4.8	5.0	3.5	**3.66**
Industrial lands	3.33	5.0	2.5	3.0	2.8	3.0	3.5	**3.30**
Average rating	4.07	4.0	4.06	4.03	4.04	4.61	4.0	4.16

5.2.4 Barriers to Reurbanization

Presented with a list of barriers or practical limitations to reurbanization, respondents were asked to rate on a Likert scale whether or to what extent the conditions had limited development opportunities for intensification, infill or adaptive reuse. The list of anticipated barriers was developed through a review of

[10] Answer options available to survey respondents for this question were amended to include "under-utilized residential property" upon the recommendation of the first survey respondent. The remaining 15 survey respondents had this answer option available to rate.

academic literature on infill and intensification (Farris, 2001; Kramer & Sobel, 2014; Suchman, 2002; Suchman & Sowell, 1997).

A rating from four to six indicated that the issue was a moderate, major, or very major barrier respectively, and a rating from three to one indicated that the issue was a minor, very minor, or non-barrier, respectively – the higher the number the more serious the issue. The four issues rated four or higher in include:

- Community opposition (4.72/6.0)
- Insufficient market conditions (4.43/6.0)
- Environmental contamination (4.4/6.0)
- Lot sizes/configurations requiring land assembly (4.17/6.0)

Additionally, in the "other comments" section, two planners from the Town of Oakville stated that the cash-in-lieu of parkland dedication payments were a barrier to reurbanization. The cash-in-lieu of parkland dedication fees referenced by these respondents refers to Part VI Section 51.1 of the Ontario Planning Act, which allows municipalities to charge developers the cash equivalent of park space when the physical space cannot be provided. Additionally, a Planner from St. Catharines wrote, "We have several heritage districts. They are valued, but they have also been barriers to intensification." Table 20 highlights the results for each municipality.

Survey question:
Drawing from your experience, please rate whether, or to what extent, the following conditions have limited development opportunities for intensification, infill, or adaptive reuse?
Please rate each condition from 1-6; 1 indicating that the issue is not a barrier and 6 indicating that the issue is a very major barrier. The same rating may be used for multiple answers.

Results:

Table 20 - Barriers to Reurbanization

1) Not a barrier	2) Very minor barrier	3) Minor barrier	4) Moderate barrier	5) Major barrier	6) Very major barrier

Limitation	Burlington	Guelph	Hamilton	Oakville	Niagara	St. Catharines	Barrie	Total
	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.	Avg.
Community opposition	6.00	5.00	5.00	5.20	3.50	3.33	5.00	**4.72**
Insufficient market conditions	4.00	6.00	5.50	3.20	2.50	5.33	4.50	**4.43**
Environmental contamination	2.00	5.00	4.50	4.60	5.50	4.67	4.50	**4.40**
Lot sizes/configurations	4.00	5.00	5.00	4.00	4.00	3.67	3.50	**4.17**
Costly parking requirements	4.00	6.00	4.50	4.40	4.00	2.00	2.50	**3.91**
Unanticipated infrastructure upgrades	5.00	5.00	2.50	5.00	4.00	2.33	3.00	**3.83**
Required planning approvals	4.00	4.00	4.50	3.60	4.00	3.00	3.00	**3.73**

Other comments

- "Parkland dedication (ie. cash in lieu requirements)." (Planner, Oakville)
- "Planning Act parkland dedication requirements very major barrier." (Planner, Oakville)

5.2.5 Scope of Limitations

Recognizing that some of the barriers might be common to other types of development as well, respondents were asked to indicate whether the issues identified were unique to reurbanization, common to reurbanization and greenfield development or unique to greenfield development.

The answer options that had a majority response of "unique to reurbanization" included environmental contamination, lot sizes/configurations requiring land assembly, and costly parking requirements. Whereas the remaining answer options (insufficient market conditions, community opposition, unanticipated infrastructure upgrades and required planning approvals) had a majority

response of "common to reurbanization and greenfield development." Additionally, the very low response rate for "unique to greenfield development" reaffirms findings from academic literature that these barriers/practical limitations are more urban-oriented issues. Table 21 summarizes the survey results across all municipalities.

Survey question:
Please indicate whether these issues are unique to infill, intensification, and adaptive reuse developments, unique to green-field developments, or common to all types of development.

Table 21 - Scope of Limitations

Answer Options	Unique to reurbanization	Common to reurbanization AND green-field development	Unique to green-field development	N/A
Land contamination from previous uses (i.e. brownfields)	85%	15%	0%	0%
Lot sizes and/or configurations that fail to support higher densities	49%	34%	14%	3%
Costly parking requirements	46%	42%	0%	12%
Insufficient market conditions	29%	60%	0%	11%
Community opposition	23%	77%	0%	0%
Unanticipated infrastructure upgrades	21%	62%	12%	5%
Required planning approvals (i.e. zoning by-law amendments or Official Plan amendments)	7%	88%	0%	5%

Comments

- "We have several heritage districts. They are valued, but they have also been barriers to intensification." (Planner, St. Catharines)

5.2.6 Implementation Strategies

From a list of facilitation strategies commonly referenced in academic literature, respondents were asked to indicate if their municipality has implemented the strategy/tool in question, if it has not been

implemented, if implementation is in-process, or "I'm not sure." The purpose of this question was to offer a snapshot of implementation progress across the various municipalities.

Notably, respondents from all seven municipalities unanimously indicated that they have implemented land use designations in their Official plans to support reurbanization. Other tools/strategies that were reportedly implemented in 50% or more of the surveyed municipalities include:

- Façade improvement funds
- Urban design guidelines
- Community Improvement Plans (CIP)
- Brownfield revitalization rebate programs
- Zoning-by law provisions
- Development charge exemption programs

Also noteworthy, although zoning by-law provisions to support reurbanization had only been implemented by 56% of the surveyed municipalities, the other 44% reported that these provisions were "in-process," indicating that all seven municipalities have at least been working towards implementing supportive zoning by-laws. Urban design guidelines were another tool where 100% or respondents indicated that their municipality had either implemented them or was in the process of implementation. "Other comments" included strategies such as aligning capital projects to support infill infrastructure upgrades, bonusing policies in the Official Plan for growth areas, and successful Section 37 agreements. Table 22 highlights survey results across all municipalities.

Survey Question:
Please indicate whether any of the following policies, regulations, or incentives have been implemented by the municipality or region where you work.

Table 22 - Facilitation Strategies (average score across surveyed municipalities)

Answer Options	Yes	No	In-process	I'm not sure
Land use designations in the Official Plan	100%	0%	0%	0%
Façade improvement funds	86%	14%	0%	0%
Urban design guidelines	77%	0%	23%	0%
Community Improvement Plans (CIP)	77%	3%	20%	0%
Brownfield revitalization rebate programs	57%	20%	20%	3%
Zoning-by law provisions	56%	0%	44%	0%
Development charge exemption programs	50%	43%	7%	0%
Post redevelopment tax exemption programs	48%	42%	0%	10%
Parking management strategies	41%	27%	14%	17%
Permit fee rebate programs	31%	48%	0%	21%
Lot consolidation strategies	14%	59%	17%	10%
Parkland dedication fee exemption programs	14%	64%	7%	14%
Priority Funding Areas (PFAs)	0%	59%	0%	41%

Comments

- "Don't know what a PFA is. Need municipal alignment of capital projects to support infill infrastructure upgrades." (Corporate Manager, Downtown Renewal, Guelph)
- "Bonusing policies in the OP for various Growth areas" (Planner, Oakville)
- "Successful section 37 agreements" (Planner, Oakville)

5.2.7 Summary

The results from the online survey depict modest transitions towards reurbanization supportive policies and outcomes. While there was a relatively high utilization rate of facilitation strategies (either implemented or in process), the majority of municipalities indicated that these efforts have not limited continued urban expansion and that greenfield development remains prominent. Survey results confirm the barriers to reurbanization identified in the literature review as four out of seven barriers were rated four out of six or higher on the Likert scale and none were rated below three out of six. However, the results also indicated that several barriers such as development regulation, infrastructure capacities, and community opposition are relevant in greenfield development situations as well. Overall, this information provides a sense of best practices and experiences with growth management in other mid-sized municipalities that are also subject to the requirements of the Places of Growth Plan (2006). The following chapter presents the case study findings from the Region of Waterloo.

5.3 Case Study Findings from the Region of Waterloo

This section presents the case study findings from the Region of Waterloo, which is the primary focus of the study. To investigate the opportunities and constraints associated with reurbanization, Planners, developers, and municipal politicians were targeted for semi-structured interviews. With written consent, interviews were audio recorded and later transcribed for data coding and analysis. Table 23 provides a breakdown of the interviewees by profession.

Table 23 - Interview Participants

Profession	# of participants
Regional Planner	4
Municipal Planner	4
Planning Consultant	3
Developer	6
Municipal Politician	1
Total	**18**

Interview participants were de-identified through the use of pseudonyms throughout research findings to encourage candid conversations and potentially sensitive discussions. Participants were given an ID number, and any information attributed to their thoughts or direct quotes is referenced using only their ID number and professional occupation. Regional Planners, Municipal Planners, and Planning Consultants are all considered a "Planner" for reference purposes. Data coding procedures (Creswell, 2009; Weston, 2001) were used to discover key themes across interview transcripts and to organize findings into logical categories. Guided by the semi-structured interview questions and research objectives, the findings have been organized into the following three categories: success factors, opportunities for investment, and ongoing challenges.

5.3.1 Success Factors

Presented with conformance-based evidence that the Region of Waterloo has been progressive with implementing many of the Growth Plan's (2006) key objectives (Allen & Campsie, 2013) and that it is on pace to meet and surpass several key reurbanization targets (Region of Waterloo, 2014a), this study set

out to identify factors that have positively contributed to reurbanization efforts. Interview participants were asked to discuss their experience with reurbanization projects and to comment on factors that have positively contributed to successful outcomes. It is important to note that interview questions about success factors were targeted towards the local domain of the Waterloo Region and represent the attitudes, beliefs, and opinions of planners and developers actively engaged in the reurbanization process. Table 24 provides a summary of the most prevalent success factors discussed within and across interviews.

Table 24 - Summary of Success Factors

Success Factors	Number of interviews in which mentioned (N=18)
Cooperation/collaboration/shared vision	11 (61%)
Financial incentives	10 (56%)
Progressive policy and regulation	8 (50%)
Influence of the LRT	5 (28%
Economic Restructuring	4 (22%)

The number associated with the success factor represents the number of interviews in which that factor was mentioned and discussed. The ensuing discussion provides additional detail on how each factor contributed to reurbanization initiatives.

5.3.1.1 Cooperation, Collaboration, and a Shared Vision

The vast majority of developers spoke very highly about the City of Kitchener's commitment to reurbanization, which in their opinion has been a driver for development. Developer 11 (2014) made the following comments:

> "The people at the City of Kitchener are fabulous. It all starts with the leadership at the top. Carl Zehr is a fabulous guy. He gets it. He understands how things happen. And then the senior staff at Kitchener are super progressive and they have a dream and a vision to really make their city rock."

Developer 10 (2014) mentioned several instances where Kitchener's planning department had been very flexible and accommodating with minor variances and zoning amendments to expedite projects in the downtown.

> "From a planning perspective, the City of Kitchener has been very pro-development, pro residential in the core, pro bring people in any way they can that makes sense from a planning perspective, so we didn't really have a lot of hurdles." (Developer 10, 2014)

Planner 16 (2014) highlighted the importance of managing the development approval process.

> "One of the things that the development community say they like about our [the City of Kitchener] process is that we are clear about our expectations and what we're trying to achieve. So that makes it easy for them to design projects that meet our public policy objectives. But umm you know, we can always get better in terms of process. Every once in a while a project gets offline where we add cost but no value… every city does that. We do it less than a lot of cities, but we need to always keep an eye on that." (Planner 16, 2014)

However, several developers noted a lack of internal commitment in the City of Cambridge, which acted as an impediment to reurbanization. Voicing dissatisfaction over a current development, Developer 11 (2014) stated,

> "We could be so much further along down in Cambridge right now, but it's been so painful to work with these guys down there. Frankly, we said to the mayor of Cambridge, if we have a building that we can buy tomorrow in Cambridge or in Kitchener...*snap* we're buying the building here [in Kitchener] all day long because we know that we can get that building from start to finish far faster and far less painfully than it would be down in Cambridge."

Participants with development experience unanimously agreed that cooperation and collaboration within the local planning agency had a significant impact on the their ability to bring a project to market, which influenced their willingness to invest in another project in the Region.

Flexibility in by-law enforcement was identified as another success factor for reurbanization. Planner 7 (2013) explained that many conventional regulations are designed for average, suburban

situations, but that most reurbanization projects don't come in average categories, so dealing with exceptions to the rule has been a constant challenge. As Developer 11 (2014) explains,

> "When you're doing a building like this [adaptive-reuse of a historic building], are you able to get that building to code as if you built it brand new from the ground up? No, you can't! What they [the City of Kitchener] recognize is that before we fixed it up, this building, like a lot of other buildings, posed a lot of risk to the city – bad exiting, poor systems… just not a safe building. They understand that from where it was to where we've taken it is a massive leap and when you're doing these things you need a little bit of latitude at times, without compromising anything drastic of course."

When asked about success factors behind previous reurbanization projects, interview participants frequently cited flexibility and creativity – the ability to work with imperfect information and make changes on the fly.

Collaboration and communication between planning staff and developers appeared to be the starting point for flexibility and creativity. The balance of developers reported positive experiences working with planning staff and other related departments in Kitchener-Waterloo, which often lead to information sharing, collaborative problem solving, and streamlined approval processes.

5.3.1.2 Financial Incentives

Interview participants identified downtown development incentives as one of the most important building blocks for reurbanization in the Region of Waterloo. Large variances were reported between Kitchener, Cambridge, and Waterloo in terms of market strength, so it is difficult to comment on the importance of development incentives homogeneously. However, in the past ten years, all three municipalities have had landmark reurbanization projects that many participants felt would not have been viable without financial support. Developer 10 (2014) stated, "The first thing we look for is how much it can sell for, the second thing is whether it's in the boundary of the development charge credits cause you can't do high rise here [City of Kitchener] if it's not." A key component of the various financial programs was ensuring that it was economical for developers to implement high-quality urban design standards. Planner 14 (2014),

Planner 15 (2015), and Planner 16 (2014) explained that good quality intensification drives future intensification and that financial incentives have helped developers put forward higher quality projects that encouraged other high quality projects.

Additionally, while downtown financial incentives can amount to over $16,000 per unit for residential condominiums (City of Kitchener, 2013b), both planners and developers expressed the importance of these incentive programs beyond their monetary value. For instance, speaking about the intangible importance of downtown incentives, Developer 11 (2014) stated

> "It's the principle of it to say you know what, you're working in a municipality who recognizes some of those challenges. It's a perception thing. We say all the time, we can invest our capital in lots of different places, but we want to invest where you're on the same page with the city, and they get what you're trying to accomplish."

From a planning perspective, participants noted that the incentive programs tended to improve communication channels between developers and the planning staff. Planner 6 (2013) stated,

> "From the municipality's perspective, there is a lot of value in the incentives because it gets developers in the door early. So with our Phase 2 ESA grants, we're talking to people during their due diligence period because they want to find out about our programs; they want to see if it's a good fit. We get to hear the details and find out about opportunities much earlier than when they are coming in for a development application far far down the road. So we get a lot of upfront information, and through that program we also get a lot of environmental information, so that's valuable for us."

Overall, participants repeatedly stressed the importance of building strong working relationships and information sharing between planners and developers, which affirms that positive interactions between the planning agency and the development industry is a driver of plan implementation as suggested by Laurian et al. (2004) and Yu and Kwon (2011).

5.3.1.3 Progressive Planning Initiatives

Throughout the interview process, it became apparent that regional and municipal Official Plans and zoning by-laws had contributed to, rather than inhibited, the process of reurbanization. Both developers

and planners reported that the City of Kitchener, City of Waterloo, and the Regional Municipality of Waterloo had implemented land use designations that allowed greater height, density, and mix of land uses as-of-right along the Central Transit Corridor and other primary nodes. Participants identified this "pre-zoning" strategy an appropriate tool to guide intensification towards major nodes and corridors while protecting stable neighbourhoods. Several planners proudly emphasized that in many cases, pre-zoning has enabled developers to redevelop property at greater densities, with greater certainty, without requiring a zoning by-law amendment, which allows them to invest their money with greater confidence.

The Region's early introduction of growth management policies was another aspect that was frequently mentioned as a success factor. Several planners suggested that, unlike many other municipalities that may have only begun implementing reurbanization objectives into their Official Plan policies and zoning by-laws upon the introduction of the Growth Plan in 2006, reurbanization initiatives such as the RGMS (2003) and the City of Waterloo's Land Budget, Height and Density Study (2003) pre-dated the Growth Plan. Interview participants explained that by the time the Growth Plan (2006) came out, the development industry was already aware of the Region's plans to develop Rapid Transit and redirect growth to the core, and that most of the prime development opportunities along the CTC had already been acquired by developers who were simply waiting to bring key projects to market. Overall, participants frequently referred to the Region as being "ahead of the curve."

5.3.1.4 Influence of the Rapid Transit Planning

Although this study did not explicitly focus on transit, the Region's plans for Rapid Transit were frequently mentioned as a factor contributing to greater levels of intensification along the CTC. At the time of study, there seemed to be endless speculation over whether the designated Rapid Transit Station Areas would spur intensification in anticipation of the LRT or whether development patters would continue as they have. While available data suggests that new building permits are starting to concentrate around Rapid Transit Station Areas (Region of Waterloo, 2014a), long term trends are still speculative.

Interview participants suggested that planning decisions to reduce parking requirements within Rapid Transit Station Areas have enabled greater densities that would not otherwise have been possible. With limited space for on-site parking, developers reported a direct relationship between lower parking ratios and higher densities. The following quote demonstrates this point,

> "The LRT provides, in my opinion, a huge opportunity. Because this project [name undisclosed] would be a lot smaller if I had to provide 1.2 spots per unit. If I can get a ratio of 0.7 spots instead of 1.2, it will be that much more dense because of it." (Developer 17, 2014)

Although it was widely reported that reduced parking requirements enable greater density, there was not consensus whether LRT would actually reduce parking requirements beyond a meaningful threshold, especially in residential buildings. While higher order transit within the Region may facilitate reduced parking requirements for intra-city travel, the need for inter-city travel may sustain the demand for residential, on-site, parking despite the LRT.

> "KW is still a little bit isolated, so unless you never leave the region, even if the LRT is up and running, I don't see people giving up their car. I think it's just too soon. People have to sort of get that it will be decades before you have buyers who say I don't need a car here in any great numbers that would affect the way that you build a building." (Developer 10, 2014)

The need, or demand, to travel to other cities for business and entertainment highlights the importance of further developing the Kitchener to Toronto rail service along with other inter-city bus services to reduce automobile dependence.

Several participants highlighted the importance of the LRT for reurbanization beyond reducing parking requirements or getting people from point A to point B. Participants pointed to the symbology of the Region's investment in the LRT and other core-area initiatives.

> "An engineer would tell you that busses are cheaper, almost as fast, and more flexible, so why wouldn't you have busses right? But a developer will tell you that it's a matter of commitment. If the city and region don't commit to the service then I'm not going to commit to this piece of land." (Developer 17, 2014)

The perpetuity of the proposed LRT platforms resonated with several developers as it provides long-term certainty about the location of transit services.

> "Adaptive bus rapid transit is more flexible and it's a lot cheaper… But from a development standpoint, the fact that it's more flexible means that it can stop servicing an area that you're counting on it to service." (Developer 13, 2014)

Like the LRT, other forms of core-area investment such as the University of Waterloo's School of Pharmacy in Kitchener or the Centre for International Governance Innovation (CIGI) in Waterloo seemed to provide developers with confidence that other agencies, firms, or institutions were contributing to downtown renewal efforts as well, which strengthens the value of their existing investments.

Consequently, several developers felt that landowners in close proximity to proposed LRT stations tend to over-estimate the value-added to their property.

