Understanding Developer's Decision Making in the Region of Waterloo

by

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A Senior Honours Essay
Presented to the University of Waterloo
in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Environmental Studies
in Planning

Waterloo, Ontario

2016

Financial support for this research was provided through SSHRC Partnership Development Grant # 890-2013-0034, entitled "Light Rail Transit and Core-Area Intensification: Unpacking Causal Relationships". We also wish to thank our research partners at the Region of Waterloo, City of Waterloo, City of Kitchener, and Coldwell Banker Peter Benninger Realty for facilitating the development of the survey. Finally, a huge thank you to all of the developers who participated in the pre-testing process or survey.

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1. Introduction

Land development--the conversion of lands to occupiable structures--represents the collective activities of key agents, including: regulators (governing bodies), land developers, real estate agents, and consumers in the market. Individual agents have different roles in the land development process. In the past, there have been many attempts to model their complex interactions (e.g. Schaeffer and Hopkins, 1987; Lai, 2001); however, these models inadequately account for factors that influence the behaviours of key agents (Gore & Nicholson, 1991; Coiacetto, 2001). More specifically, there needs to be further research and understanding of the key agent in the model: land developers.

Land developers are the primary drivers of change in the development process; they propose what to build, where to build, when to build, and how much to sell it for (Bourne, 1976; Coiacetto, 2001; Morgan, 2010). Different from other agents in the development process, land developers are involved for the entire duration, from acquiring land to selling the final product (Miles et al., 2000). As noted in a literature review conducted by Antanaitis (2015), there are limited empirical studies available that target individual developers using key informant interviews. Many existing models use assumptions about developer behaviour that are often overly simplistic and are unable to account for the complex decision-making strategies of developers and other agents (Knapp et al., 1998). Key informant interviews are useful in providing an in-depth understanding of how and why certain factors affect developer's decision making, as well as revealing potential patterns in their behaviours. This richer information could in principle lead to improved models of developer behavior.

Furthermore, developer behavior can be highly location-specific. For instance, studies of developer typologies (e.g. Bourne, 1976; Fainstein, 1994; Kenney, 1972; Winarso, 2000) discovered that heuristic learning (an approach to problem solving by using general knowledge and experience, also known as using a rule-of-thumb) of land developers varies between geographic areas. Developers' strategies are affected by local community characteristics such as demographic trends and political structure. Our study focuses on the behaviours and decision-making of developers in the Region of Waterloo, one of the fastest growing regions in Ontario, Canada. In addition to building a better understanding of the behavior of local developers, we intend to use the results of the research to build a location-specific model of developer behaviour. The study will also lay the groundwork to compare developers' behaviour pre-and-post implementation of a planned light rail transit (LRT) system in future research

2. Study Area

The Region of Waterloo is comprised of the tri-cities of Kitchener, Waterloo, and Cambridge, and various townships (see Figure 1). Several key features of the area have shaped land development patterns and opportunities.

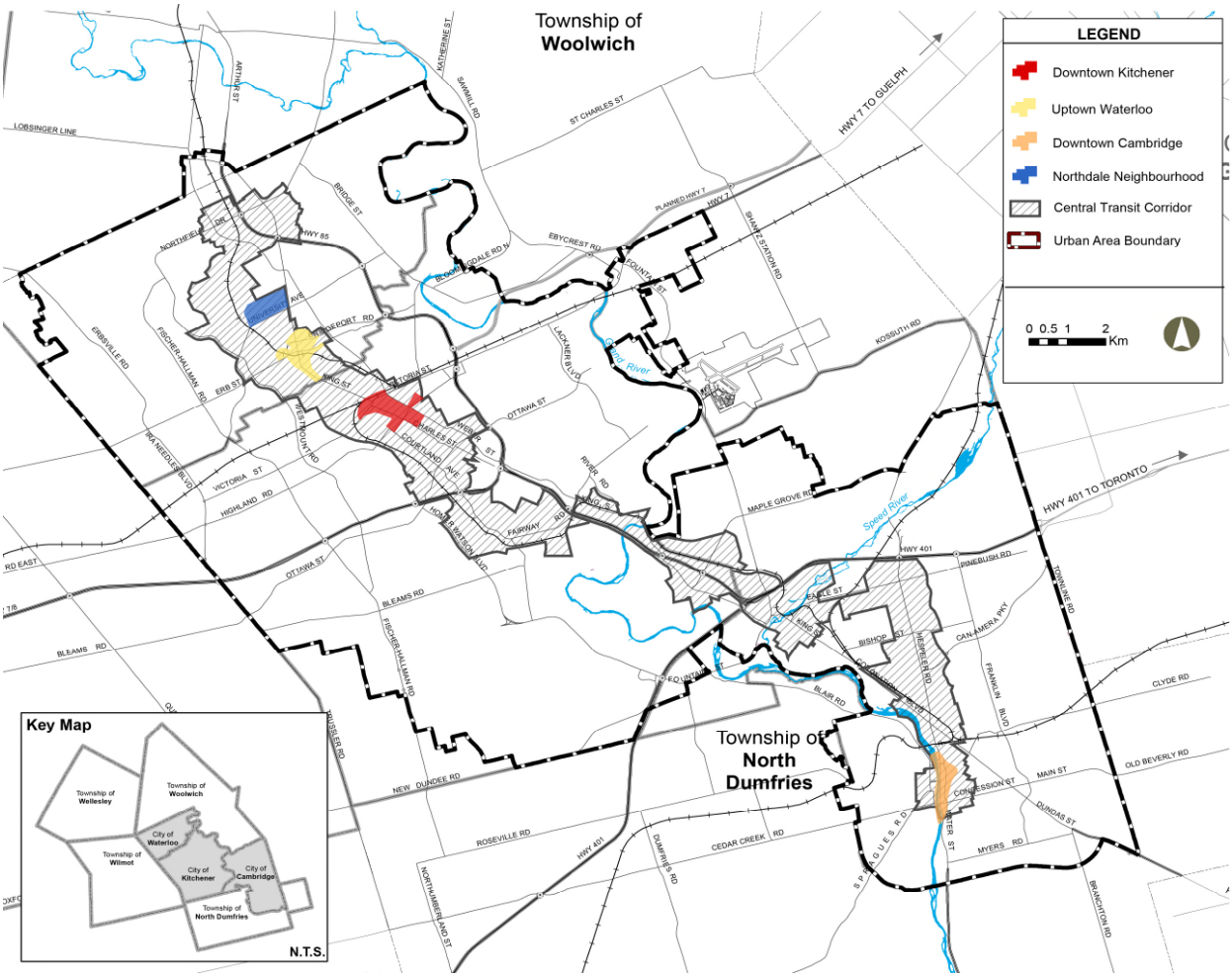


Figure 1: Study Area

- The Region is developed around strong industrial/retail cores in each municipality (the Urban Growth Centres: Downtown Kitchener, Uptown Waterloo, and Downtown Cambridge), which is now connected through a main transit corridor. Over the past few decades, the Urban Growth Centres of the tri-cities have witnessed a transition from