> "There are some big parcels over at Charles and Ottawa, but we've had brokers coming to us trying to sell us stuff there and they are just completely out to lunch. They want huge values – they say ohh the LRT is going to be going out front, we should be selling this land for you know X millions of dollars and they are just out of touch with reality because the market for product in that area is probably ten to fifteen years away in my view." (Developer 11, 2014)

> "The problem though is that the LRT has created so much opportunity that every land owner on it thinks their value has doubled, tripled, quadrupled, when in reality it's much more modest, you know." (Developer 17, 2014)

Overall, whether or not empirical evidence suggests a causal relationship between Rapid Transit stations and development patterns, the developers interviewed in this study reported significant speculation within Major Transit Station Areas.

5.3.1.5 Economic restructuring

Several interview participants suggested that the Region's, and particularly the City of Kitchener's decision to refocus its assets towards downtown to develop a knowledge-based economy rather than

expanding its industrial greenfield assets was a significant turning point for development trends. Planner 16 (2014) commented,

> "The idea of shifting attention to the centre of the city to reurbanization as part of a strategy for building a new competitive economy was controversial at the time and took a fair amount of chutzpa on the part of the council."

While the concentration of high tech firms in downtown Kitchener's Innovation District such as Google, Desire2Learn, and EA Sports, just to name a few, only represent a small portion of the city-wide employment base, several participants suggested that this business cluster is attracting a lot of private sector investment, which continues to expand in downtown Kitchener. The City of Kitchener's Economic Development Investment Fund (EDIF) was also credited with spurring large amounts of public-private sector investment in Downtown Kitchener. The City of Kitchener committed $110 million to the EDIF in 2003 that has supported the following downtown projects (City of Kitchener, 2014b):

- University of Waterloo School of Pharmacy - $30 million
- Wilfrid Laurier Faculty of Social Work - $6.5 million
- Downtown parking improvements - $5.5 million
- King Street Master Plan - $3.3 million
- Victoria Park improvements - $2.7 million
- Downtown community centre - $1.7 million
- Communitech Hub - $500,000

The City of Kitchener (2014b, p. 2) suggests that these investments have created a "remarkable turnaround, with the city and especially the downtown recognized as a location for innovation, entrepreneurship, and a sought-after urban lifestyle." It's debatable whether the City of Kitchener has actually achieved a "sought-after urban lifestyle" to date, but there does appear to be momentum in that direction.

5.3.2 Opportunities for Investment

The feasibility of accommodating future growth in the built up is largely related to the conditions, character, and capacity existing property along the CTC. As such, this study explored expert feedback on four key reurbanization zones: Uptown Waterloo, Midtown Waterloo/Kitchener, Downtown Kitchener, and Downtown Cambridge (Galt). From both a provincial and local policy perspective, the Urban Growth Centres are considered primary focus areas for reurbanization within the hierarchy of designated nodes and corridors (Filion, 2007; Ministry of Infrastructure, 2006b; Region of Waterloo, 2010c). For this reason, I decided to focus the site-specific investigation within these primary reurbanization zones.

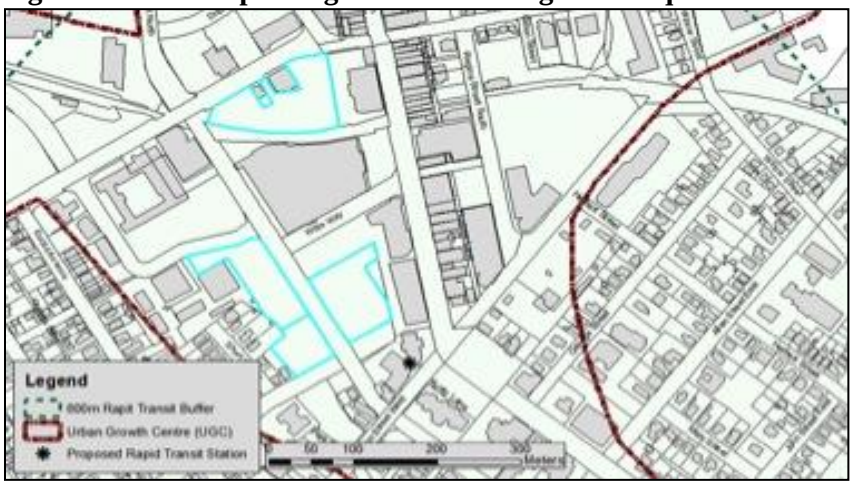
This section presents the findings from key informant interviews on each reurbanization focus area. Each subsection begins with an overview of the area and then progresses into a discussion about the site-specific "Opportunities for Investment" that were identified in the Region's Community Building Strategy (2013) along with additional properties identified by participants. Finally, this section summarizes interview participants' views on differences in the development climate for reurbanization between Kitchener, Cambridge, and Waterloo.

5.3.2.1 Uptown Waterloo UGC

Waterloo's Urban Growth Centre is expected to accommodate 200 people and jobs per hectare by 2031 and function as the City's focal point for economic, social, cultural, residential and administrative activities (City of Waterloo, 2013). Uptown Waterloo has accommodated numerous reurbanization projects in the past ten years; however, participants noted that Waterloo's UGC is smaller than downtown Kitchener's and has stable neighbourhoods tight to its core, which could limit the number of viable development opportunities. This section highlights three development areas that exemplify the land available for reurbanization within the Uptown UGC.

1. Surface parking lots surrounding Town Square

Figure 6 – Surface parking lots surrounding Town Square



Parcel Size: Combined lots ~ 7.3 acres
Zoning: Waterloo By-law 1108: C8-25, C2-25, MR-25

The surface parking lots surrounding the Uptown Public are in the heart of Uptown's Commercial Core and will be surrounded by the proposed LRT route. The majority of these parking lots are municipally owned and service the surrounding businesses that do not provide on-site parking. The size and location of these lots would be suitable for mid to high-rise development with active uses at street level (Region of Waterloo, 2013).

However, participants reported that there have been several proposals to redevelop sections of these parking lots, but that an inability to arrange for new structured parking has prevented development from proceeding. Regarding this "Opportunity for Investment," Planner 8 (2013) stated,

> "Until the city develops a plan, has the money, and is able to provide that amount of parking somewhere else in a municipal parking structure, they're probably not going to sell those lots – they're probably not going to develop those lots."

Other participants noted that business owners would be worried about too many parking spaces disappearing as it might encourage people to shop at either Conestoga or Fairview Mall instead of downtown. Filion and Bunting (1993) found similar concerns among merchants during Kitchener's urban renewal efforts in the 1960s. Additionally, several interview participants noted that it would be incumbent of the municipality to wait until the LRT is operational to reassess the modal split and to extract greater value from a surely appreciating public asset.

2. The Uptown Corridor

Figure 7 - Residential/commercial property along King St. N and Regina St. N

Parcel Size: N/A
Zoning: By-law #1108, C8-25

Figure 8 - Example of a residential land assembly along the Uptown Corridor

The under-utilized residential and commercial properties along King St. N and Regina St. N in Uptown are suitable for mid to high-rise infill and intensification. The majority of property in this area is zoned as C8-25 under the City of Waterloo's zoning by-law #1108, which allows up to 25 building storeys and a mix of uses. Through the acquisition of multiple residential lots, student-oriented buildings have dominated redevelopment in the northern portion of Uptown; however, these student buildings are not as prevalent in the Uptown UGC. South of Bridgeport Rd. E, there are many residential homes that have been converted to small businesses along Regina St., whereas King St. has many coffee shops, bars, restaurants, and clothing stores.

While vacancy rates remain low in Uptown, the development potential in this area is limited by several caveats. Most of the lots are not large enough to facilitate increased density on a site-by-site basis and therefore must be consolidated with adjacent lots. Within the Commercial Core, many existing buildings have been renovated or repurposed, which often inhibits land assembly. Developer 9 (2014) used a development on Regina St. N in Uptown to exemplify this limitation.

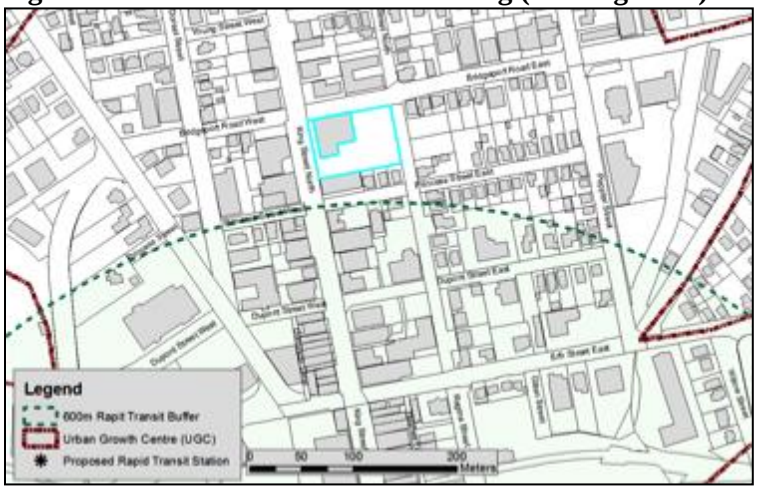
> "A great example is the building at Regina and DuPont. There is a Seven Shores is in there and a yoga place upstairs – it basically looks like a stacked townhouse development. Commercial main floor, two floors above. Terrific, sensitive, infill development, but that site will prevent development on that entire city block from a homogenous point of view because you can't come out to Regina now." (Developer 9, 2014, p. 13)

The repurposing or renovating of under-utilized property creates a difficult situation to deal with from a planning perspective because the building improvements add vibrancy to the streetscape and increase the tax base but they also inhibit land assemblies and thus intensification.

Additionally, there are numerous heritage-controlled properties in the UGC. While it was justifiably recognized that heritage resources are integral to the character of Uptown, from a land development perspective, developers expressed an aversion to these sites due to the greater administrative burdens, greater design contingencies, and reduced development yields.

3. Former Canada Post Office

Figure 9 – Former Canada Post Building (70 King St. N)



Parcel Size: ~ 0.95 acres
Zoning: By-law #1108, C8-25

Figure 10 - Rear view of the former Canada Post site

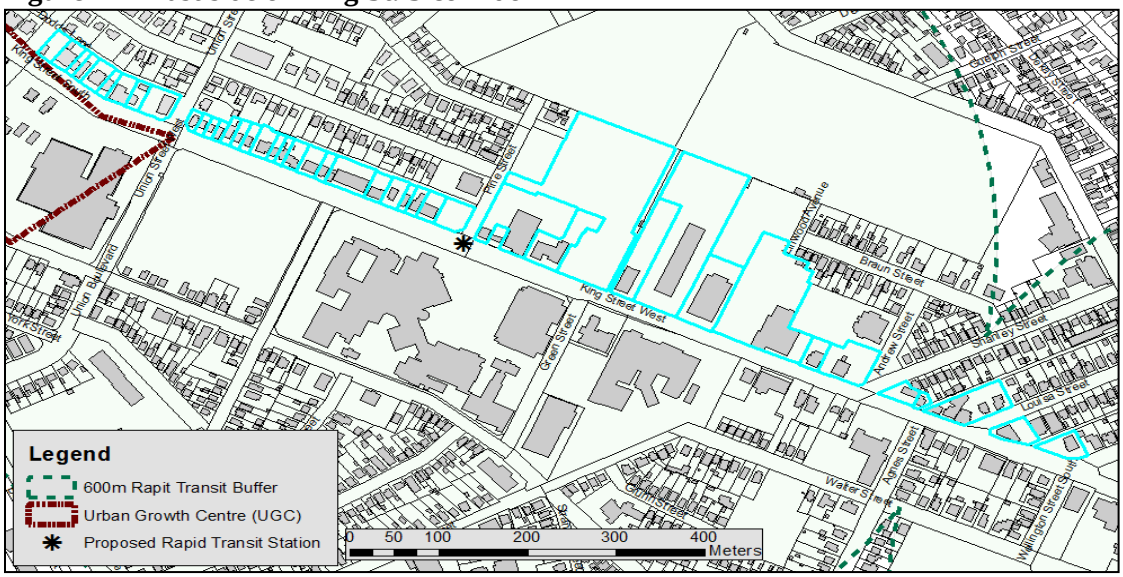
At about one acre, this site is one of the largest vacant/under-utilized parcels left in Uptown and could easily accommodate a mid to high-rise mixed use building. The Canada Post building has been vacant for several years and there are currently no signs of activity.

5.3.2.2 The Midtown Corridor

The mid-town corridor connects Kitchener and Waterloo along the spine of the Central Transit Corridor. Although the midtown corridor is not explicitly recognized in the Growth Plan, numerous participants believed that it was important to build a better network between Uptown Waterloo and Downtown Kitchener as it is currently a bit of a "no-man's land." With Sun Life Financial and the Grand River Hospital taking up a large portion of the west side of King St., the remaining opportunities include large surface parking lots, under-utilized residential and office buildings, and a large brownfield site.

4. East side of Midtown Corridor

Figure 11 - East side of King St. S corridor



Parcel size: N/A
Zoning: Waterloo #1108: C2-6, Kitchener: MU-2/MU-3

Figure 12 - Examples of building types along the east side of King St. S

This opportunity area spans the east side of King St. S from John St. E to Wellington St. N. Existing land uses generally include single and duplex homes, residential buildings converted to commercial space, small-scale office buildings, and surface parking lots.

There were conflicting opinions among participants about the availability of viable intensification parcels in this area. Participants generally agreed that the existing built form under-utilizes the available space and is visually unappealing; however, there was a difference in opinion over the practical development capacity of this corridor. Several participants viewed the consolidation of lots along King St. S as a promising opportunity. For example, Planner 3 (2013) noted,

> "I think anywhere along that side of King Street between Waterloo and Kitchener, from there right up, that whole side in my opinion can be

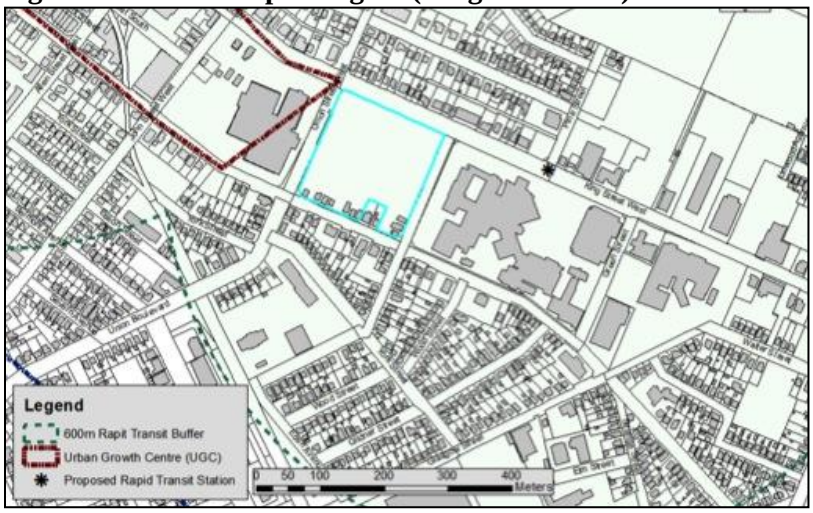
> redeveloped because they're all small buildings and a lot of them are under-utilized."

On the contrary, several other participants questioned the economic feasibility of land assembly and redevelopment along this corridor. Although many of the commercial and office buildings are under-utilizing available space, many of the buildings are occupied by professional offices such as doctors, lawyers, etc., which generate large amounts of revenue and drive up the price of the property compared to old residential houses. Additionally, the zoning along this strip permits less height and density than in Uptown and Downtown – Planner 8 (2013) jokingly stated, "what are you going to tear down a three storey office to put up a five storey office?"

In terms of marketability, several participants cited the lack of amenities and unappealing adjacent buildings as characteristics that would hurt unit sales. Furthermore, Developer 17 (2014) commented that the recent extension of Kitchener's downtown development charge exemption to southeast of the existing boundary will attract development before the Midtown corridor. Lastly, this strip of land is immediately adjacent to the Mary Allen neighbourhood, which has voiced concerns about the encroachment of height and density.

5. Sun Life parking lot

Figure 13 – Sun Life parking lot (King and Union)



Parcel Size: ~ 6 acres
Zoning: Waterloo #1108: C1-25 & Kitchener: MU-3

Located on the west side of King St. S on the corner of King St. and Union Blvd, this privately owned six-acre surface parking lot is the largest parking lot within the case study boundary. The lot is large, flat, free of existing buildings, and it fronts King Street with excellent access to public transit. With potential to accommodate significant density, many planners and developers agreed that it is a poor usage of the space and thus a prime candidate for redevelopment. However, in June, 2014, Sun Life announced that it plans to demolish 10 houses adjoining employee parking to create additional parking spaces (B. Davis, 2014) – a testament to Sun Life's need for employee parking.

One of the first limitations on this site is that it is heavily utilized; several participants commented, anecdotally, that the majority of Sun Life employees commute in from the suburbs, creating a high demand for parking. Offsetting surface parking with a parking structure creates two foreseeable challenges. 1) Employee parking would be displaced during the interim twelve to eighteen months it takes to construct a new parking structure; and 2) parking structures are very expensive to build and likely beyond Sun Life's current needs. As Planner 7 (2013) points out, with a large corporation like Sun Life Financial,

> "You're having that discussion in Toronto, not here. So you have to be able to say to them, this is how we plan to make money, because for them it has to be about at the very least breaking even, but mostly it's about how to make some money out of this."

The general consensus among participants was that the Sun Life parking lot will eventually redevelop when fewer employees require parking and when land prices are high enough to justify building a parking structure.

6. RMS Site

Figure 14 – RMS Site (105 Glasgow St.)

Parcel Size: ~ 47 acres
Zoning: Kitchener, M2-21U

"It's a huge investment opportunity. Where else are you going to find 47 acres (Planner 7, 2013)?" The RMS site is a former tire manufacturing facility with a special machinery group renting a large portion of the lot. With 47 acres, this site has the potential to develop as its own community or to

augment the surrounding areas such as Belmont Village and downtown Kitchener (Planner 7, 2013). Participants noted that it could likely accommodate a wide range of uses such as residential, office, commercial, park space, or institutional. The Community Building Strategy (2013) suggests that the site could be used to connect the Iron Horse Trail with the new Downtown Kitchener Multimodal Transit Hub.

The sheer size of the property and the existing buildings was identified as the biggest challenge to redeveloping this site. "There are probably only a few firms in Canada who would tackle a site that size. Locally, I'm not even sure. Plus it would need to be master planned (Developer 9, 2014)." Participants also expressed concerns over the extent of brownfield contamination, which would add even more complexity to the scope of a potential redevelopment.

> "There would be remediation required on the site – no question – you don't manufacture rubber for a century and then not have anything on the site. It's also a heritage building – it's a daylight industrial building." (Planner 7, 2013)

Compatibility with adjacent property was also identified as a limitation; narrow residential streets and stable neighbourhoods surround the site. Lastly, participants noted the distance to public transit and lifestyle amenities as a limiting characteristic. There are many other, more manageably-sized parcels in downtown Kitchener that are better located than the RMS site (Planner 8, 2013).

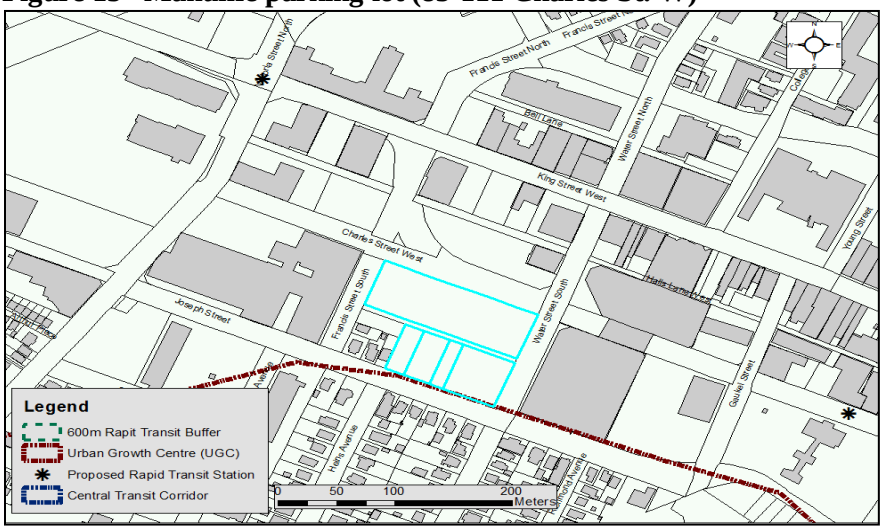
5.3.2.3 Downtown Kitchener UGC

The Downtown Kitchener UGC is expected to accommodate 200 people and jobs per hectare by 2031(City of Kitchener, 2013a). With the future Multimodal Transit Hub locating near King St. W and Victoria St. N, participants described the surrounding area as the epicentre for activity in the Region. Speaking about current developments in the Innovation District in downtown Kitchener, Planner16 (2014) commented, "That's ten years construction; I don't think the cranes are coming down for ten or fifteen years in this area because this crane [pointing] is building 200,000 square feet." Participants also

identified Kitchener's financial incentives as a critical motivator for continued growth of the downtown, especially with the extension of development charge exemptions southeast of the pre-existing downtown boundary. The general consensus among interview participants was that all types of property within a reasonable buffer (500-800m) of the proposed Multimodal Transit Hub and the existing Innovation District would be prime opportunities for investment. Two specific development opportunities are discussed.