industrial uses to a growing service sector. They are now the central employment and residential clusters of the Region.

- Different from other similarly sized Canadian municipalities, the Region of Waterloo houses three prominent institutions: University of Waterloo, Wilfred Laurier University, and Conestoga Collage. The three colleges draw in an influx of students from outside the Region on an annual basis. As a result, land use in the area of these institutions is highly influenced by student housing demands. In particular, the housing characteristics in the area surrounding the University of Waterloo and Wilfred Laurier University (known as the Northdale neighbourhood) has transformed from mainly low-rise single-detached housing to mid- and high-rise student housing apartments in response to zoning changes in the City of Waterloo permitting higher density developments. The Northdale neighbourhood is now subject to a Community Improvement Plan, which aims to guide student housing developments in the area.
- Beyond the student population, the Region of Waterloo aims to attract a diverse workforce from around the province, particularly from the Greater Toronto Area (GTA). The Region of Waterloo is connected to other municipalities by interregional rail transportation (GO Transit and VIA Rail) and by car (Highway 401). However, rail services are often infrequent, where service only facilitates daytime commutes to Toronto. Highway 401 therefore acts as a major commuting and commercial corridor for the Region.

To support growth in the Region of Waterloo, Regional Council adopted the Regional Growth Management Strategy in 2003, which established the urban growth boundary and proposed the

creation of a rapid transit system. The urban growth boundary limits developable greenfield lands and directs growth in core areas of the Region. In 2011, the Region received funding for the ION rapid transit system: a light rail transit (LRT) system proposed to connect the tri-cities of Kitchener, Waterloo, and Cambridge (Region of Waterloo, 2011). The area, approximately 800 m around the proposed ION track, is known as the Central Transit Corridor (CTC). The CTC intends to accommodate higher density developments and promote sustainable urban intensification projects, attracting and retaining people and businesses into the Region.

A number of hedonic studies have found that proximity to higher-order transit has an impact on land uses and house values (Baum-Snow & Kahn, 2000; Cervero & Duncan, 2002; Dziauddin et al., 2014; Krause and Bitter, 2013; Duncan, 2010). Cervero (2003) suggests that the implementation of Light Rail Transit results in pro-development policies along transit corridors, greater development capacities, and support from investors. The research provides an opportunity to analyze developer's attitudes and strategies prior to the development of the light rail transit in the Region. The study aims to capture development trends specific to the Region of Waterloo, improving the understanding of this complex system, and provide recommendations for policy-making and infrastructure investments.

3. Methodology

For this study, our research team conducted mixed quantitative and qualitative structured interviews with land developers to gain insight into the perceived values of transit access and general drivers of the real estate market in the Region of Waterloo. Key informant interviews are particularly useful for gathering in-depth information on complex processes where norms, values and informal policies are not obvious to outsiders (Dean & Elliott, 2012).

We established connections with prominent developers in the Region by tracing recent major developments to their respective firms with the help of our research partners at the City of Kitchener, City of Waterloo, Region of Waterloo, and real estate network. Our main focus was on development firms with a significant portfolio of work in the Region of Waterloo's residential market. From our methodology, we estimate that the number of development firms with active developments[1] in the Region to be around 40 firms[2]; albeit, a significant portion of new residential developments could be attributed to a sub-selection of firms.

This study reports results from a total of 18 developers who participated in the key informant interview process. The interviews were conducted in-person and by phone. The representative from each firm was questioned on four main categories: 1) the firm's characteristics including past, present, and future trends to identify development patterns; 2) developer's behaviour; 3)

[1] Active Developments: Development activity within the past 5 years
[2] Calculated from the lists populated by staff from the City of Kitchener, City of Waterloo, Region of Waterloo and secondary sources of data (e.g. development applications). This value excludes home building/construction-only firms.

factors that affect developer decision-making; and 4) perspective on developing in the Central Transit Corridor. The results from the survey are summarized in Section 4 of this report.

One developer participates in the non-residential market, and as such, their data have been excluded in any quantitative responses related to residential development.

4. Summary of Results

The survey results are divided into four parts:

Part A: Firm's Information

Part B: Developer's Behaviour

Part C: Factors

Part D: Developing in the Central Transit Corridor

Missing responses could be attributed to any of the following reasons:

1. The question is not applicable due to the firm's operations.
2. The question is not applicable due to the age of the firm. Any questions on changes to development from past to present are not applicable to firms incorporated after 2003.
3. The participant declined to respond.

Note: The data in all charts are randomized. Thus a developer ID number represents different developers across tables, and no developer's answers can be aggregated by using these ID.

PART A

1. How many years has your firm worked in the land development industry?

Table Q1: Years in Land Development Industry

Years in Land Development Industry	# of Responses
1-5 Years	2
6-10 Years	2
11-20 Years	3
21-30 Years	3
31+ Years	7
Total	17

Four firms are relatively new in the industry (1-10 years) and have been excluded in questions that ask about past trends on activity before 2003. The majority of firms interviewed have been in the industry for over 20 years.

2. How would you best describe you firm's business model?

Table Q2: Business Model

Business Model	# of Responses
Incorporated Only	14
Partnership	1
Publicly Traded Shares	0
Sole Proprietorship	2
Public Agency	0
Total	17

All of the firms are incorporated, and a few are sole proprietorships or partnerships.

3. What business operation(s) are your firm involved in?

Table Q3: Business Operations

Business Operations	# of Responses
Land Development	17
Building & Construction	16
Property Management	14
Real Estate Investment	14
Marketing & Sales	10
Other	7

All of the firms are involved in land development[3], and nearly all of them are also involved in building and construction, property management, and real estate investment. More than half the firms have in-house marketing and sales. Other business operations include: consulting, healthcare, restaurant management, etc.

[3] Only firms involved in the land development industry were asked to participate in this study.

4. What is your firm's approximate number of units sold for residential projects in the Region of Waterloo in 2014?

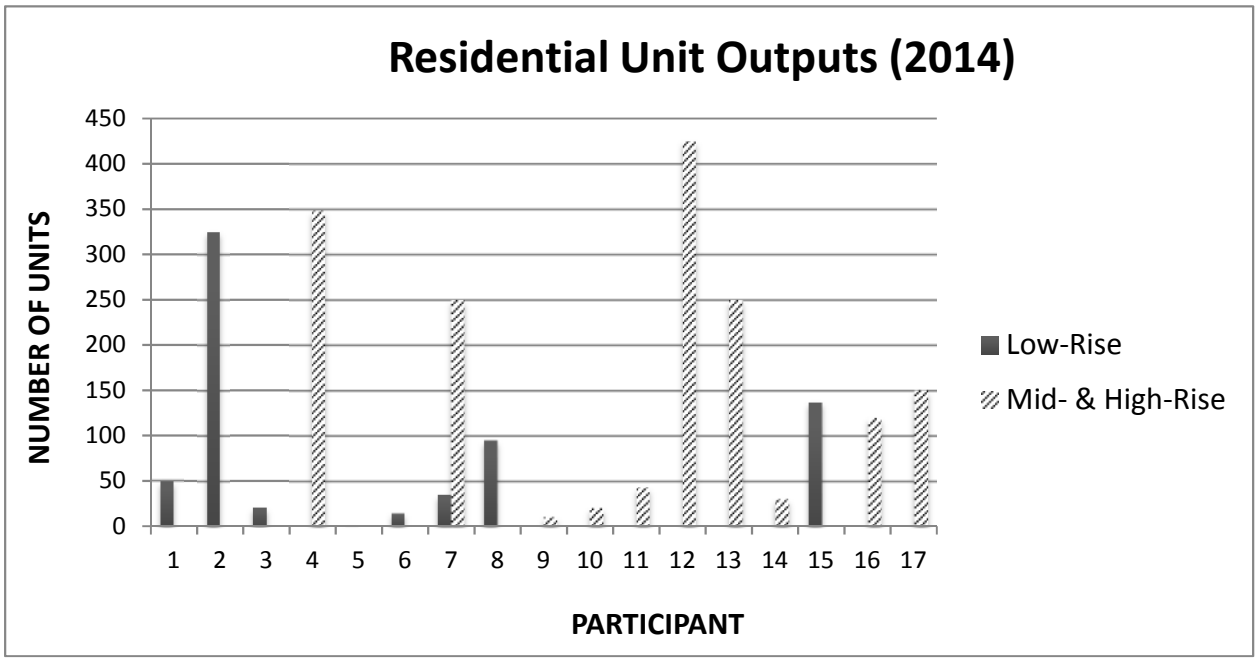


Figure Q4: Residential Unit Outputs (2014)

Figure Q4 represents the approximate annual residential unit outputs for low-rise and high-rise projects, using 2014 as the measure. Low-rise projects include: single-detached, semi-detached, row housing and low-rise apartments. Mid- and high-rise projects include apartment buildings. Due to the difficulty of accurately recalling data during the interviews, the values obtained are estimates. The responses also vary as some developers assessed the question based on the units sold, while others assessed it based on building permits obtained. The results from this question are only a generalization of the firm's residential unit outputs for 2014. The actual distribution of projects for each firm may vary as the residential outputs may have changed since 2014.

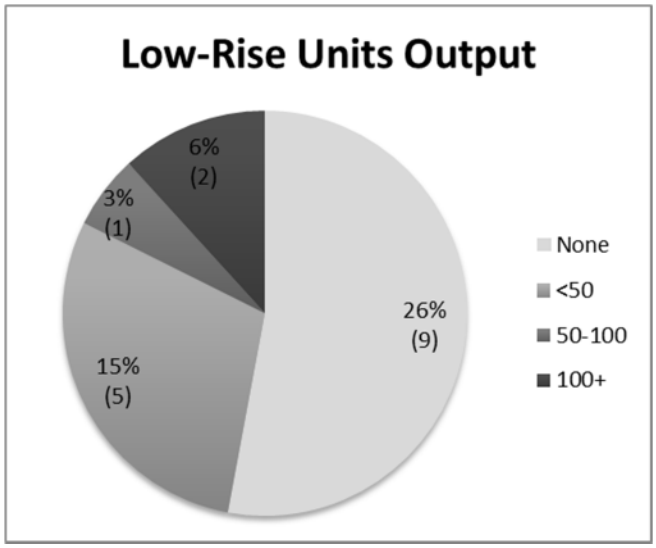


Figure Q4a: Low-Rise Units Output

For firms involved in low-rise developments, the majority of the firms have outputs fewer than 50 units a year.

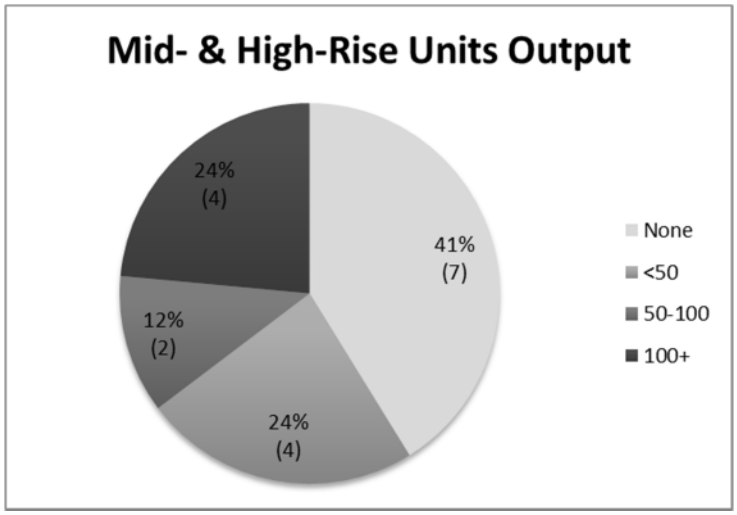


Figure Q4b: Mid- & High-Rise Units Output

For firms involved in mid- and high-rise developments, there is a greater range in the number of residential unit outputs. Four firms produce fewer than 50 units annually, while four firms produce over 100 units annually.