7. Manulife parking lot

Figure 15 –Manulife parking lot (85-111 Charles St. W)



Parcel Size: ~3 acres
Zoning: Kitchener, D-5

This site, like other surface parking lots identified thus far, could accommodate a range of mid to high-rise buildings with commercial/retail at ground level. There has also been talk that the City of

Kitchener plans to build a new structured parking garage at this location as soon as a private sector partner can be arranged (Pender, 2014). Whatever the end-use, this site is located within walking distance to many of Kitchener's major amenities.

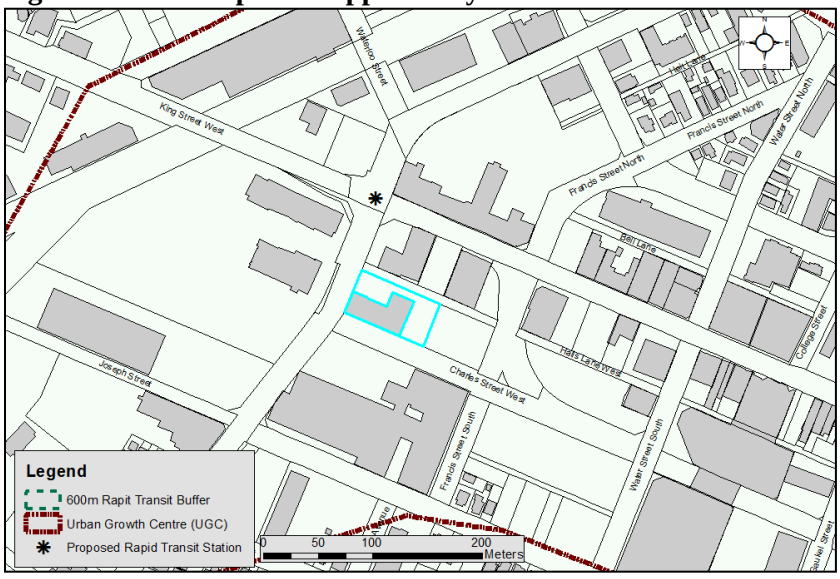
As with the Sun Life parking lot, displacing employee parking was identified as the biggest limitation to redeveloping the Manulife parking lot:

> "So you go to remove one of these parking lots that Manulife owns. All those Manulife people live out in the burbs and they come downtown to work 9:00-5:00, so where are they going to park? So you have to replace the parking count that's there, but you have to literally take it and put it underground or above grade before you can even start to provide more parking for what you're putting on top of it." (Developer 17, 2014)

Environmental contamination was identified as another potential issue with redeveloping this parking lot, and many other parking lots in downtown Kitchener. A few participants noted that many surface parking lots in Kitchener and Cambridge are covering contaminated soil and that redevelopment to a more sensitive use, such as residential, could encounter significant cleanup costs.

8. Downtown Kitchener U-Haul site

Figure 16 – Development Opportunity: U-Haul site in Downtown Kitchener



Parcel Size: ~ 0.84 acres
Zoning: Kitchener, D6

This property is currently held and operated by the moving company, U-Haul. On site, there is a small single-level building surrounded by several different types of moving vans. Immediately surrounding this property is the Lang Tannery tech hub to the west, the School of Pharmacy to the north, and the construction site for One Victoria condominiums to the east. With such a variety of surrounding land uses, this site has the potential to accommodate high-density office, commercial, residential, or institutional development. Planner 14 (2014) commented on the existing U-Haul site, stating that it's "not a use that is generally considered to be a good fit for the type of downtown that we're trying to build."

The largest barrier to redeveloping this site was not related to its physical capacity or layout, but that the existing owner is not motivated to sell. While cautious not to speak for the property owner, several participants suggested that numerous offers to purchase the property have been turned down. Planner 3 (2013) noted that U-Haul has a valuable portfolio of real estate holdings and that the owner's decision not to sell is a strategic move.

5.3.2.4 Downtown Cambridge (Galt UGC)

The Galt UGC is expected to accommodate 150 people and jobs per hectare by 2029 (City of Cambridge, 2012). Cambridge's target of 150 people and jobs/ha is less than Kitchener and Waterloo's 200 people and jobs/ha; however 150 people and jobs per ha is more than double the city's UGC density of 71 people and jobs/ha as of 2006 (Allen & Campsie, 2013). The City of Cambridge's Growth Management Strategy

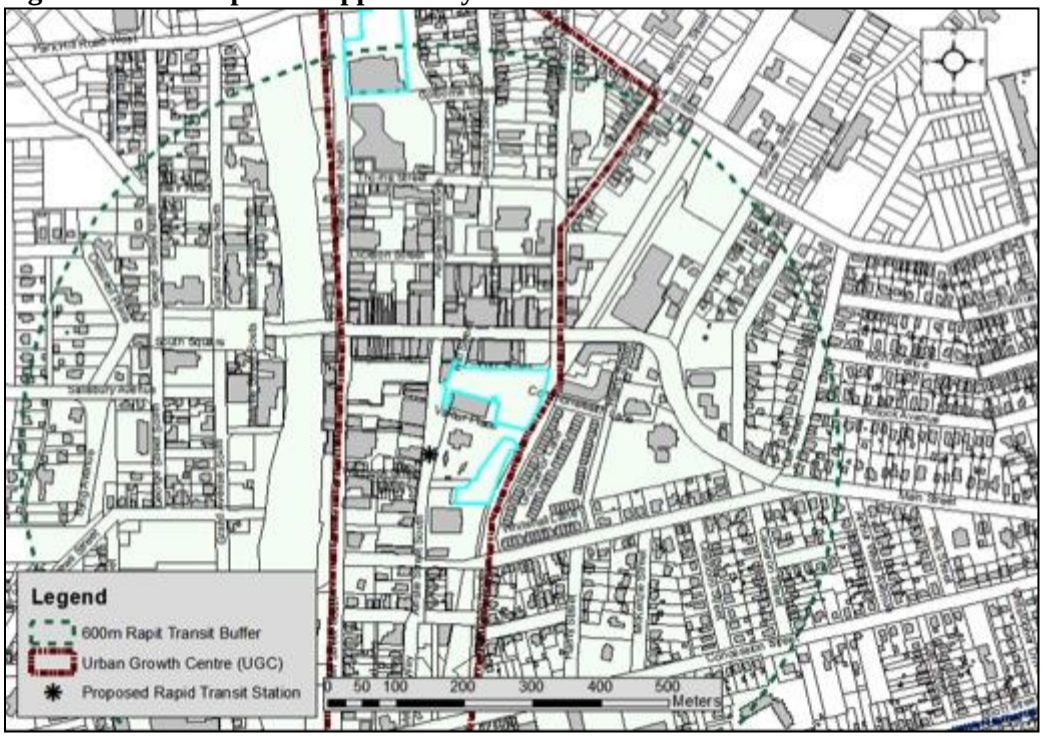
(See City of Cambridge, 2009) divides the UGC into three sections: Northern UGC, South of Colborne St., and South of Warnock St. The City of Cambridge (2009) offers the following description of each section:

- "The northern section is characterized by large retail stores and single detached homes.
- The area south of Colborne Street contains two major office buildings and several multiple-residential buildings with the balance being made up of two- and three-story attached commercial structures.
- This form is consistent up to Warnock Street at which point single detached housing along with single- and multi-story commercial/industrial buildings dominate the built form."

Visual observations confirmed this description.

9. Development opportunities in the Galt UGC

Figure 17 - Development Opportunity: Galt UGC



Participants noted that the Galt UGC has high a prevalence of historic buildings with heritage significance, and that intensification of retail and commercial property would likely involve some type of renovation or adaptive reuse that maintains the original building and its character. The City of

Cambridge's 2013 Downtown Urban Design Guidelines (See City of Cambridge, 2013) actually allow, where appropriate, and suggest best practice measures for additions to heritage buildings.

Surface parking lots are also quite prevalent in the Galt UGC. The Community Building Strategy (2013) identifies both the parking lot adjoining the Ainslie St. Terminal and the Food Basics parking lot as "Opportunities for investment." The Ainslie St. Terminal site offers large, open, parcel fabric and has been described as the "southern gateway to the CTC," and an "important point of access to the Region" (Region of Waterloo, 2013).

Figure 18 - Examples of surface parking lots in the Galt UGC

The City of Cambridge (2009) notes that sites south of Main Street have larger parcel fabric and will likely be redeveloped before the northern portion due to the challenges of land assembly. Additionally, interview participants noted that the Galt UGC is not necessarily expected to accommodate the majority of intensification, as other sections of downtown west of the Grand River along with other nodes and corridors such as the CanAmera node and the Hespler corridor may be more appropriate for reurbanization.

Participants noted that it would be premature to start eliminating parking spaces in downtown Galt as the City of Cambridge is still heavily automobile-oriented. Therefore to utilize the available surface parking lots as intensification sites, one would need to replace the lost parking stalls in a parking structure, which may not be economically feasible. Planner 19 (2014) stated,

> "We [the City of Cambridge] don't have the money to put a parking facility in right now, so we don't want to start eliminating parking spaces in the downtown core . . . I don't know if the city would have the appetite to redevelop a parking lot at this stage with anything other than a parking structure."

Overall, land values and market rates in Galt are not high enough to justify redeveloping surface parking if it requires structured parking, as the return on investment of new developments could be comparatively worse than the revenue generated from parking.

Additionally, environmental contamination is widely prevalent in the Galt UGC; Planner 19 (2014) stated, "Basically the entire Galt core is on contaminated property." The Galt UGC also has several topographical features such as an underground bedrock formation, a high water table, several Wellhead Protection Areas, and a pervasive flood plain, which create additional hazards for brownfield remediation and several other aspects of the development process. Participants noted that these additional complications further limit the economic viability of intensification in this area.

With several church priers, bell towers, and tremendous heritage resources in the Galt UGC, intensification efforts must be sensitive to historic sightlines and the integrity of the current built form. Planner 19 (2014) noted that the City ended up implementing lower building height standards in the UGC due to community concern over preserving its historic character. As a result, Planner 8 (2013) explained that greater height and density will need to be accommodated around the periphery of the UGC where adjacent property is less susceptible to adverse impacts.

5.3.2.5 Differences between Kitchener, Cambridge, and Waterloo

This research studied reurbanization across the Region of Waterloo's three urban municipalities, and while there were many shared regional characteristics, it became apparent that there were some stark differences between the three cities, especially in Cambridge. Developer 18 (2014) stated, "Most of my experience is in Kitchener and Cambridge, and they are night and day. Politics, process, requirements, all

the way down to the buyers, they are totally different." The following section summarizes key distinctions between Cambridge, Kitchener, and Waterloo identified by interview participants.

Waterloo has traditionally been a greater magnet for investment and job growth than Kitchener or Cambridge, but many participants felt that Kitchener is becoming an increasingly competitive location for residential and employment growth.

> "Big name players are now located in Kitchener and Cambridge, where before, I mean I think if you were looking back a decade and you knew Google was coming to town you knew they were in Waterloo. Period. Now, it's a non-issue. They're in Kitchener and expanding in Kitchener." (Developer 13, 2014)

Most interview participants did not believe that Cambridge was on the same playing field as Kitchener and Waterloo in terms of intensification potential. One participant related this discrepancy to what they described as a "blue-collar mindset":

> "Cambridge. Oh man, once a week I sit down and think about it, right. Why not Cambridge? The thing I like about Kitchener-Waterloo is that it's got the blue to white collar shift. You had a lot of manufacturing jobs that have transitioned to high tech and office. Cambridge is still stuck in that kind of blue-collar mindset." (Developer 17, 2014)

While the University of Waterloo's School of Architecture has been a positive addition to downtown Galt, participants highlighted that the university/college presence in Kitchener-Waterloo has a much larger critical mass and suggested that it has been a much stronger catalyst for development. Additionally, many participants felt that the proposed aBRT transit improvement in Cambridge was less "sexy" than the LRT infrastructure being implemented in Kitchener-Waterloo, which further polarized Cambridge from Kitchener-Waterloo.

Market demand was identified as a key driver for core area growth and development, and many participants felt that Cambridge still has a poor market for infill and intensification. There was a perception and perhaps even negative stigma associated with Cambridge. For instance, Planner 1 (2013) stated,

> "You know when you look at parcels of land, and when groups come to me, their first choice of where they want to go is here in Uptown, then maybe downtown [Kitchener], but they're not even talking Cambridge. I think their core [Cambridge] is phenomenal and it's got tremendous potential, but for some reason the industry is not as interested in Cambridge – I can't explain it"

Others were more overt with their description of the housing market in Cambridge.

> "It's just not a good market to be honest. It's been proven a number of times. Riverbank Lofts is having a very tough time getting off the ground and Waterscape is very slow as well. You know, it is what it is. It's Cambridge; it's always kind of been the ugly duck." (Developer 17, 2014)

Another factor separating Cambridge from Kitchener and Waterloo was the land available for development. Many participants pointed to the fact that there is less greenfield land available in Kitchener and almost none available in Waterloo, which has forced new growth and development inwards. On the other hand, Cambridge still has available greenfield opportunities. As highlighted in Chapter 3, the City of Cambridge has incorporated 223 hectares of new Designated Greenfield Area since 2006 while the City of Kitchener only designated 36 hectares and the City of Waterloo designated zero new hectares after 2006 (Allen & Campsie, 2013). Planner 20 (2014) stated,

> "I would suggest that the majority of greenfield development over the next ten years will be in Cambridge, not in Kitchener, and definitely not Waterloo, which is built out."

Several participants suggested that the remaining greenfield opportunities could likely take priority over urban sites in the Galt UGC, as greenfield opportunities are generally easier and less risky than infill opportunities (De Sousa, 2000; Hayek et al., 2010; McCarthy, 2002).

5.3.3 Ongoing Challenges

Although building permit data (Region of Waterloo, 2014a) indicates that the Region of Waterloo is collectively reaching many of its reurbanization targets, discussions with planners and developers revealed that there are still many challenges to spurring intensification along the CTC. The Region of Waterloo has numerous under-utilized properties along the CTC with an active potential to sustain reurbanization; however, many of these remaining development sites are more onerous to develop compared with traditional suburban greenfield opportunities (Region of Waterloo, 2007). As identified throughout key informant interviews and the data coding process, the most frequently cited limitations can be grouped into six major themes, which are highlighted in Table 25. Each interview participant was asked to explain the most challenging aspects of redeveloping under-utilized property through infill, intensification, and adaptive re-use and how these challenges affect development outcomes. The number associated with barrier represents the number of interviews in which that factor was mentioned and discussed.

Table 25 - Barriers to Reurbanization

Prominent Barriers	Number of interviews in which mentioned (N=18)
Brownfield remediation	18 (100%)
Land acquisition and assembly	14 (78%)
Accommodating the automobile (parking economics)	14 (78%)
Market dynamics	8 (44%)
Development regulation	6 (33%)
Building and maintaining community support	5 (28%)

These six limitations had an overarching impact on land development across the Region of Waterloo, but distinctions between Kitchener, Waterloo, and Cambridge will be noted when necessary.

5.3.3.1 Brownfield Remediation

"It's eye opening just how much money you can spend on a brownfield cleanup before you've changed the conditions one iota (Developer 13, 2014)." With historic roots in the industrial and manufacturing sector, the Region of Waterloo has many former warehouses and factories in urban areas that are heavily polluted with environmental contaminants. Former industrial and manufacturing buildings can be found in excellent locations and present phenomenal opportunities for reurbanization. Brownfield sites are often the only means of acquiring critical masses of land for redevelopment without land assembly (Farris, 2001; Steinacker, 2003). However, brownfield remediation has a tendency to be cost-prohibitive and unpredictable.

The cost to remediate a brownfield site can escalate quickly and overrun anticipated margins. In Planner 5's (2013) experience, "It happens time and time again where a client will come back and say not worth it. Not worth it. It's going to be way too much money upfront. Too much risk, not enough gain. It's a business decision for them." Other participants also told stories about past projects that suffered from brownfield complications

> "Some developers I've talked to will claim to this very day, and I believe them, that they've lost money on projects mostly because of the cleanup costs." (Planner 15, 2014)

In addition to the sheer cost, remediation requirements were reportedly very difficult to predict and often not discovered until a developer has committed to the project (Planner 14, 2014). The following quotes demonstrate two developers' experience dealing with the uncertainty of brownfield remediation.

> "You can only poke and prod at these buildings so much. At the end of the day you find out how much you have to deal with when you're finished. You can do sample testing all over the place but there is no way to totally quantify everything until you've actually finished it all, and it's nothing to blow through extra hundreds of thousands of dollars on things that crop up along the way, so those are the you know some of the big fundamental challenges that we've experienced." (Developer 11, 2014)

> "The biggest thing with contamination is that you could drill holes, you can have every PhD looking at it and giving you, oh ok here is the worst

> case, but it's always going to cost two or three times what anyone says. The problem with contamination is that the cost is unknown to fix it." (Developer 17, 2014)

The combined cost and uncertainty also creates a difficult financial structure for developers. It is a timing issue; remediation is very capital intensive as it requires large sums of upfront cash. Developer 17 (2014) explains, they are nearly impossible to finance and require large investments right from the start: "It turns so many guys off because you can't finance it upfront; you have to literally take cash from your pockets and throw it in the project. The banks won't touch it." Planning literature (See Farris, 2001; Simons, 1998; Steinacker, 2003; Suchman, 2002; Wyly & Hammel, 1999) also recognizes the difficulties of financing brownfield cleanups due uncertain outcomes, immeasurable risk, and downstream liabilities. The Region's Brownfield Financial Incentive Program (BFIP) offers a ten year Tax Increment Grant, which provides significant relief to developers, but the rebate funds are collected over a ten year period and don't necessarily solve the upfront nature of the cash flow problem.

One of the most common methods for removing contaminated soil was found to be the "dig and dump" approach whereby the contaminated soil is physically removed from the site and trucked to a landfill. It's rather straight forward, but costly and not very sustainable. Planner 6 (2013) suggested that we should think twice about paying developers to simply truck contaminated soil to the landfill; perhaps the planning department should be facilitating a more sustainable process:

> "Soil is not just a waste; it can be a resource and it should be treated as a resource. So instead of that material going to a landfill at a HUGE cost, like we're talking about millions and millions of dollars, we should be looking for ways to reuse that soil once it's appropriate for another use." (Planner 6, 2013)

Developing a better approach to soil management could be a great alternative to the current tax increment grant rebates; "if we can figure out a way to help developers deal with soil more simply, than that might be just as valuable as offering them money to clean up the sites (Planner 6, 2013)."

Although nearly every participant identified brownfield contamination as an important issue, many also indicated that developers are becoming much more sophisticated with the cleanups and treating it as just another cost of business.

> "With the Brownfield contamination, I think people are getting a little more comfortable with learning that you can get to the other side – that it doesn't have to be completely cost prohibitive or onerous." (Planner 4, 2013)

Other participants reported that brownfield redevelopments tend to be an easy win from a community building perspective because it is replacing something that wasn't looked at too favourably in the community (Planner 14, 2014). Overall, it appears that brownfield remediation has become an integral part of the reurbanization process and is becoming viable to a wider range of developers.

5.3.3.2 Land Assembly

Interview participants noted that many of the easiest sites along the CTC have already been developed and that the remaining inventory of land is far more complicated. Planner 15 (2014) noted,

> "The easy parcels of land have long since been owned and long since been developed. So now the tough parcels are left. They are either tough because they're contaminated, tough because they have bad locational criteria, flood plain issues or lot consolidation issues. So instead of dealing with one owner to make a transaction, now you have to deal with five or six."