5. How large is your firm in terms of paid employees (full-time staff not including contractors)?

Table Q5: Number of Employees

Number of Employees	# of Responses
1-5 employees	5
6-25 employees	5
26-100 employees	1
101-300 employees	3
301 or more employees	3
Total	17

The number of employees is a good measure to classify the relative firm size and scope of operations. From the results, the majority of firms interviewed have less than 25 employees.

6. In what municipality is your firm's headquarters located?

Table Q6: Location of Firm

Municipality	# of Responses
Kitchener	6
Waterloo	7
London	2
Burlington	1
Guelph	1
Total	17

We used the location of the firm's main headquarters for all firms with multiple offices. From the results, most firms are located in the Region of Waterloo, specifically in the City of Kitchener and City of Waterloo.

7. Please indicate the approximate percentage of your firm's projects located in the Region of Waterloo relative to your total project portfolio.

Table Q7: Percentage of Project in the Region of Waterloo

Percentage	# of Responses
1-25	1
26-50	1
51-75	2
76-100	13
Total	17

The majority of the firms have over 75% of their projects within the Region of Waterloo, of which many of them specialize in projects unique to the Region's market.

8. Please indicate the approximate percentage of your firm's projects in the following real estate sector(s) between 2011 and 2015.

Table Q8: Real Estate Sectors

Real Estate Sectors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Retail-Residential	22	5	10	0	0	0	30	10	0	5	0	0	0	0	0	0	0
Retail-Office	0	40	40	0	0	10	0	0	0	0	0	0	0	0	0	0	0
Residential Only	0	0	10	25	40	45	70	85	90	95	98	100	100	100	100	100	100
Retail Only	0	0	40	0	0	45	0	5	0	0	0	0	0	0	0	0	0
Office Only	0	55	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0
Industrial/Institutional	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Retail-Residential-Office	78	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Commercial Uses	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Looking down the columns of Table Q8, it is evident that the firms are diverse. There are some firms that specialize in residential-only development and some firms that specialize in mixed-use developments (combining retail, residential, and/or office uses). Other firms show a more diverse portfolio.

9. Has your real estate sector focus changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table Q9: Real Estate Change from Past to Present[4]

Real Estate Sector Change (Past to Present)	# of Responses
N/A	4
No change	6
Increase mixed-use	4
Decrease residential, increase non-residential	1
Decrease non-residential, increase residential	2

[4] Questions on trends from past to present are not applicable to firms that were incorporated after 2003.

Total	17

What was the reason/motivation for the change?

Table 9a: Reason/Motivation for Change

Reasons	# of Responses[5]
Affordability	1
Opportunities	3
Building Portfolio	2
Changes in Market Demand	4

In general, the participants had similar reasons for changes to their firm's real estate sector focus. Many participants specified that there has been a shift away from residential-only developments due to opportunities- more specifically the lack of greenfield development opportunities. One developer said that land development "is an opportunity-based/deal-based business", referring to how land availability (e.g. greenfield opportunities) dictates where development growth will occur. Some participants believe that decreasing greenfield opportunities and changes in market demands will lead to higher demand for mixed-development. Other factors, such as the introduction of light rail transit, are contributing to this trend.

[5] Some participants have indicated more than one reason and thus, their responses have been counted more than once

10. Will your real estate sector focus likely change in the future (>2020)? If yes, what is the change?

Table 10: Real Estate Change from Present to Future

Real Estate Sector Change (Present to Future)	# of Responses
No change	6
Increase retail	3
Increase mixed-use	6
Increase residential	2
Total	17

Can you say more about the reason/motivation for the change?

Table 10a: Reason/Motivation for Change

Reasons	# of Responses
Policy Changes	2
Profitability	2
Diversify Portfolio	2
Opportunities	2
Market demand	3

Several participants said that changes to their real estate sector focus were due to infill opportunities and greater demand for mixed-use development. With fewer greenfield opportunities available, many developers indicated that they are interested in taking part in more infill/intensification projects within urban core areas (i.e. Central Transit Corridor) of the Region. The vision for development in the core area is to promote compact, high-density mixed-use development. One developer indicated that the residential-only market is saturated in some areas; instead, the developer believes that there is a greater demand for employment and other commercial services. Some participants said that their firm is interested in diversifying their portfolio of work by introducing different types of mixed-use prototypes (e.g. retail-residential and office-residential mixed use development). The desire for mixed-use developments coincides

with policy changes by municipalities. Regional and municipal plans and policies are encouraging mixed-use developments and the development of "complete communities" by ensuring a range of services, housing and employment opportunities for the public. From the responses of the developers, it is interesting to see that there are several firms that are considering combining retail, residential, and office use all in one development.

11. For your firm's residential developments, please indicate the approximate percentage of your firm's number of projects with the following building type(s) between 2011 and 2015.

Table 11: Building Types

Building Type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Low Rise	0	0	0	0	20	25	25	50	75	85	90	90	95	100	100	100	100
Mid Rise	60	100	100	0	80	75	50	50	0	10	10	10	5	0	0	0	0
High Rise	40	0	0	100	0	0	25	0	25	5	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

12. Has your building type focus changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 12: Building Type Change from Present to Future

Building Type Change (Past to Present)	# of Responses
N/A	4
No change	6
Decrease low-rise	6
Decrease high-rise	1
Total	17

What was the reason/motivation for the change?

Table 12a: Reason/Motivation for Change

Reasons	# of Responses
Affordability	2
Business Strategy	3
Policy Changes	2
Feasibility	1
Opportunities	1
Market Demand	1

The developers specified that there has been a decrease in low-rise developments due to changes to business strategies, affordability of housing and policy changes. Three firms noted that their business strategy and scale of business plan has changed over time. In particular, one participant explained how their business strategy is to start with low-rise development and then build mid/high-rise development when there is the population density and market in the area to support higher density development. To understand why developers are transitioning to higher density developments, one participant used the concept of economies of scale: it is not always feasible to continue with low-rise development (e.g. single-detached homes) as the cost of greenfield land is increasing. Instead, developers have the incentive to build mid- and particularly, high-rise developments given that the cost of purchasing land and the approval process is similar for both types of developments, but mid- and high-rise developments can yield significantly more units, reducing the cost per unit. Strategies of the developers to move away from low-density developments are also linked to policy changes (e.g. changes to density requirements in the zoning by-law), where policies encourage for higher density in built-up areas and urban growth centres.

13. Will your building type focus likely change in the future (>2020)? If yes, what will be the change?

Table 13: Building Type Change Present to Future

Building Type Change (Present to Future)	# of Responses
No change	2
More mid-rise and high-rise	7
More mid-rise	1
More high-rise	2
Higher density low-rise and some mid-rise	4
May vary[6]	1
Total	17

Can you say more about the reason/motivation for the change?

Table 13a: Reason/Motivation for Change

Reasons	# of Responses
Affordability	1
Business Strategy	4
Profitability	2
Policy Changes	2
Density	3
Market Demand	1
Opportunities	1

Many participants indicated that their firm will participate in more mid- and high-rise developments (greater emphasis on high-rise developments) in the future. The majority of the participants re-iterated that moving towards intensification is part of their business strategy, where some developers aimed to develop low-rise buildings in new greenfield sites; as the community establishes a greater population density and planning policy changes, the developer

[6] The comment "may vary" indicates that their firm will introduce new products dependent on density considerations and business strategy.

will gradually move towards higher density. One participant summarized their rationale behind building form trends as, “housing form will be dictated by two things: density considerations and business strategy”. From the developers, it appears that that density targets established by municipalities are a driving factor in the housing form and type of development land developers will focus on in the future. Density targets were particularly stressed by student housing developers as a major factor affecting their development choice.

It is interesting to note that only a few developers indicated their concerns with market saturation and the importance of understanding the supply side of the housing market. Based on the responses from the participants, it appears that it market demand is of a greater concern to developers rather than the supply (related to the actions of other developers in the land development process).

14. For prominent building types that your firm has developed between 2011 and 2015, please indicate the corresponding tenure and target market.

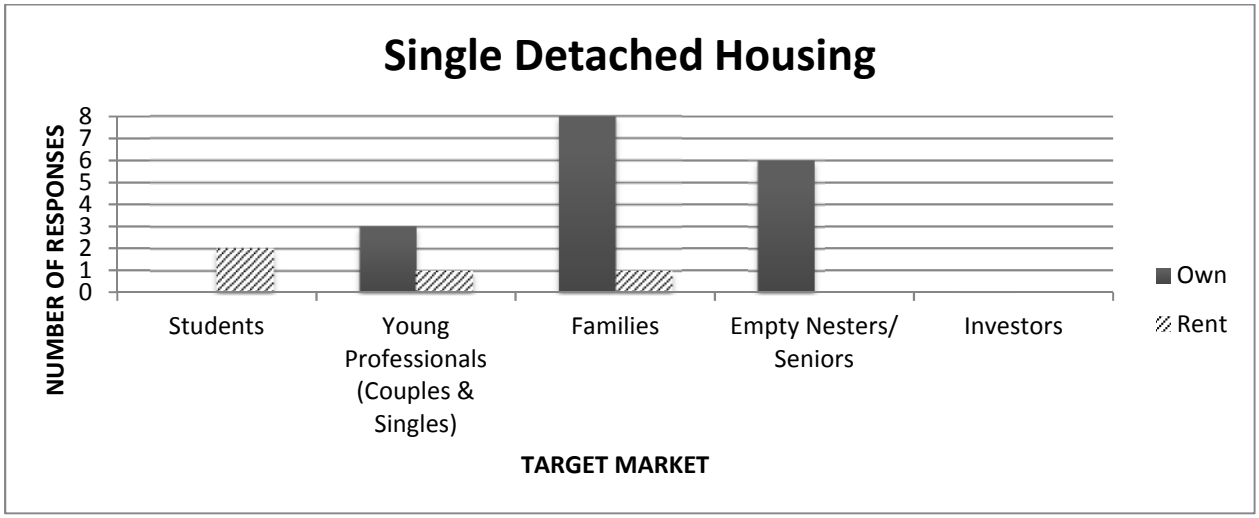


Figure Q14: Single-Detached Housing[7]