Having to purchase multiple parcels from multiple different owners to assemble sufficient land for intensification was identified as a significant burden by both interview participants and planning literature.

Many of the remaining lots in the core areas of the CTC lack the size and configuration to support intensification on a site-by-site basis, which makes it difficult for a developer to obtain enough land for development. As Planner 3 (2013) states, "You can't have a bunch of small pieces getting redeveloped all on their own because you have to take into consideration zoning regulations like parking and setbacks." In addition to parcel size, parcel configuration poses many challenges as well; many of the fragmented

lots are also irregular in shape, which makes it difficult to utilize the parcel coverage as "you can't have an 's' shaped parking lot (Planner 3, 2013)." Therefore, to mitigate the problem of small, irregular shaped parcels, developers must acquire multiple lots and consolidate them (i.e. land assembly).

The need to acquire multiple parcels of land for development posed several challenges to planners and developers interested in reurbanization along the CTC. The first challenge related to negotiating with multiple private landowners who may not be motivated to sell. Some landowners reportedly held out for excessive amounts of money while others refused to sell due to emotional attachments to their property. Planner 15 (2014) commented, "I've seen it with some of the developers where they just can't get this little old lady to accept this big cheque and it's because it has nothing to do with money." Further, Developer 9 (2014) shared an experience where an individual purchase negotiation inhibited land assembly and prevented the preferred course of action in the City of Waterloo.

> "Our small one at Regina and Bridgeport - we would have preferred to go all the way out to Bridgeport road and get those 60 foot by 60 foot lots. One was a holdout for a ridiculous amount of money so we couldn't go all the way out. That building was designed originally to be twelve storeys with underground parking, but once the one guy decided he wanted around 3/4 of a million for his little house, that pooched the development. We had to bring it back down to four storeys. The city was on board with up zoning the entire site to twelve storeys if we got those houses, but we couldn't do it. We don't have the powers of expropriation; we only have the powers of negotiation, so those lots will be there in perpetuity until Bridgeport gets widened because the development potential is lost." (Developer 9, 2014)

Figure 19 - BPR Lofts in Uptown Waterloo

Filion and Bunting (2000) found similar issues in Downtown Kitchener in the 1990s where land holders were unmotivated to sell property, which delayed the evolution of the core. Further, studies on land assembly and economic behavior (See Cadigan et al., 2011; Eckart, 1985; Menezes & Pitchford, 2004; Strange, 1995) report that with an indivisible land assembly, the number of land owners (sellers) positively correlates with higher land prices and a greater chances of failure to collect all of the necessary parcels.

Another challenge that land assembly creates for planners, developers, and the general public, is property maintenance. As Planner 8 (2013) explains,

> "In the interim when a developer starts to assemble several properties, they're obviously not investing in the buildings that currently exist, so there can be a real challenge with property maintenance in the interim before the lot consolidation happens."

Figure 20 - Example of poor interim land assembly conditions in Uptown Waterloo

There have been several articles in the Waterloo Record documenting an ongoing disagreement between City Councilors and a local land developer over unsightly property conditions leading up to what has been described as a prolonged demolition in Downtown Kitchener (See Thompson, 2014).

Save for parking lots, developing on vacant land is a rare occurrence in a reurbanizing city, and dealing with existing buildings increases the difficulty of land assembly. Several developers lamented existing buildings as they often add undue cost to a potential land acquisition. Developer 9 (2014) explains, "We're only buying the acreage of the land. That is the hard part about valuating a lot – sometimes what's on it is worth more than the land vacant and that's challenging." Also, buildings with significant improvements or renovations within the past fifteen years or so can be uneconomical to buy and tear down. Revenue generating buildings can also add undue cost to a developer's acquisition.

> "If it's a use that's generating revenue, even if the site could easily accommodate fifteen storeys and it only has a one or two storey building, it will probably stay there for a while as whatever it is today because it's generating a lot of revenue for the current owner." (Planner 14, 2014)

Figure 21 - Example of an under-utilized revenue generating building in Midtown

Similarly, Planner 19 (2014) offers an example of how revenue-generating buildings have limited lot consolidation and redevelopment in downtown Galt:

> "In our Urban Growth Centre, which might not be like other Growth Centres, our buildings are occupied and functioning and we don't have a lot of vacant buildings in between. So if all these buildings are making money than no one will want to tear them down and sell in order to facilitate property consolidation."

Several participants explained that land owners tend to be skeptical or apprehensive about the information presented to them by speculative land developers. While the majority of participants thought that land assembly was more of a private sector issue and not something that planning departments can get involved with, Planner 15 (2014) explained that planners can facilitate the land assembly processes by offering neutral, unbiased information to property owners.

5.3.3.3 Accommodating the Automobile (Parking Economics)

Like many mid-sized cities, Kitchener, Cambridge, and Waterloo have a modal split that strongly favours the automobile; 81.4% of the employed labour force commutes to work in a car, truck, or van as a driver and 6.7% as a passenger while only 5.4% commute via public transit and only 4.3% walk (Statistics Canada, 2013a). Understanding parking demand and accommodating the automobile was cited as one of the most difficult aspects of facilitating growth and development in the UGCs.

> "If you are a city with significant greenfield resources, then urban office and residential opportunities are always going to have a disadvantage against suburban spaces in the way that they manage the automobile." (Planner 16, 2014)

As the above quote demonstrates, downtown areas cannot accommodate the automobile as easily as suburban areas can, so in the Region of Waterloo, parking has become a significant bottleneck for reurbanization.

Market demand for parking is dynamic and frequently changing, which makes parking requirements very difficult to regulate through zoning by-laws. Several participants shared the belief that parking requirements ought to be determined by market demand and should not be regulated in zoning by-laws. For example, Developer 17 (2014) stated,

> "I think parking shouldn't be part of the zoning by-law. I think the market should dictate what parking ratio you provide. If I have the balls to build a building with zero parking and I think the market is going to absorb it, then so be it."

On the other hand, several other participants discredited the notion that items such as parking should be completely de-regulated:

> "If you listen to some members of the industry they might say just get those controls out – just don't have them and allow any developer to come in. That's not the society that we live in. It might work for a handful that do it right, but there will be others that attempt to abuse it, so that's not a reality and the conversation wouldn't happen." (Planner 15, 2014)

> "We have to be very sensitive to when a developer comes in and says hey I can put up this eight storey tower and sell all of these units without parking; I should be allowed to because the market will support me. Yeah but everybody visiting your site is taking up the on-street parking that the local business rely on." (Developer 13, 2014)

> "Parking is the necessary evil so we're of the opinion that we shouldn't have a minimum but I understand why the city has to do that because there are time where it would become the neighbourhood issue. If you take away these lots and put up a residential development without any parking and it becomes the neighbourhood problem, the city has to solve that problem. But from our point of view, because we need to pre-sell

> condos, the market will say whether or not we got it right." (Developer 9, 2014)

Throughout the interview process, there seemed to be a constant tension over how to best reduce parking requirements in downtown areas without causing spillover into adjacent side streets and communities.

The majority of participants acknowledged that there is a direct correlation between parking requirements and density: higher parking requirements result in less density. "Parking is my biggest number one barrier to entry on any site (Developer 17, 2014)." Developer 17 (2014) further stated,

> "I will provide as little parking as humanly possible and will thereby maximize my unit count. Therefore, when I need to provide more parking, I have less units, which affects my development yield, which affects the economic model."

Most developers reported being extremely cautious about over-supplying parking not only because it limits their unit count, but because it also makes each project less cost-competitive as the cost of parking gets bundled into the price of the entire building.

The King Street corridor (Ainslie St. in Cambridge) occupies a significant portion of the three Urban Growth Centres. However, in each Urban Growth Centre, the central corridor is typically lined with historical buildings. Therefore, one of the only ways to increase density in these areas is through building additions and renovations, as demolition is often not a workable option. In the Uptown Waterloo UGC, for example, many of the historic buildings fronting King Street have been grandfathered into updated zoning by-laws, allowing them to rely strictly on street-parking. However, newly added floor space must comply with the current parking ratios. Developer 13 (2014) explains this dilemma.

> "If a structure was good enough to add a third storey, that adds value to you, but not if halfway through the process you find out your cost of offsetting the parking ate up the profit of that third storey, which it does in many cases. So as soon as you start getting outside the existing envelope, parking drives everything because as soon as you add one square foot, technically you need to provide parking for it. So you can't economically expand many of these buildings."

If the cash-in-lieu required to accommodate off-site parking in another garage ($35,000 per stall in the City of Kitchener[11]) outweighs the value of the building expansion, large tracts of property along the CTC will not be attractive investment opportunities.

Participants also noted that high parking requirements will inhibit further reurbanization from a broader economic development perspective as well. For example, Planner16 (2014) explained that there is enough vacant land within Kitchener's Innovation District to accommodate roughly 20,000 additional jobs, but that there is only room for another 1,500 parking stalls, which under the current modal split would limit job growth to 2,000 additional employees in the Innovation District. These parking/employment capacity figures for Kitchener's Innovation District were verified in the City of Kitchener et al. (2013) report on the business case for two-way Go Train service between Kitchener and Toronto. According to Planner 16 (2014), "we cannot optimize the available density in the Innovation District without higher order transit . . . the financial model for structured parking just doesn't work in this marketplace, in mid-sized cities in particular." Overall, continued growth and development along the Central Transit Corridor could be significantly limited by the current parking requirements and modal split.

The Region's water table and well water protection policies further complicate parking economics. The Region of Waterloo has a higher water table than many other city-regions and close to 80% of the drinking water comes from ground water wells (Planner 3, 2013). As a result, the Regional Official Plan (ROP) uses Wellhead Protection Sensitivity Areas (WPSA) to regulate development surrounding municipal wells to prevent ground water contamination (Region of Waterloo, 2010b, Map 6a). Unfortunately, most of these wells are located in urban areas, which can significantly limit development potential. Most sites in urban areas do not have the space to accommodate parking

[11] Region of Waterloo. (2009). Regional Parking Management Strategy. Waterloo, ON. Retrieved from http://www.regionofwaterloo.ca/en/regionalGovernment/resources/REGIONAL_PARKING_STRATEGY_-_FINAL_-_NOVEMBER_2009.pdf

requirements with surface parking, nor is surface parking considered desirable from an urban design perspective. Therefore, large developments often require underground parking structures. However, in the Region of Waterloo, the high water table often makes underground parking uneconomical past one or two levels. Two interview participants elaborated on this challenge:

> "When you have zoning that permits a high density tower of some sort, developers will likely want to maximize their density provisions on the property, which means that you also have to accommodate parking on site. Often, the only way to accommodate that parking is to go underground, but when you have a high water table, the cost becomes prohibitive – you will not go down." (Planner 4, 2013)

> "The bigger challenge for us is our high water table, like without a doubt it's one of our biggest challenges. Every project I'm dealing with in the corridor, the most they can usually do is one level of underground parking where they know they can stay above the water table." (Planner 15, 2014)

Further, Planner 5 (2013) explained that even if the parking economics made sense, Level One Wellhead Protection Sensitivity Areas in the ROP (2010, Map 6a) prohibit underground structures, which drastically conflicts with the Region's intensification objectives.

Several participants commended recent projects such as 144 Park, One Victoria, and the Barrel Yards for their ability to hide aboveground structured parking by wrapping it with other uses such as townhomes or commercial space. This method of wrapping the parking structure with something vibrant and pedestrian friendly seemed to be the preferred solution for mitigating the ground water issue. After discussing several methods of mitigating the "ground water issue," most participants acknowledged that perhaps the issue is more to do with the parking requirements than the ground water. "Either you go up with aboveground parking structures or you provide less parking, which is what I'm all for (Developer 17, 2014)."

Several participants also suggested that there might be a behavioral aversion to structured parking among the general public. Many of the structured parking garages in Kitchener, for example, have additional capacity but apparently it's been a challenge to get people to use them instead of surface

parking (Politician 12, 2014). According to Planner 7 (2013), people generally prefer to see the sea of parking and spot an open space. Even if they have to walk a great distance to a specific store in the mall, for example, they don't value the time spent walking from the far edge of the parking lot to the store.

> "The burdens of a parking structure seem to be more tangible to people. That's the way people seem to value it, so even though it's probably in most cases less work, should be less stressful, and arguably more convenient, that's not the way the vast majority of the population sees it." (Planner 7, 2013)

This aversion to structured parking likely stems from greater familiarity with surface parking, but it must be dealt with during the reurbanization process nonetheless.

5.3.3.4 Market Dynamics

The implementation of reurbanization objectives depends on good plans and committed planning agencies (Laurian, Day, Backhurst, et al., 2004), but good plans also rely on private sector investments as buildings cannot be zoned into existence. Market demand for urban lifestyles was reported as one of the greatest factors affecting the rate of reurbanization. This section details the importance of market demand for reurbanization and the related limitations described by interview participants.

Prior to some of the first landmark reurbanization projects such as the Kauffman Lofts and the Seagram Lofts, the viability of urban condominiums in Kitchener-Waterloo was still unknown.

> "In 2004, we had a Royal LePage do an analysis of the residential market for downtown Kitchener and they basically concluded that there was no market. So for Andrin [with the Kauffman Lofts], testing the market was a very risky proposition." (Planner 16, 2014)

Many participants noted the challenges of "being the first guy in," or the pioneer. Therefore, while there may be large tracks of under-utilized property in transitioning neighbourhoods along the proposed LRT route, economic barriers to entry can inhibit the transition. Developer 17 (2014) noted that the first developer to break ice in a new area typically faces greater challenges than those who follow. Academic literature on urban infill also suggests that pioneering new product types is challenging in untested

markets as "financing innovative or unusual projects in the core is difficult and often not favoured by lending institutions (Wyly & Hammel, 1999)."

From a private sector perspective, core area investments need to be profitable. Participants described infill and intensification as a high risk, high rewards business, which therefore requires healthy profit margins to counter the risk.

> "Most of the banks today – the project doesn't go if you can't get financing. So if it doesn't look like a healthy bottom line than the bank's not going to finance it. So it's not like 'oh a developer should or shouldn't make 15%'. The bank is not going to give a developer the money to do a development if they're showing 7 or 8%, because with 7 or 8% you make one mistake on the site and you get nothing." (Developer 10, 2014)

One of the first challenges the Region of Waterloo faced was insufficient market demand for the type of high density, good quality urban design that had been mandated in planning documents. For example, speaking about the City of Kitchener, Planner 16 (2014) explained that "The market price for residential condominiums in downtown Kitchener does not support a marginally profitably project plus the DC [development charges]. The DCs make it non-viable."

Another market factor controlling the rate of reurbanization is the depth of the market (i.e. absorption) – the total number of new housing units absorbed into the local market each year. Many participants suggested that market absorption is the biggest barrier to implementing the type of density that the Waterloo Region expects to achieve.

> "You cannot construct an infill project unless you have demand, unless you have groups purchasing it. What I don't think is understood factually is whether we can support the kind of infill and intensification the public policy is expecting? I think that's the biggest challenge." (Planner 1, 2013)

Even if other barriers to development were removed (e.g. height restrictions, brownfield contamination, etc.) the depth of the market would still ultimately control the rate of reurbanization. The following comments reiterate the inability of supply to exceed demand.

> "Another issue, which is outside of our control is demand. How fast can you build out 3000 units – not on the construction side but on the marketing and sales side. The market demand has to be there. We can't just put up 3000 residential units and then slowly have them get consumed and bought over a period of ten years." (Developer 9, 2014)

> "The city [of Kitchener) has been pretty vocal about wanting to get a skyline and being prepared to do larger buildings. I'm sure we could have had more density on this site if there was enough depth in the market to support it." (Developer 10, 2014)

Therefore, planners must closely monitor the macroeconomic environment as it affects the willingness of investors to take risks and buy into projects, the availability of bank finances, and the sale price of units, which largely influences the speed of reurbanization.

5.3.3.5 Development Regulation

While development regulation has been included in the "Ongoing Challenges" section, most participants noted that Official Plan policies and supporting documents have been quite supportive of reurbanization. Ongoing challenges with development regulation typically involved changing timelines or specific rules and regulations.

One of the consequences with implementing updated Official Plans, zoning by-laws, and urban design guideline is that it creates difficult transition periods between the old and the new rules. Overall, one of the greatest frustrations among developers seemed to be the anticipation of new regulation within the Rapid Transit Station Areas. Since the development process can take anywhere from two, to five, to ten years, developers wanted to know what the new regulations would be now rather than later, so that their developments could be ready by the time the LRT is serviced.

One of the specific regulations that planners expressed frustration with was the Ministry of Environment's Environmental Noise Guidelines. The newest Environmental Noise Guidelines (NCP-300) (Ontario Ministry of the Environment, 2014) have now been released, but at the time of this study, the Ministry of Environment was in the process of updating several previous versions that were not as conducive to reurbanization. Planner 7 (2013) and Planner 4 (2014) explained that the Region of

Waterloo doesn't have station area noise guidelines yet and that the existing Environmental Noise Guidelines don't anticipate a lot of congesting and activity from larger, mixed-use buildings, which results in low baseline assumptions for noise impact studies. Additionally, interview participants noted that condominium conversions are particularly onerous under the existing guidelines. Planner 7 (2014) stated,

> "The noise guidelines are costly and timely and can be a real pain, and in the end, sometimes you can kill a development on the basis of the noise requirements and how much they have to do to minimize the noise to meet the standards."

Overall, interview participants suggested that the Ministry of Environment's Environmental Noise Guidelines were not compatible with reurbanization, which could foreseeably create serious challenges to implementing municipal Station Area Plans such as the City of Kitchener's PARTS strategy.

5.3.3.6 Building and Maintaining Community and Political Support for Reurbanization

While technical issues such as brownfield remediation and parking economics dominated much of the discourse on the barriers to reurbanization, several participants suggested that the big picture issue of reversing physical, economic, and cultural patterns of growth along with building community commitment to a new city mentality has been the greatest challenge. Planner 16 elaborates on this point.

> "This is a really significant long-term challenge because we spent a long time moving away from the centre of the city, not only physically but also economically and psychologically. The bulk of the Waterloo Region lives on the periphery of the city. They're not living on the transit corridor." (Planner 16, 2014)

Planner 16 (2014) explained that in the early 2000s, the City of Kitchener had a very significant, very animated, and very high profile debate about the focus for its economic development strategy, which was very controversial at the time since roughly one quarter of the local labour force was in manufacturing.

Building community commitment to the Region's investment in Rapid Transit was also reported as a challenging aspect of reversing suburban travel patterns and mentalities. The LRT debate has been a

divisive issue and many participants felt that there is still a poor understanding about the opportunity cost of not building the LRT.

> "There is a mindset that if I don't get to use it in my lifetime than it's not worth doing. So people can be short sighted in their views. They're not thinking generationally as some other countries do." (Politician 12, 2014)

Although much of the debate over the LRT has been silenced by a series of contract approvals, maintaining support for Rapid Transit and reurbanization will be an ongoing challenge.

The apparent discrepancy between people's perceptions of time and the real speed of city building emerged as another challenge to building community support for reurbanization. "Great things and great cities take time and people are very impatient and expect everything to happen in three years, but it doesn't happen that way (Planner 14, 2014)." Planner 16 (2014) made a similar comment about the actual speed of city building:

> "One day you're going to wake up and you're going to say what the heck happened to my city, but you won't have any idea that it's happening around you. It's going to happens so slowly that your perception of that experience will be non-existent."

These insights suggest that length of the development process is so disharmonious with individual experiences that people can lose sight of the process and then find themselves surprised or concerned when a building is approved in their neighbourhood.