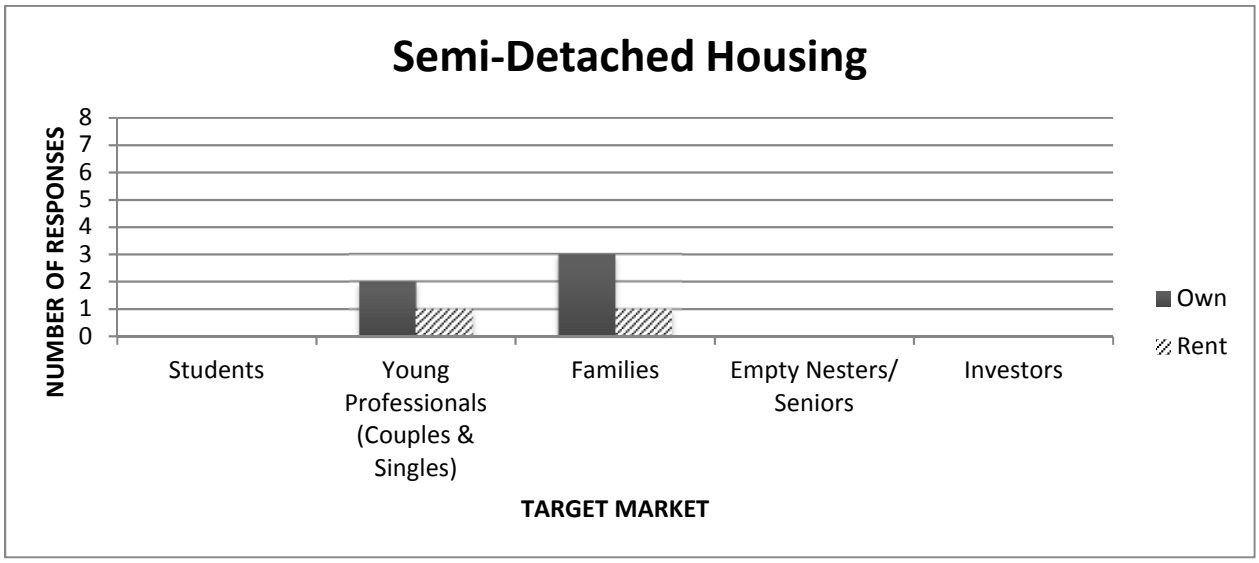


Figure Q14a: Semi-Detached Housing[8]

[7] Note: The target markets for single detached housing include students due to the inclusion of student housing developers. Some of the student housing developers have single-detached housing within or in close vicinity to the Northdale neighbourhood used for rental purposes.

[8] Note: The sample of firms is relative small, and only a small portion of the sampled firms are actively involved in the semi-detached housing building type. As such, the above figure does not represent an accurate distribution of target markets for semi-detached housing.

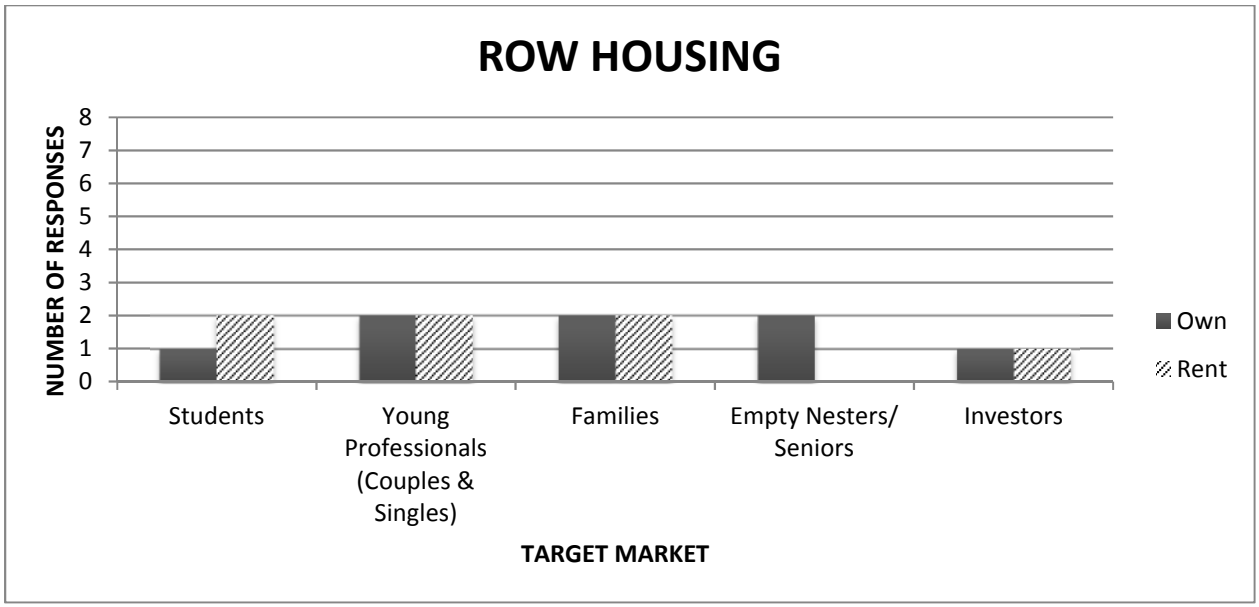


Figure Q14b: Row Housing

Figure Q14c: Low-Rise Apartment[9]

[9] Low-rise apartments: 1-3 storeys

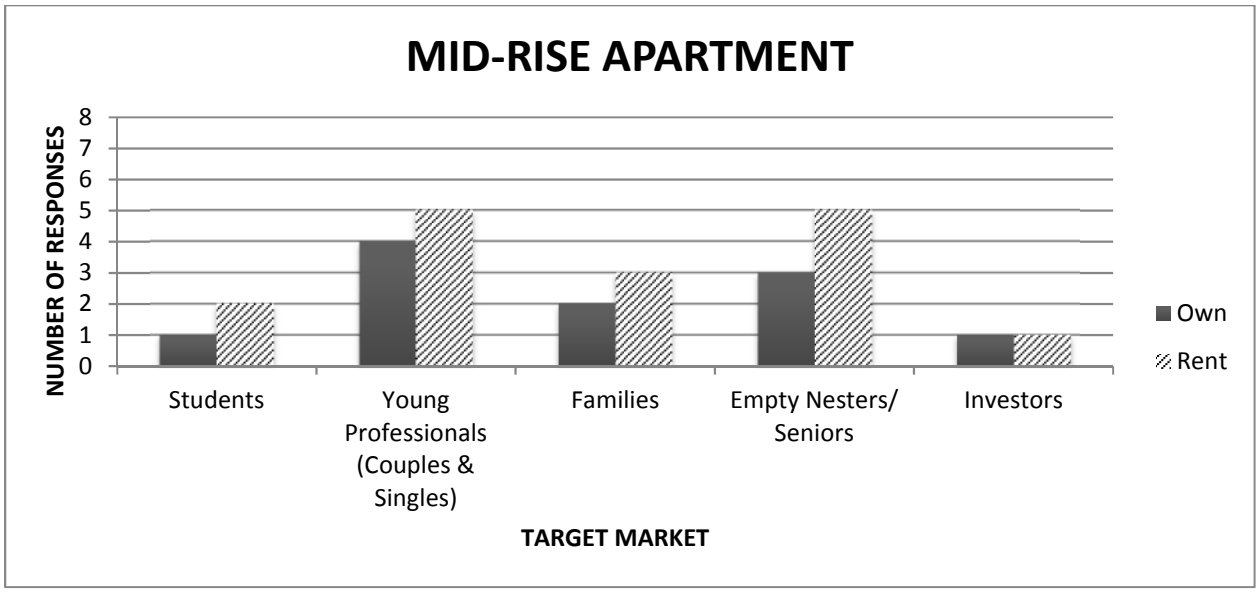


Figure Q14d: Mid-Rise Apartment[10]