5.3.4 Summary

This section explored the experiences of planners and developers in their respective efforts to implement reurbanization initiatives in the Region of Waterloo. Both quantitative data and qualitative feedback indicate that the Region is making significant progress towards its reurbanization objectives. The major success factors discussed by interview participants included cooperation and collaboration between pubic and private sector stakeholders, financial incentives, early adoption of flexible planning regulations, the influence of the LRT, and economic restructuring. Despite economic restructuring, the majority of

participants focused on micro-level drivers of reurbanization internal to the planning process rather than more macro level variables such as changing labour markets or demographic trends. The main obstacles to reurbanization mentioned by interviewees were brownfield contamination, land assembly, accommodating the automobile, transitions in market demand, development regulation, and maintaining political and community support for planning initiatives. Together, these factors increase the time, cost, and risk associated with undertaking a reurbanization project compared with traditional greenfield development scenarios that are often subject to less volatile conditions. Obstacles such as brownfield contamination, land assembly, development regulation, and community/political support appear to be commonplace in most city-regions pursuing reurbanization, while obstacles such as market dynamics and accommodating the automobile appeared to be largely related to suburban lifestyle preferences that are more entrenched in small to mid-sized cities. Accommodating automobile-oriented lifestyles whilst also attempting to achieve density, vibrancy, and good urban design proved to be especially difficult in the Region of Waterloo due to the high water table and source water protection policies that limit both the technical and financial viability of underground parking structures in many locations. Overall, the challenges identified through key informant interviews appear to complicate rather than inhibit reurbanization. The next chapter discusses the core research questions from a broader perspective to compare and contrast findings across data sources.

Chapter 6 – Discussion of Findings

Municipalities across the Greater Golden Horseshoe are in the process of implementing policies to limit urban sprawl in favour of compact, transit-oriented, development in existing urban areas to comply with Growth Plan (2006) requirements. This reurbanization mandate is intended to protect the environment, decrease traffic congestion, make more efficient use of existing infrastructure, and to revitalize downtowns as primary destinations for social and economic activity. While smart growth and reurbanization policies have been championed by planning practice and academia, implementation efforts frequently suffer from myriad barriers that perpetuate status quo development patterns. This study seeks to understand how barriers to reurbanization affect the redevelopment of under-utilized property in the Region of Waterloo and whether policy initiatives have been successful at facilitating reurbanization. An objective of this research is to shed light on the Region's progress towards reurbanization objectives and to provide recommendations for future implementation.

Research findings were primarily derived from eighteen semi-structured interviews with planners and developers actively involved with reurbanization. These interviews provided a basis for understanding success factors behind previous projects, the location and types of land uses available for future development, and the barriers to utilizing these lands for intensification. The interviews provide insight into local efforts to implement Growth Plan (2006) policies and compliment previous research on the Kitchener CMA. While this case study confirmed many of the barriers to reurbanization discussed in the literature, findings also revealed notable non-barriers, which, combined with the Region's progress towards key reurbanization targets, contrasts with previous research on Kitchener CMA. This section will highlight similarities and divergences within the literature and discuss their relevance to the overall research topic.

6.1 Evidence of Reurbanization

Research Question: Is the Region of Waterloo meeting its reurbanization targets?

Allen and Campsie (2013) found that both the Region of Waterloo and all three of its urban municipalities have introduced reurbanization objectives/targets into Official Plan documents that met, and in many cases, exceeded the Growth Plan's (2006) requirements. The Region's progressive approach towards Official Plan policies stands out in comparison with the majority of other municipalities in the GGH that did not implement reurbanization targets beyond Growth Plan (2006) minimums, and especially with other mid-sized city/regions in the Outer Ring, many of which implemented reurbanization targets below Growth Plan (2006) minimums. Additionally, building permit data (See Region of Waterloo, 2014a) shows that in all four years since 2009, the Region exceeded its target reurbanization rate of 45%, growth in apartment units met or surpassed the growth of single-detached units, and roughly 50% of development within the Built Up Area was within 800m of Major Transit Station Areas along the CTC. Further, discussions with planners and developers revealed that there has been significant construction activity along the CTC and that land surrounding the future Rapid Transit Station Areas is now under considerable speculation by the development industry. However, Burchfield's (2010) findings suggest that across the GGH, many municipalities were able to capitalize on some of the easy intensification opportunities on large land parcels during the earlier stages of implementation, but that ongoing reurbanization efforts may become more difficult as the easier opportunities diminish (Burchfield, 2010).

Further, ongoing monitoring and evaluation by the Neptis Foundation has revealed several shortcomings in the methodology of key indicators. For instance, Burchfield (2010) cautioned that the methodology used to calculate intensification rates has been inconsistent among municipalities and has a significant impact on final results. Burchfield (2010) highlighted that when the City of Waterloo's 2001 built boundary was used to measure intensification between 2001-2006 the rate was 56%, but if the 1990 built boundary was used in the same calculation, the rate fell to 14%. Additionally, methods for

measuring designated greenfield area densities have been inconsistently applied in a similar fashion, which inhibit accurate comparisons across municipalities (Allen & Campsie, 2013). In light of these finding, the Region's progress towards reurbanization may need to be re-evaluated upon further standardization of measurements and indicators.

6.2 Reurbanization Opportunities

Research Question: What locations and what types of property have an active potential for reurbanization in core areas along the Central Transit Corridor?

Participants suggested that brownfield properties have been one of the Region's key resources for reurbanization as major redevelopment projects[12] have brought new life to the Region's core districts. Given the prevalence of brownfield properties in Canadian urban areas (De Sousa, 2006; Hayek et al., 2010) and the Region's historically industrial economy (Bunting et al., 2007), it's not surprising that brownfield redevelopment was an important aspect of reurbanization. While brownfield sites continue to provide additional opportunities for reurbanization, surface parking lots and other under-utilized residential and commercial properties emerged as a significant source of land for future reurbanization along the CTC. For instance, within the case study boundary, fifteen out of eighteen "Opportunities for Investment" identified by the Community Building Strategy (2013) were surface parking lots. Similarly, the top five "opportunities for reurbanization" rated by participants in the survey of other mid-sized cities (in order) included under-utilized residential property, retail property, commercial property, under-utilized parking, and old industrial/manufacturing sites.

The Community Building Strategy depicts many under-utilized parcels of land such as surface parking lots transitioning into high-rise office and residential developments, however, throughout the document and associated materials, there is almost no discussion of the obstacles to utilizing these

[12] For example, the Kauffman Lofts, the Seagram Lofts, the Arrow Lofts, the School of Pharmacy, the Tannery District, Luther Village, and the Waterscape condominiums, among others were all funded through brownfield financial incentives

properties for reurbanization. While the Community Building Strategy provides an excellent overview of the Rapid Transit station areas, participants noted that many of the "Opportunities for Investment" are long-term prospects and are not necessarily expected to transform in the near future. A common theme that emerged through both key informant interviews and the web survey was that we should not confuse the availability of surface parking lots with the feasibility of utilizing them for intensification. Bunting and Filion (1993) highlighted that re-developing municipally owned parking in the City of Kitchener has been a challenge to reclaiming under-utilized land since the 1960s. Similarly, participants explained that municipally owned parking lots are constrained by the financial implications of parking replacement agreements, public scrutiny over the sale of a public asset, local merchant concerns over customer retention, and the desire to hold out for higher land values. The need to offset foregone parking spaces in structured parking (whether to comply with zoning by-law requirements or to meet market demand) in order to facilitate reurbanization was a major constraint on this type of land.[13]

Skaburskis and Moos' (2010) discussion on the economics of urban land helps to explain why parking lots often remain undeveloped despite market pressure, and why this might not be such a bad thing. As they explain, circumstances of uncertainty increase the value of having options, so even though developing a small condominium could generate more profit than a parking lot to date, property owners frequently prefer to wait until an increase in land value supports a larger project. Therefore, if the land value of surface parking lots along the CTC are appreciating, a strategic delay would create more intense developments later down the line, which could better serve the LRT than if a smaller project was brought to market sooner.

In terms of location, there was consensus among participants that the City of Cambridge would have greater difficulty meeting and sustaining its reurbanization objectives than the City of Kitchener or

[13] The Region of Waterloo's Parking Management Strategy (2009) highlighted that municipal parking structures are often constructed, operated, and maintained at a financial loss in the Region of Waterloo. Additionally, Planner 16 (2014) explained that market rates for structured parking in mid-sized cities are not high enough to support the construction of a parking garage without cross financing or subsidies.

the City of Waterloo. Participants noted that market demand for infill and intensification in Cambridge was hampered by a negative stigma, suburban mentalities, suburban housing preferences, and the availability of greenfield land.[14] Participants' views on the City of Cambridge support Alexander and Tomalty (2002) and Hayek et al. (2010) suggestion that cities with suburban housing preferences are often unsuccessful at redirecting growth to the core until all remaining greenfield land has been developed. The limited opportunity for development within Cambridge's UGC may serve as evidence that availability of greenfield land undermines market pressure for intensification.

6.3 Constraints to Reurbanization

Research Question: What are the greatest difficulties with accommodating reurbanization through infill, intensification, and adaptive reuse developments?

This section highlights similarities and divergences between the literature, case study, and online survey (see Table 26) followed by a discussion about their relevance to the overall research topic.

Table 26 - Comparison of Constraints to Reurbanization across Data Sources

Constraint	Literature	Case Study	Online Survey
Political resistance	Local government has the ability to stifle the implementation of reurbanization policies. Compact development often arouses opposition from neighbourhood groups and greenfield regulations often arouse opposition from industry stakeholders, who exert political pressure on local council.	Participants viewed local and regional city councils as very being very supportive of reurbanization objectives. Many local politicians and department heads within city government were seen as champions of the LRT and reurbanization policies.	Not directly addressed
Community opposition	Cities frequently fail to reach optimal densities because residents of existing communities bear the direct cost of	Participants did not identify community opposition as a major barrier to reurbanization. Participants generally	Rated as a moderate to major barrier (4.72/6). Highest rated barrier to reurbanization.

[14] While the City of Waterloo had zero hectares of new Designated Greenfield Area added after 2006, the City of Cambridge had 223 hectares of Designated Greenfield Area added after 2006 (Allen and Campsie. 2013, Appendix C)

	accommodating new residents but remain mentally detached from many of the city-wide benefits such as preserving open space, which creates incentives for existing residents to oppose densification in their neighbourhoods	alluded to community concerns as a modest issue that is of great importance, but not significantly prominent or a drain on implementing reurbanization	
Development regulation	Development regulation is particularly arduous as urban areas have more regulation and zoning by-laws often prohibit intensification as-of-right	The level of regulation and red tape certainly appeared to be higher in urban areas, but both Kitchener and Waterloo have policies to prioritize or streamline urban-oriented development proposals. Zoning by-laws were very supportive of reurbanization, but the frequent changes and updates complicate the approval process and timeline.	Rated as a minor barrier (lowest out of all possible choices) and 88% of respondents indicated that development regulation is not a uniquely urban issue as it affects both intensification and greenfield development.
Market demand	Intensification limited by suburban housing preferences that are not economically viable in the core.	Although there has been many successful intensification projects, developers suggested that market demand for parking stalls is one of the most difficult consumer preferences to accommodate and a barrier to entry for many smaller development sites.	Rated as moderate to major barriers (4.43/6)
Land economics	Land market distortions created by policies and urban finance systems that fail to limit greenfield availability and fail to charge greenfield development the true or marginal cost of growth	Greenfield development significantly limited and regulated by the Regional land budget and Protected Countryside Line. Significant financial resources have been dedicated to support intensification within the Urban Growth Centres. Kitchener's development charge schedule charges a premium for suburban	Unanticipated infrastructure upgrades were identified as a minor to moderate barrier (3.83/6). There was a perceived need for municipal alignment of capital projects to support infill infrastructure upgrades.

		locations.	
Industry momentum	Greenfield development heavily preferred by development industry and financial institutions	Industry momentum now seems to be in favour of intensification. Many new development firms have fulfilled the latent demand for urban lifestyles.	Not directly addressed
Land assembly	Adds time, cost, and risk for infill developers	Very prominent in Urban Growth Centres, but large parcel fabric still available in outlying areas served by transit.	Rated as a moderate barrier (4.17/6)
Brownfield remediation	Prominent in de-industrialized regions	Very prominent constraint to redevelopment	Rated as a moderate to major barrier (4.4/6)

Although the Region of Waterloo showed promising signs towards implementing reurbanization objectives, there still appear to be many obstacles to intensification along the CTC. This case study confirmed many of the barriers to reurbanization observed in the literature. For instance, barriers to brownfield redevelopment described by interview participants such as the cost, risk, and uncertainty associated with brownfield cleanups closely echoed findings from the literature (See De Sousa, 2000, 2006; Hayek et al., 2010). Similarly, difficulties caused by land assembly such as prolonged negotiations, higher land prices, and unmotivated land holders (Noted in studies such as Bunting & Filion, 2000; Cadigan et al., 2011; Farris, 2001; Menezes & Pitchford, 2004; Suchman & Sowell, 1997) created problems for many developers interviewed in this study as well. Further, automobile-dependent travel patterns and suburban-oriented lifestyle preferences described by Bunting et al. (2007) have persisted in the Region of Waterloo and continued to drive demand for parking along the CTC, which proved to be a bottleneck for both density and economic development. The common theme among these obstacles is added cost, risk, time, and uncertainty in the development process that can make urban infill and intensification less cost competitive than greenfield development without significant public sector support. The lesson learned from this competition for investment dollars is that efforts to promote reurbanization cannot be contemplated in isolation of greenfield opportunities as the development industry is profit driven and tends to follow the path of least resistance.

Alternatively, this case study diverged from the literature in the discovery of several non-barriers to reurbanization. Notable barriers discovered in the literature that were absent from case study findings include community opposition, development industry resistance, and political interference.

Community opposition or NIMBYism was identified as a barrier to intensification across a wide range of studies (For example, see Bunting & Curic, 2006; Cinyabuguma & McConnell, 2013; McConnell & Wiley, 2010; Searle & Filion, 2010; Vallance et al., 2005) and was the highest rated barrier on the web survey. Cinyabugma and McConnell (2013) suggest that cities frequently fail to reach optimal densities because residents of existing communities bear the direct cost of accommodating new residents but remain mentally detached from many of the city-wide benefits such as preserving open space, which creates incentives for existing residents to oppose densification in their neighbourhoods. Nevertheless, case study findings from the Region of Waterloo did not identify community opposition as a major barrier to reurbanization. Participants generally alluded to community concerns as a modest issue that is of great importance, but not significantly prominent or a drain on implementing reurbanization. It should be noted that there is somewhat limited evidence to support this finding as community groups were not targeted for data collection, but Planner 16 (2014) offered some insight as to why community opposition to major intensification and redevelopment projects has remained seemingly modest in many areas along the CTC.

To preface their explanation, Planner 16 (2014) contrasted reurbanization in the Region of Waterloo with reurbanization in San Francisco where community opposition has significantly inhibited infill and intensification. Planner 16 (2014) explained that in San Francisco, the planning process is completely backlogged by NIMBY-style opposition to infill and intensification from very affluent property owners adjacent to primary nodes and corridors. Pointing to a map/picture, Planner 16 (2014) stated, “One yard behind that site is a $3million house, so the owner of that $3 million house is preventing the reurbanization of that site, and the planning process will not trump it.” Alternatively, in the Region of Waterloo, the majority of reurbanization projects to date have been on brownfield sites, which typically arouse less community opposition as the environmental cleanup replaces past uses that are often

considered unfavourable by the surrounding community. Further, Planner 16 (2014) explained, "in Kitchener, we don't have to take down one single-detached house in a mature neighbourhood to achieve the level of density that we want." Therefore, one explanation for less flagrant community opposition may simply be that the Region of Waterloo's core areas evolved from an industrial and manufacturing landscape that provides redevelopment opportunities in the core that are distant enough from stable residential neighbourhoods.

With respect to the development industry, Filion and Bunting (2000) found that developers in Kitchener-Waterloo were admittedly unaware of the latent downtown housing demand and potential core area development opportunities, and were unfamiliar with urban infill building techniques, which was an impediment to core area reinvestment. Conversely, this study found that developers were acutely aware of housing demand and investment opportunities in core areas along the CTC and actually preferred urban infill development techniques. However, as I discovered, this was not because local developers had adapted to changing circumstances. Prompted with a question about the challenges of transitioning from dispersed suburban development patterns towards a compact urban form, Planner 7 (2013) explained that in terms of the development community, there hasn't actually been much of a transition:

> "Most developers are not transitioning. Most of the greenfield developers remain greenfield developers. Most of the reurbanization developers are developers from outside the city, who now have this kind of thing as a core business model, or they are small entrepreneurs who see an opportunity, but they're not typically members of the Waterloo Region Homebuilders Association." (Planner 7, 2013)

Therefore, it appears that the latent demand for downtown living described by Filion and Bunting (2000) has been supplied by new specialized developers or firms native to the GTA rather than the local home builders who supplied most of the postwar suburban expansion. This finding corroborates with Laurian et al.'s (2004) suggestion that the commitment and capacity of development agencies can play a big role in plan implementation.

6.4 Success Factors

Research Question: What factors have positively contributed to reurbanization efforts in the Region of Waterloo?

This research question explores potential rationale behind the Region's progress towards more compact, centralized development patterns, which sharply contrasts with findings from previous literature on the structural dynamics of Kitchener CMA (See Bunting & Filion, 1993, 1999, 2000; Bunting et al., 2007). Interview participants were asked to draw from their experience on past development projects within the case study boundary that they considered successful and to highlight some of the key factors that contributed to that outcome.

One of the strongest themes to emerge was the importance of partnerships between public and private sector stakeholders (i.e. cooperation, collaboration, and sharing a vision). Interview participants explained that the complexity of most infill, intensification, and adaptive-reuse development applications require significant collaboration between planning and development agencies and that both Kitchener and Waterloo have been very accommodating. Several developers lamented their experience working with other municipalities who put them through the "ringer," which stalled projects and created disincentives to pursue future development opportunities. These results corroborate with findings from Laurian et al. (2004) and Yu & Kwon (2011), who also highlight the importance of partnerships and good working relationships to plan implementation. Additionally, this finding is consistent with the Region's 2005 Reurbanization Market Analysis and Feasibility Study (MKI, 2005), which found that "municipalities' overall supportiveness toward this type of development, and a willingness to work with the developer to resolve planning issues, is often cited as a prerequisite to proceed with a reurbanization application (p. 88)." The literature on transit-oriented development such Mejia-Dorantes and Lucas (2014) also identifies collaboration and communication between transit providers and development agencies to be a critical success factor behind rapid transit implementation.

It will be interesting to see whether the fall 2014 municipal elections in the Region of Waterloo affect the dynamic and cohesion of the current urban regime. There could be significant changes to the political representation at city council as neither mayoral incumbent is running for office in Waterloo nor Kitchener. Several developers suggested that there seems to be growing resentment in suburban wards regarding the level of public spending directed towards the downtowns in recent years, which could open the door for suburban-oriented mayoral or council candidates. Building on this thought, Developer 10 (2014) stated, "Momentum is really hard to create, but it's easy to kill. If those pieces of the puzzle begin to unravel, it could be more like some of the municipalities where it is harder to get things done. It could be a vastly different place to do business."

Several interview participants identified blue to white-collar labour market shifts as a driving force behind downtown revitalization and demand for condominium developments in Kitchener's Innovation District, which is home to many established tech companies such as Google and Desire2Learn along with the start-up incubator Communitech. Their assertions corroborate with three key areas of the literature on reurbanization and gentrification. First, this blue to white-collar shift is synonymous with widespread deindustrialization as service producing sectors have outpaced goods producing sectors in most developed nations (Bell, 1976; Knox & McCarthy, 2005). Second, the concentration of high tech firms in Kitchener's Innovation District and throughout the Technology Triangle supports Ley's (1986) and Vinodrai's (2010) assertion that the knowledge-based economy tends to remain centrally clustered in many cities. And third, the demand for urban condominiums reportedly created by tech sector workers supports Florida's (2004) assertion that creative workers prefer vibrant, mixed-use, urban environments. Although these labour market changes were considered a positive attribute towards reurbanization amongst interview participants, evidence in the literature reminds us about externalities such as gentrification that often accompany such shifts.