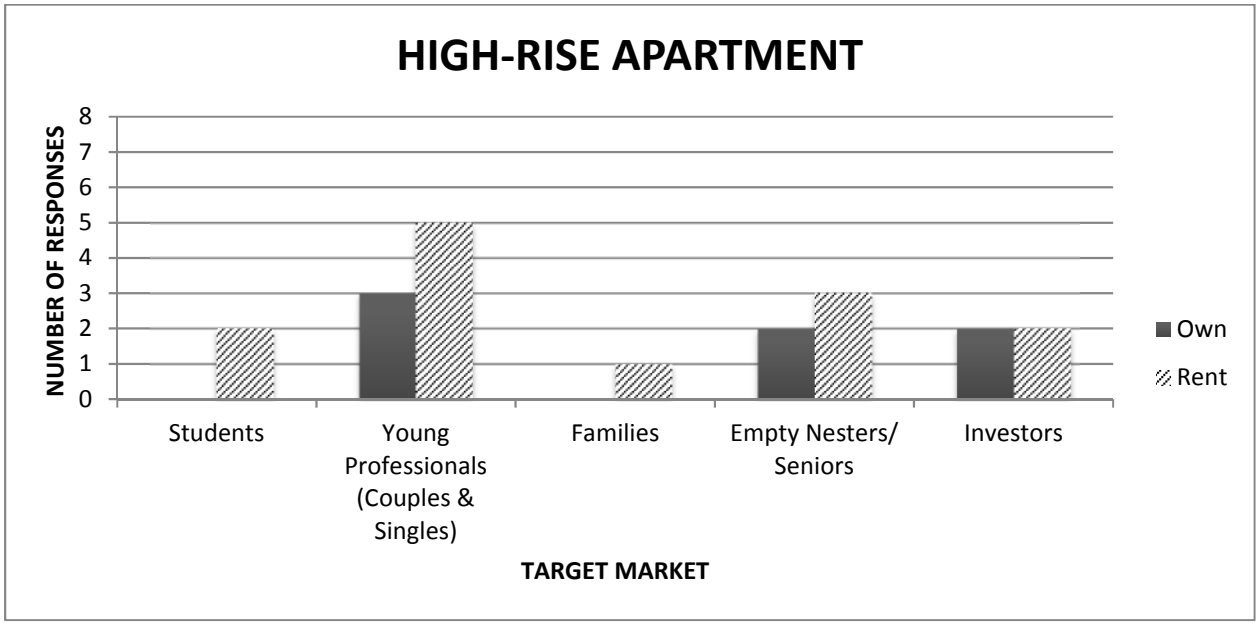


Figure Q14e: High-Rise Apartment[11]

[10] Mid-rise apartments: 4-11 storeys
[11] High-rise apartments: 12+ storeys

From the Waterloo Region 2010 Reurbanization Market Study, developers are responding to the same target markets as anticipated by the Region. The study noted that the target market groups e.g. young singles have individual needs, preferences, and characteristics (Metropolitan Knowledge International et al., 2010). For example, seniors prefer larger units compared to other consumer groups. On the other hand, young professionals (first time homebuyers) are generally interested in smaller units that are more affordable, and may perhaps rent instead of buying. From the results, there are developers that cater towards multiple target markets for the same building type e.g. high rise apartments. There are a few developers that are interested in targeting families with children in their upcoming mid- and high-rise projects within the urban core. This target market has previously been neglected in core areas of the Region; however, this shift in developer's target markets is consistent to the Region's strategies in attracting and housing families in the city centres.

15. If your firm develops student housing, please indicate the approximate percentage of your firm's student housing projects relative to total project portfolio in the Region between 2011 and 2015.

Table 15: Student Housing

Student Housing	# of Respondents
0%	14
100%	3
Total	17

16. Has your proportion of student housing projects changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 16: Student Housing Change from Past to Present[12]

Student Housing Change (Past to Present)	# of Responses
N/A	4
No change	13
Total	17

What was the reason/motivation for the change?

Currently, student housing developers are consistently developing only student housing. From the survey, non-student housing developers are not interested in the student housing market as they claim the market to be saturated.

17. Will your proportion of student housing projects likely change in the future (>2020)? If yes, what will be the change?

Table 17: Student Housing Change from Present to Future

Student Housing Change (Present to Future)	# of Responses
No change	13
Depends on opportunities	2
Go into high-rise condo market	1
Move away from student market	1
Total	17

Can you say more about the reason/motivation for the change?

Although the majority of non-student housing developers indicated that they are not interested in the student market, there are some developers that would consider this target depending on

[12] Note: this does not include developers who were contracted to build/construct student housing developments through their construction division.

opportunities. For example, one participant said, “this is a deal-based business, so there isn’t certainty on the type of projects we [the firm] would take on. We assess all opportunities based on its merits”. The developer was referring to potential development opportunities e.g. nearby Conestoga College that may be of interest to their firm in the future. However, both student housing developers and non-student housing developers agree that the housing market around the University of Waterloo and Wilfred Laurier University is saturated. One participant noted that the universities are also actively developing in the area, which increases the competition for developers in the Region. Multiple student housing developers indicated that they would be interested in other markets, e.g. high-rise condo markets or perhaps might focus on the young professionals target market instead. The participants expressed interest in moving into a market outside of the City of Waterloo due to reasons such as increasing development charges and parkland dedication requirements. One student housing developer stressed their preference for developing in the City of Kitchener instead, as they feel that the City of Kitchener’s policies create more of an incentive for developers to develop.

18. If your firm develops low-rise developments, please indicate the percentage of your developments with the following size characteristics between 2011 and 2015.