Using rapid transit to spur intensification along the Central Transit Corridor has been a central tenant of the Regional Growth Management Strategy (2003), the Regional Official Plan (2010), the

Central Transit Corridor Community Building Strategy (2013) and all subsequent local growth management initiatives. Numerous studies commissioned by the Region concluded that LRT was the most effective transit investment to reduce congestion, spur intensification, reduce emissions, increase mobility, increase transit ridership, and generate economic development activity (Region of Waterloo, 2009a, 2009b). Likewise, the planners and developers interviewed for this study identified the LRT as a critical success factor behind private sector investment in reurbanization projects surrounding transit station areas. Findings that LRT anticipation has caused additional real estate speculation and increased land costs surrounding proposed transit stations is compatible with studies such as Debrezion et al. (2007), Cervero and Duncan (2002), and Ko and Cao (2010), which documented similar economic uplifts associated with rapid transit investments. Developers interviewed for this study revealed that the LRT has made intensification more economically viable due to corresponding land use policies that permit reduced parking standards and greater densities for transit-oriented developments. These observations regarding the importance of linking transit investments with supportive TOD policies corroborates with a wide range case studies on existing transit systems, which underscore that transit investments must be integrated with supportive regulation to facilitate intensification (E.g. Babalik-Sutcliffe, 2002; Cervero & Landis, 1997; Mejia-Dorantes & Lucas, 2014; Suzuki et al., 2013). Overall, arguments put forward by Regional planning documents and interview participants that LRT will be a catalyst for reurbanization are compatible with a broad range of literature on rapid transit and land use change.

Reviewing both local and Regional reurbanization tools and strategies revealed that many best-practice policies are currently in place to limit outward development, to facilitate greater residential and employment densities in core areas, and to integrate transit and land use planning. Similarly, interview participants identified flexible land use regulations (i.e. pre-zoning) along the CTC combined with financial incentives to support downtown development as critical support mechanisms that have enabled reurbanization projects beyond what the market would otherwise support. Alternatively, several articles recently published in the Ontario Planning Journal (For example, see McDonald, 2013) raise concerns

about the consequences of pre-zoning for intensification. McDonald (2013) explains that liberal applications of pre-zoning may cause the elected council to lose control over development decisions and fail to facilitate public input as development negotiations would occur via site plan control, which doesn't typically involve council or public input. However, when prompted with this concern, none of the interview participants believed that the updated local zoning by-laws jeopardized control over development.

Interview participants referenced three mechanisms that enabled controllable pre-zoning: public consultation in the development of the by-law, urban design guidelines, and holding provisions. First, by completing a thorough public consultation process during the initial development of an Official Plan and zoning by-law, community concerns over intensification can be hashed out, to some degree, prior to the enactment of the by-law rather than on a site-by-site basis. Second, participants explained that strong urban design guidelines are critical to pre-zoning to ensure a minimum baseline in building quality that wouldn't otherwise be enforceable without a zoning by-law amendment. Lastly, it was suggested that the use of a holding provision can ensure that potentially problematic issues on a site can be debated at council. Overall, interview participants suggested that public consultation, quality urban design guidelines and strategic applications of holding provisions could mitigate the negative consequences of pre-zoning for intensification, thus making it a very effective tool.

Although it may be premature to suggest that the Kitchener CMA has reversed its long-standing pattern of urban dispersal, many of the success factors identified in this case study help to explain the Region's progress towards more compact development patterns. The underlying theme behind the success factors described by participants, and even the absence of barriers documented in the literature, seems to be a healthy and collaborative relationship between major urban stakeholders. The relationships observed in this study draw many parallels to what Davis (1999) refers to as a healthy building culture. Davis (1999, p. 149) explains that in a healthy building culture, ". . . the people and institutions who are responsible for making buildings need to have the means to make and test changes as they are needed,

without a great deal of hindrance." Fostering a healthy building culture may appear to have obvious merits, and public-private sector collaboration is frequently cited as a success factor for redevelopment strategies (Babalik-Sutcliffe, 2002; Yu & Kwon, 2011); however, this rhetoric is rarely achieved in practice (Mejia-Dorantes & Lucas, 2014).

Chapter 7 - Conclusions and Recommendations

7.1 Summary and Conclusions

The benefits of reurbanization are well articulated and supported in the academic literature and generally include improved mobility, reduced CO2 emissions, economies of scale in infrastructure and service provision, downtown revitalization, greater housing choices, and protection of farmland and other environmentally sensitive areas. In order to realize the associated benefits of reurbanization, municipalities must have the capacity to accommodate future growth through compact development typologies such as infill, intensification, and adaptive reuse. However, the literature on smart growth and reurbanization indicates that there is a significant implementation gap between rhetoric and reality in many North American regions, particularly in small to mid-sized cities. Further, a recent policy analysis of the Growth Plan (2006) conducted by the Neptis Foundation (Allen & Campsie, 2013) found that the Growth Plan is *not* being fully implemented and that little information has been released about the progress of the 21 upper and single-tier municipalities attempting to implement the Growth Plan objectives.

The Growth Plan for the Greater Golden Horseshoe's approach to regional planning strongly aligns with the concepts of smart growth and reurbanization. The Region of Waterloo falls within the planned area of the Greater Golden Horseshoe (GGH), but unlike many other single and upper-tier municipalities in the Outer Ring, the Region of Waterloo has been diligent with implementing best practice growth management initiatives (Allen & Campsie, 2013). Additionally, building permit data over the past four years indicate a noticeable shift towards more compact, centralized development trends (Region of Waterloo, 2014a) that significantly depart from the Region's historic pattern of urban dispersal (Bunting et al., 2007).

Overall, the Region of Waterloo is at a critical period in terms of planning for reurbanization. Plans for the LRT have been confirmed, construction scheduling has begun, and Rapid Transit studies in

Kitchener and Waterloo are underway. With $818 million invested in rapid transit between the federal, provincial, and local governments, generating intensification on these under-utilized, constrained, properties to support the transit line is a critical component of the reurbanization strategy.

The primary objective of this research was to explore the past, current, and ongoing experiences of planners and developers to identify local conditions that either support or inhibit reurbanization in core areas along the CTC, and most importantly to develop an in-depth understanding about why and how these conditions affect development outcomes. The following research questions guided the investigation:

- What factors have positively contributed to reurbanization efforts in the Region of Waterloo?
- What locations and what types of property have an active potential for reurbanization in the Region of Waterloo?
- What are the greatest difficulties with accommodating reurbanization through infill, intensification, and adaptive reuse developments?

Addressing these research questions began with a review of relevant planning literature and an analysis of local planning documents to identify planned reurbanization areas in the Region of Waterloo and to understand the types of challenges that infill, intensification, and adaptive reuse projects typically encounter. Within the Central Transit Corridor, this investigation focused on the Uptown Waterloo, Downtown Kitchener, and Downtown Cambridge UGCs along with the Midtown corridor connecting Kitchener and Waterloo. Research questions were further explored through key informant interviews, visual observations, and an online survey of other mid-sized city-regions. The following five success factors emerged as the most influential variables towards the Region's progress:

1. Cooperation/collaboration/shared vision
2. Financial incentives
3. Progressive policy and regulation
4. Influence of the LRT
5. Economic restructuring

My findings revealed that many of the easiest sites have been redeveloped and what is leftover are the complicated, challenging sites that were previously avoided, which is consistent with Burchfield's (2010) implementation review. Additionally, this study's review of "Opportunities for Investment"

identified in the Community Building Strategy found that surface parking lots were the most frequently listed source of land for redevelopment. However, interview participants reported many limitations to utilizing surface parking for intensification in the near future, as the cost to replace surface lots with structured parking garages remains uneconomical in a mid-sized city land market. To understand these challenges, this study examined planners' and developers' perceptions about ongoing constraints to infill, intensification, and adaptive reuse. The following six challenges emerged as the most common impediments to reurbanization:

1. Brownfield remediation
2. Land acquisition and assembly
3. Accommodating the automobile (parking economics)
4. Market dynamics and consumer preferences
5. Development regulation
6. Building and maintaining community support

A comparative analysis between study findings and the academic literature confirmed that infill, intensification, and adaptive reuse developments are often unique rather than routine endeavors that require tremendous amounts of capital and are wrought with greater risk and uncertainty compared with traditional greenfield developments. While this study confirmed many of the barriers to reurbanization outlined in academic literature, several constraints such as political interference, community opposition, and industry momentum did not emerge as impediments throughout key informant interviews. Research findings also challenged our understanding of the Kitchener CMA as a prototype for urban dispersal (Bunting & Filion, 1999; Bunting et al., 2007).

Lastly, this study provided recommendations to mitigate the barriers to reurbanization and improve the development climate along the Central Transit Corridor. The following policy recommendations were grounded in suggestions from interview participants and planning literature along with personal observations and interpretations.

1. Form strategic public-private partnerships
2. Provide financial incentives geared to the development process
3. Facilitate reduced parking standards
4. Prioritize urban form over land-use in zoning regulations

5. Manage incremental growth to facilitate lot consolidation

Overall, this research study was not intended to make widespread generalizations about the viability Growth Plan implementation in all mid-sized cities. Rather, this research has been undertaken to advance our understanding about planners' and developers' experience with reurbanization in the Region of Waterloo.

7.2 Recommendations

As one participant stated, momentum is very difficult to generate but it is easy to kill. Therefore, it is important to reflect on the lessons learned from this case study and suggest measures to ensure all possible strategies are being reinforced and that the remaining obstacles are properly managed. The recommendations outlined in this chapter reflect suggestions from interview participants and planning literature along with personal observations. Further recommendations for professional practice and future research have also been detailed.

7.2.1 The Importance of Partnerships

City planning is an iterative process that involves lengthy deliberations between industry stakeholders, political representatives, and the general public, so in many instances, managing the process can be just as important as the parameters established through policy and regulation. The literature suggests that strong working relationships and communication between planning and development agencies has a positive impact on plan implementation (Laurian, Day, Backhurst, et al., 2004; Mazmanian & Sabatier, 1983; Yu & Kwon, 2011). Similarly, case study findings from the Region of Waterloo also documented positive working relationships between planners and developers as a critical success factor behind previous reurbanization projects. Therefore, *efforts to promote reurbanization should focus on forming stronger working relationships between development agencies and planning departments*. The planning approval process (pre-consultation, permitting, draft approvals, etc.) appeared to be a critical point of contact

between the public and private sector. Both planners and developers agreed that *collaboration, communication, flexibility, creativity, and transparency throughout the approval process were absolutely critical to overcoming the many complications associated with infill, intensification, and adaptive-reuse projects. Efforts should be made to use pre-consultation meetings between developers and planning staff and to facilitate timely approvals.*

7.2.2 Applying Fiscal Tools

Evidence from both case study findings and the academic literature suggests that the structure of development fees largely influences spatial patterns of urbanization. Interview participants almost unanimously agreed that the downtown financial incentives offered by the Regional Municipality of Waterloo and the three urban municipalities have been a necessary condition for reurbanization. Several developers claimed that their projects could not have moved forward without access to these financial incentives. However, the real estate market has changed drastically since the late 1990s when many of the incentives were introduced (City of Kitchener, 2013b). The City of Waterloo has already removed its Development Charge Exemption Program and there will certainly be a time when Kitchener and Cambridge no longer require their full host of development incentives as well. However, altering or removing the incentive programs that the development industry has come to know and love can be a sensitive process. Therefore, in order to find a balance between the city's need to eventually recoup development fees and the importance of offering downtown development incentives, *this study recommends two methods of adjusting current financial incentive programs.*

First, the developers interviewed for this study explained that the sheer cost of development fees (e.g. development charges and parkland dedication) and contingency costs such as brownfield cleanups create significant obstacles to reurbanization in lieu of a strong downtown real estate market. However, most developers suggested that the up-front nature of these fees is one of the biggest obstacles to bringing a project to market. Since condominium developers cannot use down payments to fund the construction

process (as per the Condominium Act, 1998, Sec. 81), they are dependent on lending institutions to finance construction. As a result, developers explained that the greater up-front costs associated with infill, intensification, and adaptive re-use projects can be too risky in a transitioning real estate market and require significant capital resources beyond reach of many smaller firms. Therefore, *downtown development incentives should place greater emphasis on front-end financial support.* If full-scale downtown development charge exemptions are deemed unnecessary in Kitchener and Cambridge, planners could *introduce area-specific regulations to defer the payment of development fees until building completion*. A restructured development charge system that defers, rather than exempts, development fees would enable municipalities to recoup significant capital costs while also ensuring that downtown development opportunities remain cost-competitive compared with greenfield alternatives.

Second, both case study findings and the literature on brownfield redevelopment (Adams, 2010; De Sousa, 2000, 2006; Hayek et al., 2010) suggest that *public sector financial incentives have been fundamental towards regenerating brownfield sites*. Although the Region of Waterloo and its urban municipalities provide significant support through the Brownfield Financial Incentive Program, case study findings indicated that *there is still room for improvement under current practices*. The current "dig-and-dump" method of brownfield cleanup is commonplace in the industry and supported through the Region's financial incentives; however, participants suggested that this method is costly and unsustainable as massive quantities of soil are treated as waste and trucked great distances to landfills.

Efforts to support brownfield redevelopment should investigate more sustainable methods of soil removal. As mentioned in Chapter 5, helping developers deal with contaminated soil more simply could be just as valuable as offering financial incentives. A 2012 report for the Region of Waterloo prepared by the BLOOM Centre for Sustainability titled *Sustainable Solutions: A Concept for a Soil and Material Management Campus* (See Region of Waterloo, 2012) directly address the issue of soil management and brownfield remediation. The concept of a soil management campus entails developers sending contaminated soil to a remediation plant and having buyers purchase the remediated soil. Treating

contaminated soil as a resource rather than a waste has many environmental and economic advantages compared with current practices. Therefore, *planners should pursue continued research and development on soil management strategies to support brownfield remediation through more sustainable practices.*

7.2.3 Managing the Automobile

Downtowns in many small to mid-sized cities have evolved to suit high rates of automobile usage and frequently rely on cheap and accessible parking to attract automobile-oriented clientele (Filion, 2007; Lauder, 2010). However, urban areas are always going to have a disadvantage against suburban spaces in managing automobile traffic and parking demand. Filion (2007) notes that efforts to replicate suburban conditions in downtown locations often fail to achieve their desired result and that favourable driving conditions are often achieved at the expense of public transit and walkability, which detracts from the synergistic energy created in more vibrant nodes. Similarly, this case study documented several barriers to reurbanization related to accommodating the automobile; participants explained that parking economics create a bottleneck for downtown economic development, limit the viability of redeveloping existing property, and restrict the density potential of new construction. Given that many of the remaining development opportunities in the Urban Growth Centres exist in the reuse of surface parking lots, *efforts must be made to reduce automobile dependence in order to spur development on these sites.*

To maintain long-term rates of reurbanization in the Region of Waterloo, *planners must focus on reducing automobile-dependent travel patterns and facilitate a more coordinated and efficient approach to providing structured parking*. Both Blais (2010) and Shoup (2011) emphasize that the price of parking to the end user has a tremendous impact on travel behaviour and the built form, and that free parking, in many cities, has undermined investments in rapid transit and pedestrian networks. Blais (2010) advocates for planners and municipal officials to unbundle the cost of parking for both public and private land uses, so that non-drivers are not forced to subsidize parking costs and drivers are forced to pay the true or marginal cost of their travel decisions. Additionally, efforts to facilitate alternate travel modes should

incorporate best practice Transportation Demand Management (TDM) and Transit-Oriented Development (TOD) measures such as pricing strategies to influence parking demand, car/bike share services at residential and employment facilities, and corporately subsidized transit passes (Ministry of Transportation, 2012)**.** Furthermore, to utilize parking opportunities more efficiently, *planners should facilitate shared parking agreements between neighbouring land uses and pursue public/private sector collaboration in the building and financing of structured parking.*

Interview participants, particularly developers, suggested that anecdotal evidence fuels much of the opposition to reduced parking requirements on a site-by-site basis in absence of concrete data. Therefore, *it is essential for planners to monitor and evaluate the impact that parking reductions have on travel behavior and on adjacent land uses in order to make informed decisions about necessary minimum parking standards.* To create walkable neighbourhoods, residents need to have access to lifestyle amenities such as grocery stores, coffee shops, bars/restaurants, or other daily-need uses within walking distance. However, many of these businesses require certain minimum critical masses to function, so density versus amenities can be a chicken and egg situation. While adverse impacts certainly need to be managed, *planners also need to consider the positive, long-term spinoffs created by reduced-parking*. If reduced parking requirements enable densities great enough to attract major amenities to existing neighbourhoods, then both new and existing residents could access lifestyle amenities without a car where walkable access was not previously possible. It is my belief that the solution to coping with excess parking demand in some cases may simply be to provide less parking.

7.2.4 Prioritize Urban Form Over Land Use

North American zoning by-laws were originally introduced in the early 20th century to separate land uses (Talen, 2012a) in response to worsening public health conditions caused by unsuitable dwelling standards and unsafe proximities between residential and noxious industrial facilities (Hall, 2002). However, most contemporary issues associated with urban development relate to building form and function, such as

height, density, lot configuration, pedestrian accessibility, and parking design rather than the compatibility of land uses. Some of the greatest challenges to facilitating infill, intensification, and adaptive-reuse documented in this case study related to faulty arrangements on existing properties that were not designed for future adaptations. The notion that building form is more important to regulate than specific land uses was supported by both interview participants and academic literature (Geller, 2010; Katz, 2004; Parolek et al., 2008; Rangwala, 2012; Talen, 2009, 2013). The use of a building may change frequently, but its urban form is much more permanent and difficult to amend. Therefore, *planners should place greater emphasis on regulating the form and function of developments rather than land use.*

One way to better integrate urban form into regulatory considerations is through form-based codes. Although the cities of Kitchener, Cambridge, and Waterloo have all introduced flexible zoning regulations along with Urban Design Guidelines or Manuals, these regulations could be combined into a form-based code. *Form-based codes,* discussed in Chapter 2, *would be much more amenable to reurbanization* as they could simplify design requirements, streamline the approval process, and pre-emptively instill a more flexible built form to ensure future adaptations and densification can avoid some of today's development perils.

7.2.5 Managing Growth

Efforts to facilitate reurbanization can easily be undermined by excessive amounts of greenfield land designated for development (Hayek et al., 2010; McCarthy, 2002) and by urban financial systems that subsidize suburban infrastructure and services (Blais, 2010; Slack, 2002). That being said, the Region of Waterloo and its urban municipalities have implemented many best practice growth management tools such as the Protected Countryside Line (ROP, 2010, Sec. 2.B.1), flexible zoning designations, and downtown financial incentives, which in unison, serve to balance the playing field between greenfield development and reurbanization.

The battles of growth management are usually fought at the urban fringe; however, this study discovered another growth management issue related to incremental building improvements, which was absent from discussion in academic literature. Due to parcel fragmentation, acquiring and consolidating development sites large enough to accommodate intensification emerged as one of the greatest barriers to reurbanization along the CTC. Smaller, highly fragmented land parcels, individually, have very little potential for intensification and only become viable for development when adjacent parcels of land can also be purchased and consolidated. As a result, small-scale redevelopments often eliminate the marriage value of surrounding land parcels, and in some cases the entire block, as these properties become uneconomical to incorporate into an indivisible land assembly. Small-scale redevelopments/re-uses of existing buildings in downtown (e.g. converting a single-detached unit into a coffee shop or small business) are usually embraced by local merchants and can be quite desirable in the short term; however, planners must also consider the opportunity costs associated with extinguishing the long-term density potential of surrounding land parcels. While quaint coffee shops and yoga studios can provide a nice balance to more intense developments within the Region's Urban Growth Centres, *redevelopments that fail to add density and detract from adjacent density potential should be deterred within the immediate vicinity of Rapid Transit platforms to ensure that land may be developed to transit-oriented densities.*

7.2.6 Recommendations for Professional Practice

Throughout this investigation, I discovered that private sector perspectives on developer decision-making were not extensively reported upon in academic literature and that few case studies of this nature were available for independent study. Further, it was apparent that many members of the development community still relied on heuristics, learning experiences, recommendations from other developers, rules of thumb and back of the envelope calculations to guide investment decisions. Again, there is a very limited range of planning literature that captures the informal, intangible, aspects of real life developer decision-making. To facilitate reurbanization along the Central Transit Corridor through Station Area

Planning, planners must understand the business model of private sector stakeholders to effectively influence investment decisions through policy planning. Therefore, through academic and professional institutions, *planners ought to instill stronger economic fundamentals into academic and professional development curricula*. This recommendation is not about whether planners ought to take on the role of the regulator, or the facilitator, or the advocate. This recommendation is about improving the planning profession's factual understanding about land development practices in order to manage growth and development more effectively.

7.3 Study Contributions and Opportunities for Future Research

This research has made valuable contributions to both academia and professional practice in a number of ways. First, this study addressed the gap in our understanding about Growth Plan implementation at the local scale, revealing not only what has happened but also why certain outcomes have transpired. Second, this study confirmed that several of the barriers to reurbanization identified in the literature such as brownfield contamination, land assembly, and parking economics are relevant to Canadian, mid-sized cities. Third, this study highlighted several success factors and digressed from the literature in its discovery of several non-barriers to implementation, which demonstrates that compact, transit-oriented development is an attainable objective under the right circumstances. These findings were particularly important to theory and practice as there has been growing skepticism over the viability of implementing smart growth policies. Additionally, it is anticipated that the findings from this research can contribute to planning practice in the Region of Waterloo by offering realistic recommendations to improve implementation strategies. Although it is believed that this study accomplished its primary research objectives, there were also several limitations that provide excellent starting points for future research.

Allen and Campsie (2013) found that many municipalities have struggled to intensify employment uses, making it difficult to reach intensification targets that specify people and jobs combined per hectare. While many of the findings from this study can be generalized between residential

and commercial developments, the majority of developers interviewed for this research specialized in residential developments rather than commercial or retail development. Therefore, further research into the logistics of intensifying employment uses such as major office development or urban industrial facilities could help facilitate a better balance of uses in intensified areas.

This research focused on the practical limitations to reurbanization from a development planning perspective (i.e. what are the impediments to actually building densities of 200 people and jobs per hectare within the built-up area). However, reurbanization objectives are not just about the numbers. While most reurbanization objectives rely on achieving critical masses of people and jobs in core areas, the literature on reurbanization and smart growth also acknowledges the importance of diverse, complete communities. Therefore, future research could investigate methods of accommodating certain demographics whose lifestyle needs haven't traditionally been met through contemporary intensification efforts such as families with children or the less well off. Who is moving to new projects along the CTC? Are baby boomers downsizing to move to the CTC? Are families choosing to relocate in urban areas? Is the critical mass of development along CTC sustainable?

This study interviewed developers whose firms have completed reurbanization project along the CTC. These stakeholders were deemed most appropriate to target for interviews as they had experience developing within the case study boundary and would be able to comment on their experience throughout the process. However, many of these participants spoke very positively about their development experience in the Region of Waterloo, which may be attributed to the fact that their projects were successful. As Planner 7 (2013) pointed out, most of the traditional suburban developers have not made the transition to infill and intensification within the Region, so perhaps there are lessons to be learned from the developers who have refrained from building along the CTC. Why have they refrained from building along the CTC? Do different builders face different barriers? Future research could explore the barriers to infill and intensification from the perspective of traditional greenfield developers to get a better understanding of why certain development firms don't make the transition from greenfield to infill.

Lastly, this study found that generating and maintaining community support for the reurbanization mandate has been both a significant accomplishment and an ongoing challenge. While professional planners and developers were deemed the most appropriate stakeholders to consult with for this research, findings from key informant interviews and academic literature highlighted the role of other stakeholders such as city council and community groups. One key informant's favourite line was "planning is politics" as major planning decisions are ultimately shaped by votes at city hall, which is very sensitive to the needs and concerns of constituents. This finding presents an opportunity for future research to explore the ways in which public perceptions about reurbanization influence political decision-making in local government.

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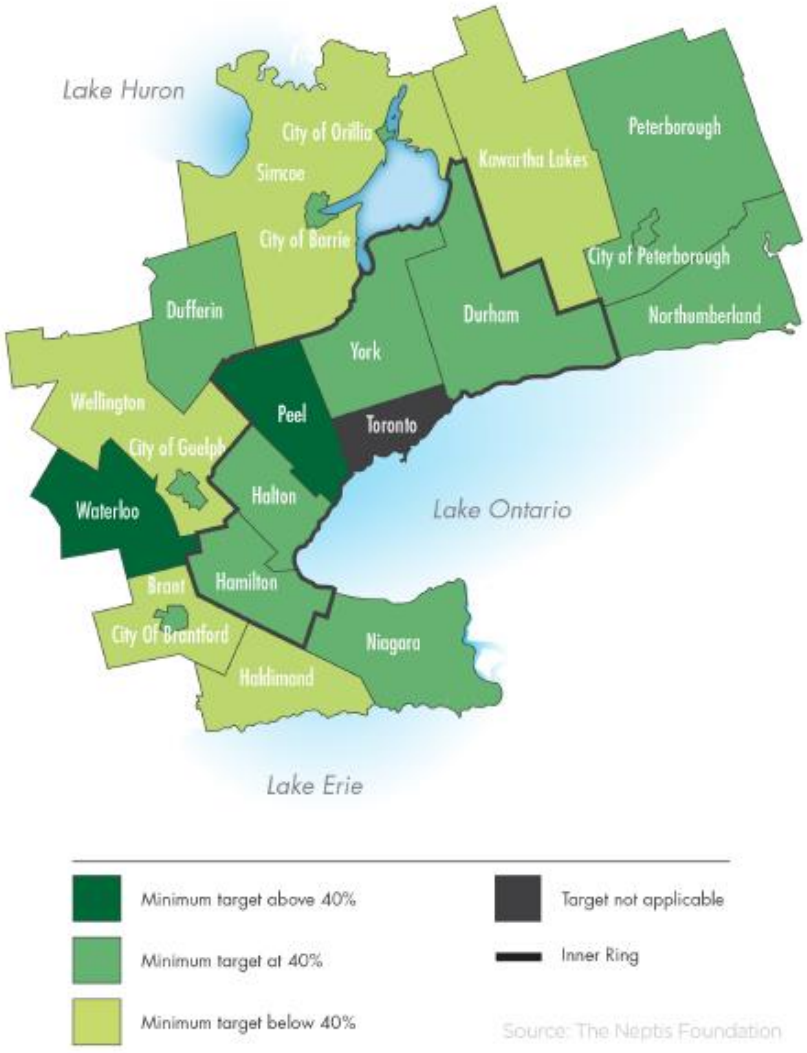
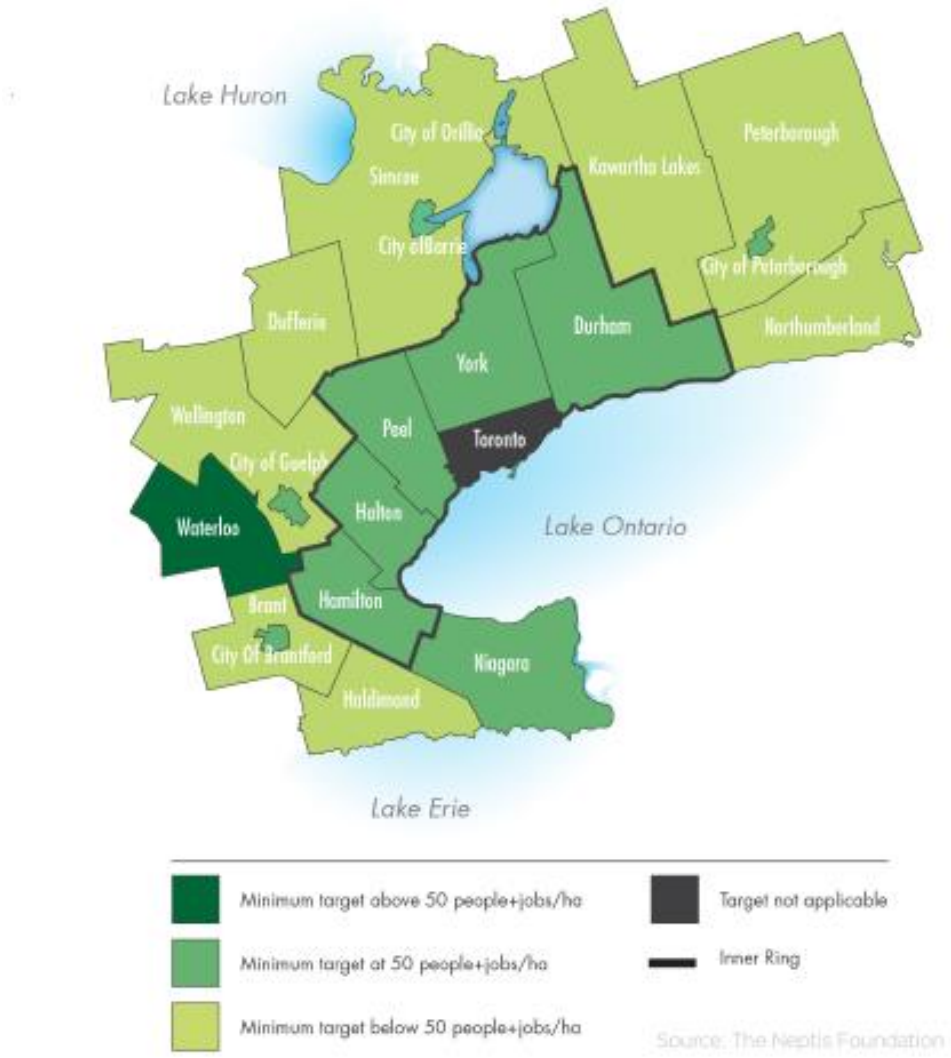
Appendix A- Growth Plan, 2006, Policy Targets in the GGH

Adoption of Minimum Intensification Targets by Upper- and Single-Tier Municipalities



Note: Map taken from Allen and Campsie (2013, Fig. 3.2), published by the Neptis Foundation

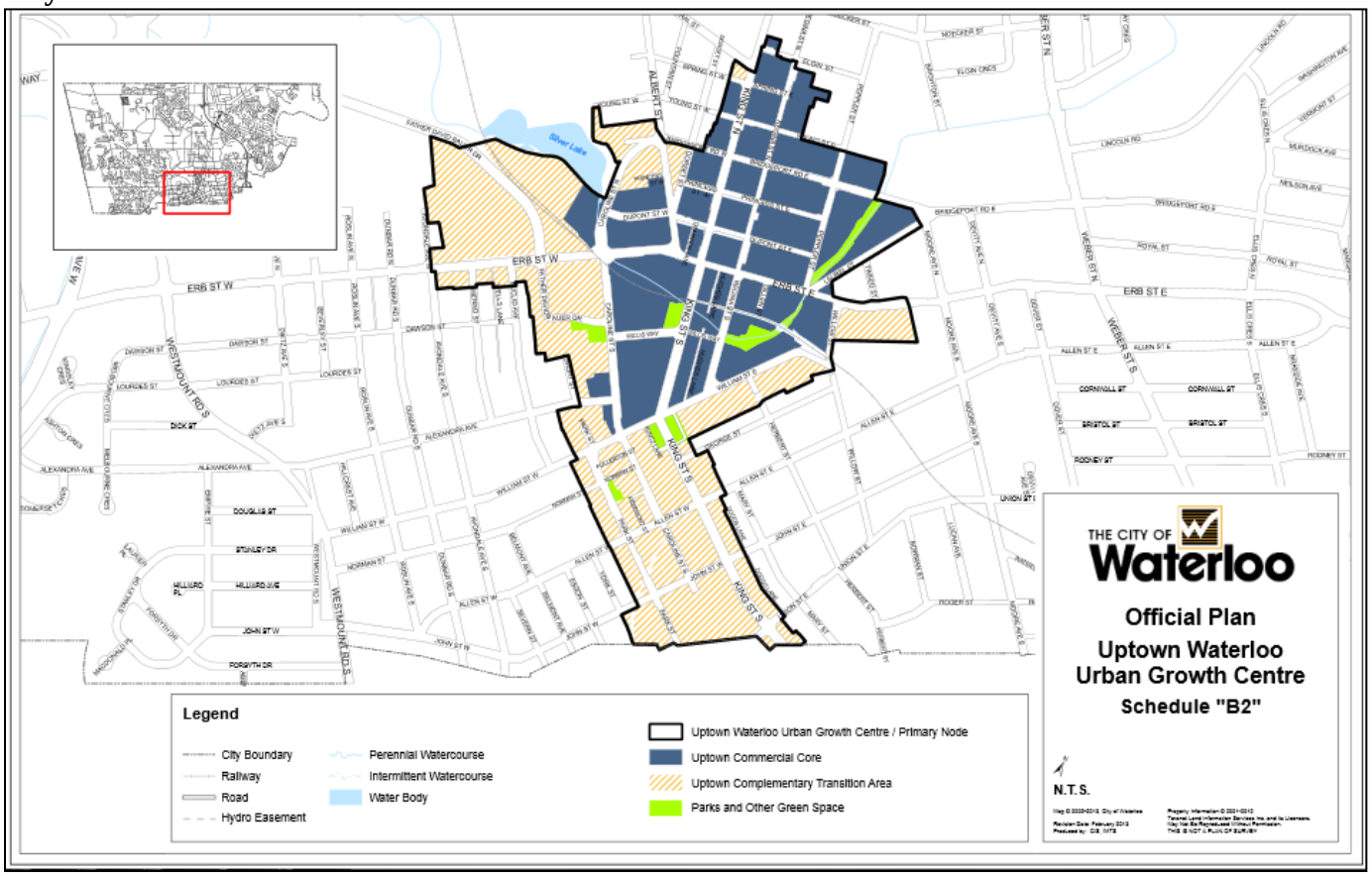
Adoption of Minimum Designated Greenfield Area Density Targets by Upper- and Single-Tier Municipality



Note: Map taken from Allen and Campsie (2013, Fig. 3.4), published by the Neptis Foundation

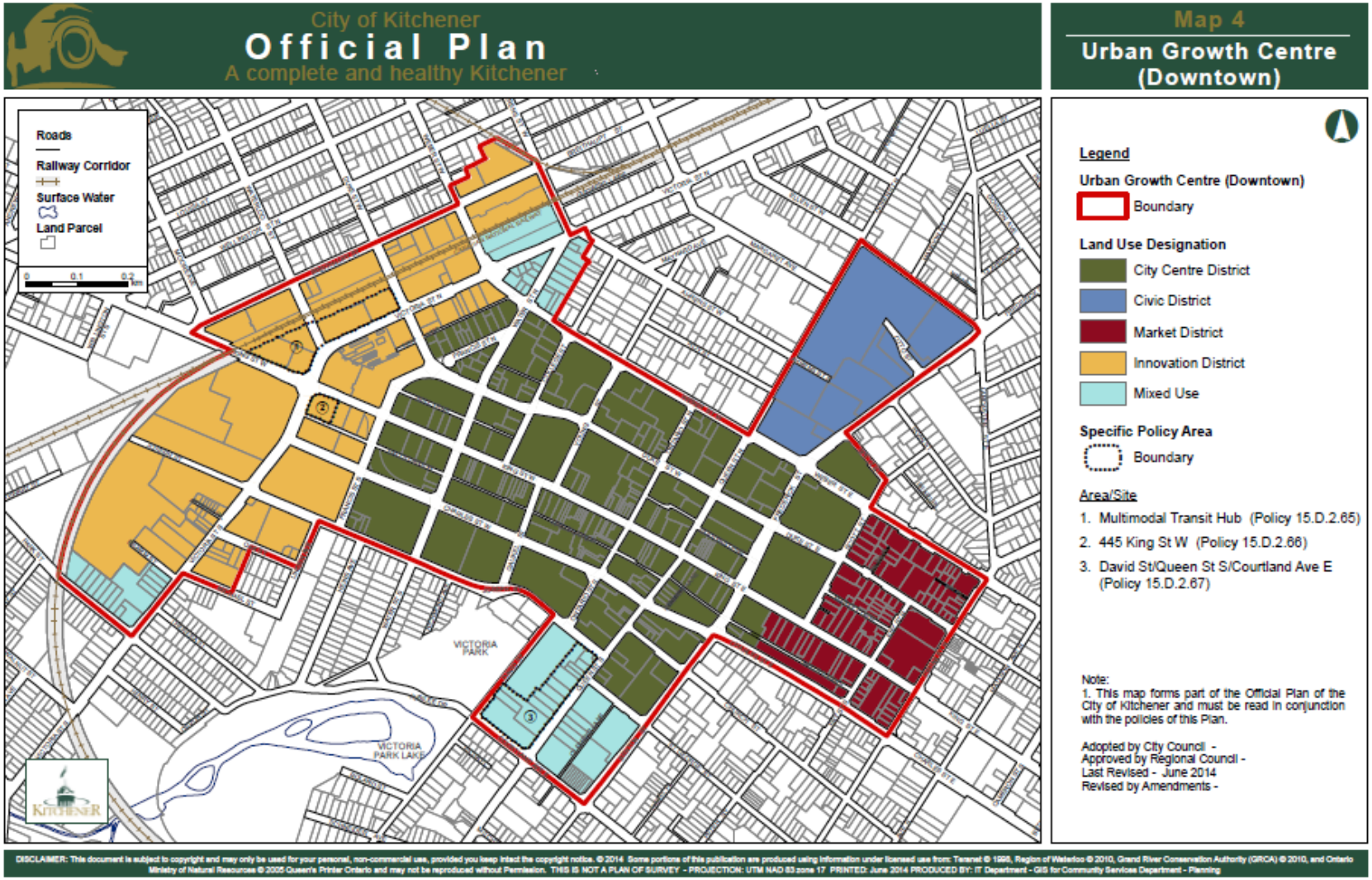
Appendix B- Region of Waterloo Urban Growth Centres

City of Waterloo UGC



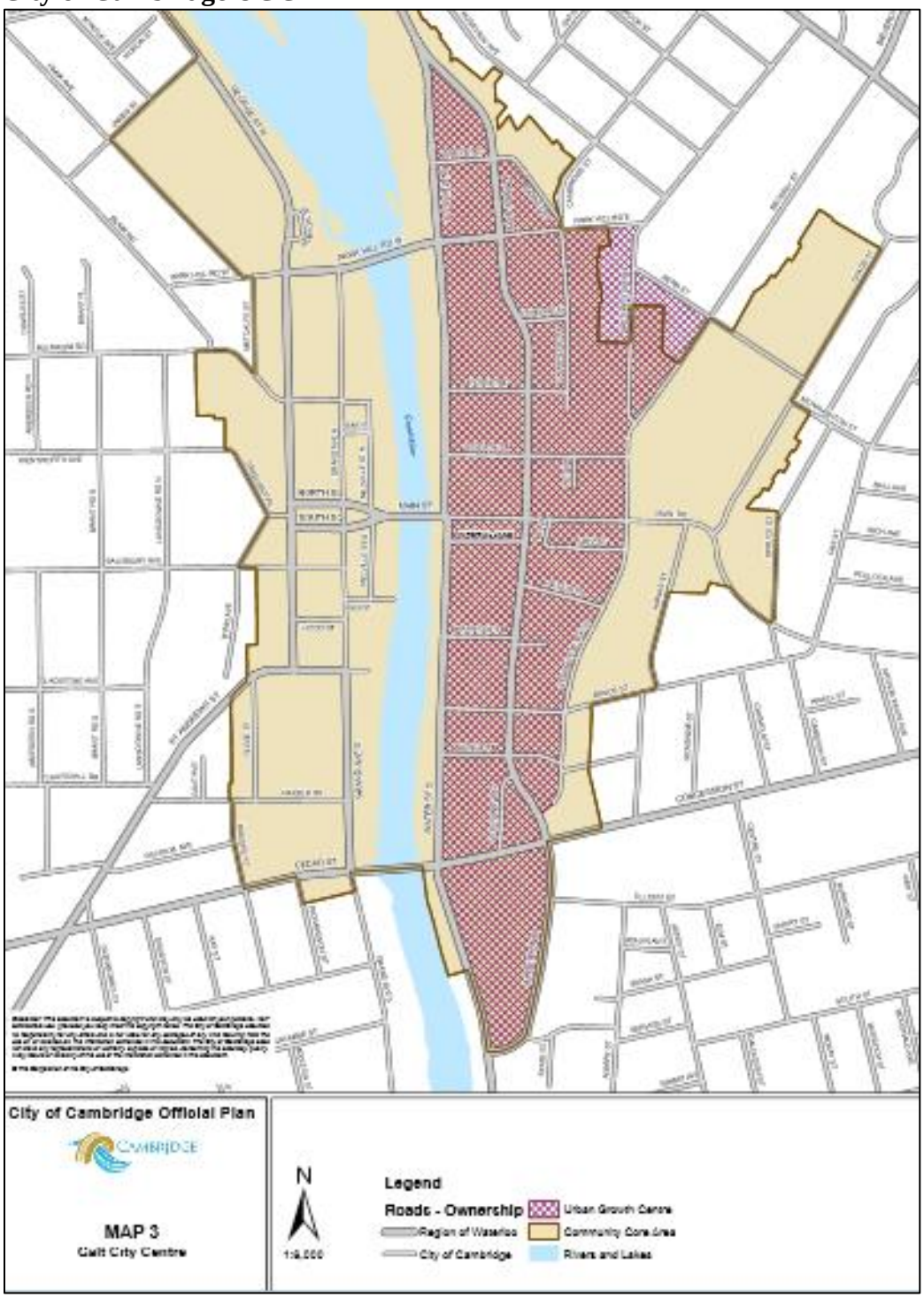
Source: City of Waterloo. (2013). City of Waterloo Official Plan

City of Kitchener UGC



Source: City of Kitchener. (2013). City of Kitchener Official Plan

City of Cambridge UGC



Source: City of Cambridge. (2013). City of Cambridge Official Plan

Appendix C- Inventory of Reurbanization Initiatives (Regional/Local)

Region of Waterloo Inventory of Initiatives

Plans/Regulations
• Regional Official Plan (ROP)(2010) • Regional Transportation Master Plan (2011) • Regional Active Transportation Master Plan (2014) • Region of Waterloo Corporate Strategic Plan (2011-2014) • King/Victoria Transit Hub (January 2013 Update)
Strategies
• Regional Growth Management Strategy (2003) • Central Transit Corridor Community Building Strategy (2013) • Regional Parking Management Strategy (2009) • TDM Parking and Trip Generation Reduction Strategy (2011) • Visualizing Densities Part II (2007)
Tools

• Regional Reurbanization Community Improvement Plan (2007)
• Financial Incentives (As of 2013)
  o Brownfield Financial Incentive Program
  o Regional Development Charges: Core Area Exemptions
  o Regional Development Charges: Demolition Credit
  o Community Environment Fund
  o Property Tax Class for Multi-Residential (Rental) Developments
• Transportation Demand Management in New Developments
• TravelWise Transportation Management Association

City of Waterloo Inventory of Initiatives

Plans/Regulations
• City of Waterloo Approved Official Plan (2012) • City of Waterloo Transportation Master Plan (2011) • City of Waterloo Strategic Plan (2011-2014) • City of Waterloo Zoning By-Law
Strategies
• City of Waterloo Land Supply, Height and Density Study (2003) • City of Waterloo Uptown Parking Strategy (2008)
Tools

• City-Wide Brownfields Community Improvement Plan (2013)
• Northdale Land Use and Community Improvement Plan (2012)
• City of Waterloo Urban Design Guidelines/Urban Design Manual (2012)
• Financial Incentives (As of 2013)
  o Uptown Façade Improvement Loan Program
  o Brownfield Incentive Program
  o Stormwater Credit Program

City of Kitchener Inventory of Initiatives

Plans/Regulations
• City of Kitchener Approved Official Plan (Council Adopted June 2014) • City of Kitchener Growth Management Plan (2013-2015) • City of Kitchener Business Plan (2014-2016) • Downtown Kitchener Action Plan (2012-2016) • City of Kitchener Strategic Plan (2011-2014) • King Street Master Plan (2010) • City of Kitchener Zoning By-Law #85-1 (Office Consolidation March 2012)
Strategies
• City of Kitchener Growth Management Strategy (2009) • City of Kitchener Economic Development Strategy (2011)
Tools
• City of Kitchener Adaptive Reuse Community Improvement Plan (2006) • City of Kitchener Brownfield Remediation Community Improvement Plan (2006) • City of Kitchener Downtown Kitchener Community Improvement Plan (1997) • City of Kitchener Energy and Water Efficiency for Land and Buildings Community Improvement Plan (2010) • Downtown Financial Incentives (As of 2013) o 3-Year Tax Exemption (1997-Present) o Planning Application and Building Permit Fee Rebates (1997 – present) o Exemptions from Parkland Dedication Fees (1995 – present) o Exemptions from Development Charges (1999 – present) o Façade Improvement Grant Program (2009-2013) • City-Wide Financial Incentives (As of 2013) o Brownfield Financial Incentive Program (2013) o Heritage Tax Rebates and Grants

City of Cambridge Inventory of Initiatives

Plans/Regulations
• City of Cambridge Approved Official Plan (2012) • City of Cambridge Zoning By-Law No. 150-85 (Office Consolidation January 2012)
Strategies
• City of Cambridge Intensification Study (2010) • City of Cambridge Growth Management Strategy (2009)
Tools
• Main Street Urban Design Guidelines (2013) • Downtown Urban Design Guidelines (2013) • Core Area Financial Incentives (As of 2013) o Design Guide Program o Building Revitalization Program o Contaminated Sites Grant Program o Application Fee Exemptions o Development Charge Exemptions • City-Wide Financial Incentives o Tax Incentive Grant Program

- Heritage Grant Program
- Employment Land Development Charge Reduction
- Development Charge Exemptions

Appendix D – Interview Recruitment Email

This email is an invitation to participate in a research study conducted by Andre Antanaitis under the supervision of Dr. Mark Seasons, Professor at the School of Planning, University of Waterloo, Canada. This study will be used to fulfill the thesis requirements for a Master of Arts degree in Planning.

Through key informant interviews, a web survey, and direct observations, this study seeks to explore the issues and opportunities that the Region of Waterloo is facing in its attempt to reurbanize under-utilized property along the Central Transit Corridor. Interview questions aim to explore prominent issues in reurbanization, to identify sites along the CTC with an active potential for reurbanization, and to assess the effectiveness of local policy and regulation.

Voluntary participation in this interview should take approximately 1 hour. An audio recording and written transcript will be kept from each interview and with your permission, de-identified quotations may be used in the thesis and any publications (i.e. participant from municipality X). It is important for you to know that all data will be considered confidential and will be accessed only by the investigators for a period of two years - after which it will be destroyed. You may decline to answer any questions that you do not wish to answer and you can withdraw your participation at any time upon request.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at 905-902-2748 or by email at aantanai@uwaterloo.ca. You may also contact my supervisor, Dr. Mark Seasons at 519-888-4567 ext.35922 or via email at mseasons@uwaterloo.ca.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Thank you for considering participation in this study.

Yours Sincerely,

Andre Antanaitis
Masters Candidate
School of Planning
Faculty of Environment
University of Waterloo
Waterloo, Ontario
Canada N2L 3G1

Appendix E – Study Summary

My thesis research explores reurbanization in the Region of Waterloo, assessing the barriers to and opportunities for intensification along the Region's Central Transit Corridor (CTC). Reurbanization, as defined by the Region of Waterloo, refers to "growth and development that helps increase the number of people living and working within urban areas." Reurbanization is typically achieved through intensification, infill, adaptive-reuse, and redevelopment. The shift from urban sprawl to compact, transit friendly communities has been championed by the Province of Ontario and is widely regarded as best practice planning in academic literature; however, there are many impediments between expressions of provincial interest and local implementation.

There are many drivers of change that affect where people choose to live and work; the spatial demography of a city is largely influenced by major demographic, social, political, technological, and economic trends. For future growth and development to occur within the existing urban area (reurbanization), people have to desire city living, but equally as important, there must also be development opportunities in strategic locations to accommodate intensification. Compared with traditional greenfield developments, intensification, infill, and adaptive-reuse developments often have greater financial risk, which can limit the supply of economically feasible development opportunities within the urban boundary. An under-utilization of property can be witnessed in many of Ontario's mid-sized cities where market pressure has not surmounted the burdens of redeveloping problematic urban properties. Core area stagnation can be detrimental to a municipality's ability to intensify and revitalize city cores, limit urban sprawl, protect green space and farmland, and develop a greater range of transit options – the core objectives of the Growth Plan for the Greater Golden Horseshoe.

I decided to focus my research on reurbanization within the Region of Waterloo's CTC as there is both a surplus of under-utilized property and an imminent need for intensification surrounding the proposed LRT Transit Station Areas. To carry out this research, I am interviewing professional planners, developers, and municipal councillors in the Region of Waterloo to identify key factors or conditions that affect the development potential of property along the CTC. The following questions will guide my case study research:

- What have been some of the greatest challenges to implementing Region-wide initiatives to redirect more of the community's future growth to the built-up areas (reurbanization)?
- What areas, or specific sites, along the CTC have the greatest potential for reurbanization?
- How do developers and home builders evaluate the feasibility of reurbanization opportunities?
- How could policy and regulation intended to facilitate reurbanization be improved?

Overall, my case study will contribute to a greater understanding of how land-use planning affects the underlying economic forces that drive development decisions in the Region of Waterloo, with applicability of findings expected to be useful in other, similar city-regions.

Appendix F – Interview Consent Form

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I have read the information presented in the information letter about a study being conducted by Andre Antanaitis of the Department of the School of Planning at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher. This project has been reviewed by, and received ethics clearance through a University of Waterloo Research Ethics Committee. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Director, Office of Research Ethics at (519) 888-4567 ext. 36005.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

YES NO

I agree to have my interview audio recorded.

YES NO

I agree to the use of anonymous quotations in any thesis or publication that comes of this research.

YES NO

Participant Name: _____ (Please print)

Participant Signature: _____

Witness Name: _____ (Please print)

Witness Signature: _____

Date: _____

Appendix G – Survey Recruitment Email

This email is an invitation to participate in a research study conducted by Andre Antanaitis under the supervision of Dr. Mark Seasons, Professor at the School of Planning, University of Waterloo, Canada. This study will be used to fulfill the thesis requirements for a Master of Arts degree in Planning.

Many municipalities in the Greater Golden Horseshoe have limited space on the urban periphery and must now accommodate greater growth and development within the built boundary. Compared to traditional subdivision developments, intensification, infill, and adaptive reuses pose many challenges and nuances that often require municipal interventions. Through key informant interviews, a web survey, and direct observations, this study seeks to explore the issues and opportunities that municipalities are facing in their attempts to reurbanize under-utilized property in transit-supportive locations. Although this case study is focused on the Region of Waterloo, I am surveying other municipalities in the Greater Golden Horseshoe to develop a greater understanding of the research field.

Voluntary participation will involve completing a 15-20 minute online survey. If you prefer not to complete the survey on the web, please contact me and I will arrange another method of participation. Participation in this study is voluntary; you may decline to answer any questions that you do not wish to answer, and you can withdraw your participation at any time by closing your web browser. It is important for you to know that data will remain completely confidential and that the web site is programmed to collect responses alone and will not collect any information that could potentially identify you (such as machine identifiers). Additionally, all findings will be reported in a de-identified manner (i.e. "participant from Municipality X") Survey data will be stored on a secured password-protected computer for two years, and will be accessed only by the researchers.

If you do choose to participate, we would ask that you take part in the survey before December 31st 2013, so we are able to begin analyzing the results. If you wish to participate, please visit the Study Website at https://www.surveymonkey.com/s/reurbanization.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me at 905-902-2748 or by email at aantanai@uwaterloo.ca. You may also contact my supervisor, Dr. Mark Seasons at 519-888-4567 ext.35922 or via email at mseasons@uwaterloo.ca. Further, if you would like to receive a copy of the results of this study, please contact either investigator.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.
Thank you for considering participation in this study.

Yours Sincerely,
Andre

Andre Antanaitis
Masters Candidate
School of Planning

Faculty of Environment
University of Waterloo
Waterloo, Ontario
Canada N2L 3G1

Appendix H – Online Survey Questions

Planning Strategies for Developing Under-Utilized Property: A Case Study

Procedure

Voluntary participation in this survey should take approximately 15-20 minutes. This survey will ask questions that draw from your opinion and experience as it relates to the subject matter. You may decline to answer any questions that you do not wish to answer and you can withdraw your participation at any time by closing your web browser. If you prefer not to complete the survey on the web, please contact me and I will arrange another method of participation.

You will be asked to identify your profession and employment location; the researchers would prefer if you provided this information, but you may still proceed anonymously. It is important for you to know that data will remain completely confidential* and that the web site is programmed to collect responses alone and will not collect any information that could potentially identify you (such as machine identifiers). Survey data will be stored on a secured password-protected computer for two years and accessed only by the researchers; after two years it will be destroyed.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please contact me at either 905-902-2748 or eantanai@uwaterloo.ca, or my supervisor, Dr. Mark Seasons, at 519-888-4567 ext.35922 or mseasons@uwaterloo.ca. You may also contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.

Thank you for your participation.

*This survey uses Survey Monkey(TM)which is a United States of America company. Consequently, USA authorities under provisions of the Patriot Act may access this survey data. If you prefer not to submit your data through Survey Monkey(TM), please contact one of the researchers so you can participate using an alternative method (such as through an email or paper-based questionnaire). The alternate method may decrease anonymity but confidentiality will be maintained

Planning Strategies for Developing Under-Utilized Property: A Case Study

Consent

Note: Consent is required to complete this survey, but you may still withdraw from the survey at any time by closing your web browser.

***1. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.**

- ◯ I agree to participate
- ◯ I do not wish to participate (please close your web browser now)

Planning Strategies for Developing Under-Utilized Property: A Case Study

Personal Information

2. What is your profession? Select all that apply.

- [ ] Planner
- [ ] Developer
- [ ] Engineer
- [ ] Municipal/Regional Councilor
- [ ] Municipal Staffer

Other (please specify)

3. Where do you currently work? Select all that apply.

- [ ] City of Barrie
- [ ] City of Brampton
- [ ] City of Brantford
- [ ] City of Burlington
- [ ] City of Cambridge
- [ ] City of Guelph
- [ ] City of Hamilton
- [ ] City of Markham
- [ ] City of Milton
- [ ] City of Mississauga
- [ ] City of Oakville
- [ ] City of Orillia
- [ ] City of Peterborough
- [ ] City of St. Catharines
- [ ] City of Toronto
- [ ] City of Vaughan
- [ ] City of Waterloo
- [ ] County of Brant
- [ ] County of Dufferin
- [ ] County of Simcoe
- [ ] County of Wellington
- [ ] Region of Durham
- [ ] Region of Halton
- [ ] Region of Niagara
- [ ] Region of Peel
- [ ] Region of York
- [ ] Region of Waterloo

Other (please specify)

Planning Strategies for Developing Under-Utilized Property: A Case Study

Survey Questions

Definitions

The term "reurbanization," as defined by the Region of Waterloo, refers to "growth and development that helps increase the number of people living and working within urban areas." Essentially, reurbanization represents the transition from urban sprawl (achieved through green-field development) to compact, mixed-use, transit-oriented development (achieved through intensification, infill, adaptive-reuse, and redevelopment). The term "under-utilized property" will refer to property in strategic locations (i.e. in close proximity to major nodes and corridors within the built boundary) that is either vacant or of insufficient density.

4. Is reurbanization occurring in your municipality? If yes, please proceed to question 5. If no, please scroll to the end of this page and click next.

- ◯ No
- ◯ Yes

5. What indicators does your municipality use to measure reurbanization? Select all that apply.

- ☐ Household appreciation rates (inner city vs. suburbs)
- ☐ Graphic indicators (i.e. maps, aerial photography, geographic information systems, or build-out analyses)
- ☐ Demographic indicators (i.e. census population data)
- ☐ Modal share of daily trips (i.e. automobile, train, bus, bike, walk)
- ☐ Not sure

Other(s) (please specify)

6. Is your municipality experiencing absolute or relative reurbanization? Please choose the the answer that best represents the growth patterns in your municipality.

Absolute reurbanization would suggest that the inner city is gaining regardless of what is occurring in the suburbs, while relative reurbanization would suggest that the inner city is gaining at a greater rate (or at the expense of) the surrounding suburban regions.

- ◯ Relative
- ◯ Absolute

Planning Strategies for Developing Under-Utilized Property: A Case Study

7. In your opinion, what land uses provide the greatest opportunities for future reurbanization in your municipality? Please rate the following land uses from 1-6; 1 indicating no opportunities and 6 indicating many opportunities. The same rating may be used for multiple answers

	1) No opportunities	2) Very few opportunities	3) Few opportunities	4) Some opportunities	5) Several opportunities	6) Many opportunities	N/A
Old manufacturing sites	◯	◯	◯	◯	◯	◯	◯
Industrial lands	◯	◯	◯	◯	◯	◯	◯
Retail land	◯	◯	◯	◯	◯	◯	◯
Commercial land	◯	◯	◯	◯	◯	◯	◯
Closed schools	◯	◯	◯	◯	◯	◯	◯
Excess parking (surface parking, street parking, parking structures etc.)	◯	◯	◯	◯	◯	◯	◯
Vacant land	◯	◯	◯	◯	◯	◯	◯

Other(s) (please specify any other land use and its rating from 1-6)

Planning Strategies for Developing Under-Utilized Property: A Case Study

8. Drawing from your experience, please rate whether, or to what extent, the following conditions inhibit development opportunities for intensification, infill, or adaptive reuse? Please rate each condition from 1-6; 1 indicating that the issue is not a barrier and 6 indicating that the issue is a very major barrier. The same rating may be used for multiple answers.

	1) Not a barrier	2) Very minor barrier	3) Minor barrier	4) Moderate barrier	5) Major barrier	6) Very major barrier	N/A
Land contamination from previous uses (i.e. brownfields)	○	○	○	○	○	○	○
Required planning approvals (i.e. zoning by-law amendments and Official Plan amendments)	○	○	○	○	○	○	○
Lot sizes and/or configurations that fail to support higher densities	○	○	○	○	○	○	○
Linkages to municipal infrastructure and servicing	○	○	○	○	○	○	○
Costly parking requirements	○	○	○	○	○	○	○
Public opposition	○	○	○	○	○	○	○
Insufficient market conditions	○	○	○	○	○	○	○

Other(s) (please specify any other condition and its rating from 1-6)

Planning Strategies for Developing Under-Utilized Property: A Case Study

9. Please indicate whether these issues are unique to infill, intensification, and adaptive reuse developments, unique to green-field developments, or common to all types of development.

	Unique to infill, intensification, and adaptive-reuse	Common to infill, intensification, and adaptive-reuse AND green-field development	Unique to green-field development	N/A
Land contamination from previous uses (i.e. brownfields)	○	○	○	○
Required Planning approvals (i.e. Official Plan amendments, zoning by-law amendments or variances)	○	○	○	○
Lot sizes and/or configurations that fail to support higher densities	○	○	○	○
Linkages to municipal infrastructure and/or servicing	○	○	○	○
Costly parking requirements	○	○	○	○
Public opposition	○	○	○	○
Insufficient market conditions	○	○	○	○

Other(s) (please specify any other barrier and indicate whether they are unique to infill, intensification, and adaptive-reuse or common amongst all types of development)

Planning Strategies for Developing Under-Utilized Property: A Case Study

10. Please indicate whether any of the following policies, regulations, and incentives have been implemented by the municipality or region where you work.

	Yes	No	In-process
Land use designations in the Official Plan that support higher density and a mix of uses	○	○	○
Zoning-by law provisions that allow for greater densities and mixed uses	○	○	○
Community Improvement Plans (CIP)	○	○	○
Lot consolidation strategies	○	○	○
Urban design guidelines	○	○	○
Parking management strategies	○	○	○
Brownfield revitalization rebate programs	○	○	○
Post redevelopment tax exemption programs	○	○	○
Permit fee rebate programs	○	○	○
Parkland dedication fee exemption programs	○	○	○
Development charge exemption programs	○	○	○
Façade improvement funds	○	○	○
Other property improvement programs	○	○	○
Priority Funding Areas (PFAs)	○	○	○

Other(s) (please list any other policy, regulation, or incentive that your municipality has implemented to facilitate reurbanization)

Planning Strategies for Developing Under-Utilized Property: A Case Study

Q11

11. Do you have any suggestions for how your municipality/region could better facilitate reurbanization? If no, please leave this question blank.

Q12

12. Do you have any other comments? Please take the time to write any additional comments or feedback that you wish to share.

Planning Strategies for Developing Under-Utilized Property: A Case Study

Thank you

You have finished the survey. Thank you for your participation. Please click "Done" to submit the survey.

If you have any comments or concerns resulting from your participation in this study, please contact me at either 905-902-2748 or eantenat@uwaterloo.ca, or my supervisor, Dr. Mark Seasons, at 519-888-4567 ext 35922 or mseasons@uwaterloo.ca. You may also contact Dr. Maureen Nummelin, the Director, Office of Research Ethics, at 1-519-888-4567, Ext. 36005 or maureen.nummelin@uwaterloo.ca.