Table 18: Size Distribution of Low-Rise Developments

Size Categories	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Under 2000 SF	0	0	0	0	0	0	0	25	25	35	60	60	70	85	100	100	100
2000 to 3000 SF	0	0	0	0	0	0	0	50	75	45	40	20	25	15	0	0	0
3000 to 4000SF	0	75	0	0	0	0	0	20	0	20	0	15	5	0	0	0	0
Over 4000 SF	0	25	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0
Total	0	100	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100

19. Has the size composition of your low-rise developments changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 19: Changes in Size for Low-Rise Developments from Past to Present

Size Change (Past to Present)	# of Responses
No change	3
N/A	9
Smaller Lots	1
Decrease in Size	3
Dependent[13]	1
Total	17

What was the reason/motivation for the change?

Table 19a: Reason/Motivation for Change

Reasons	# of Responses
Affordability	3
Policy Changes	1
Density Requirements	1
Land Availability	1

Participants revealed that the main reason for the changes in size is to address the issue of affordability for buyers. One developer expressed, "the trend in the industry is that square footage is going down because people are choosing smaller footprints". One participant linked affordability needs of buyers directly to the reduction of lot frontages, which lowers the prices of the lots and subsequently, the homes. Developers reported that they are interested in building smaller, more compact, efficient homes that are higher density in nature. Particularly for empty nesters, who are interested in downsizing and looking for less space, the developers identified that smaller unit sizes may be linked to changes in lifestyle preferences, and a demand for a more

[13] The response "dependent" indicates that there are various factors that affect the size e.g. lot frontage, and target market, and no concrete answer can be given.

affordable and organized space. General policy changes, density requirements, and land availability are other reasons for changes in the size distribution for low-rise developments.

20. Will the size composition of your low-rise developments likely change in the future (>2020)? If yes, what will be the change?

Table 20: Changes in Size for Low-Rise Developments from Present to Future

Size Change (Present to Future)	# of Responses
No Change	1
N/A	7
Smaller in size	6
Dependent[14]	3
Total	17

Can you say more about the reason/motivation for the change?

Table 20a: Reason/Motivation for Change

Reasons	# of Responses
Affordability	3
Land Availability	1
Niche	3
Density	2

In addition to affordability, there are numerous developers who believe that prospective changes in the size distribution of units relate to their firm's niche or business strategy. For example, one participant expressed that as a custom home builder, house sizes will vary due to land constraints and ownership of the land. Other developers specified that as they move away from the single-detached housing market towards higher density greenfield development (e.g. stacked

[14] "Dependent" links to the participants' uncertainty on this question due to changes in policy, land availability, and the specific property details.

townhouse), they will produce smaller units, but of greater quantities. Another important factor is density targets, which some developers claim to be dictating the type of development that occurs on a piece of land, whether it is appropriate or not for the area.

21. If your firm develops mid- and high-rise apartment buildings, please indicate the percentage of your developments within the following size characteristics between 2011 and 2015.

Table 21: Size Distribution for Mid- and High-Rise Developments

Size Categories	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Under 750SF	0	0	0	0	0	0	10	20	35	40	50	50	60	75	80	100	100
750 to 1000SF	90	0	0	0	0	0	30	40	50	60	50	50	30	25	20	0	0
1000 to 1250SF	10	0	0	0	0	0	50	35	15	0	0	0	10	0	0	0	0
Over 1250SF[15]	0	0	0	0	100	0	10	5	0	0	0	0	0	0	0	0	0
Total	100	0	0	0	100	0	100	100	100	100	100	100	100	100	100	100	100

22. Has the size composition of your mid- and high-rise apartment buildings changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 22: Changes in Size for Mid- and High-Rise Developments from Past to Present

Size Change (Past to Present)	# of Responses
No Change	2
N/A	12
Decrease in size	3
Total	17

What was the reason/motivation for the change?

Table 22a: Reason/Motivation for Change

Reasons	# of Responses
Affordability	3
Market Demand	1

[15] Note: larger units for mid- and high-rise developments can be attributed to student housing projects that has five bedrooms

According to the participants, the main reason for the decrease in the size of the units for mid- and high-rise developments is also linked to affordability. From economic theory, larger units have less demand because of its higher price. As a result, one developer indicated that their size distribution is predominately 1-bedroom or studio units in order to meet the demands of the market.

23. Will the size composition of your mid- and high- rise developments likely change in the future (>2020)? If yes, what will be the change?

Table 23: Changes in Size for Mid- & High-Rise Developments from Present to Future

High-Rise Size Change (Present to Future)	# of Responses
No change	2
N/A	4
Decrease in size	7
Increase in size	2
Cannot say	2
Total	17

Can you say more about the reason/motivation for the change?

Table 23a: Reason/Motivation for Change

Reasons	# of Responses
Business Strategy	1
Market Demand	4
Opportunity	1
Affordability	3
Policy Changes	1

For mid and high-rise units, the participants emphasized that the market desires smaller, more affordable units. It is important to note that this varies depending on the project and location. For

example, one developer pointed out that the Waterloo market generally demands larger suites and are willing to spend more compared to the Kitchener market. Several participants indicated that it is important to have well-designed smaller units than inefficient larger units as people are not willing to pay for the extra square footage. Another developer notes that municipalities are dictating the size of developments through policy changes (e.g. requirement of a certain number of 3+ bedroom units).

24. Please indicate the approximate percentage of your firm's projects categorized under the following development types between 2011 and 2015.

Table 24: Development Types

Type of Development	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Greenfield	0	0	0	0	0	0	0	0	0	50	50	50	85	95	100	100	100
Brownfield	0	0	0	30	0	100	0	50	75	0	15	0	0	0	0	0	0
Infill /Intensification	100	100	100	70	100	0	100	50	25	50	35	50	15	5	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

25. Has your development type focus changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 25: Changes in Development Type from Past to Present

Type of Development (Past to Present)	# of Responses
No change	9
N/A	4
Decrease greenfield development	4
Total	17

What was the reason/motivation for the change?

Table 25: Reason/Motivation for Change

Reasons	# of Responses
Land Availability/Opportunities	4
Business Strategy	1
Policy Changes	1
Cost of Land	1

According to the developers, the lack of land availability and high costs of greenfield sites has led to the decline of greenfield development and an increase in infill/brownfield opportunities.

If you remain specialized in a single development type, what is your motivation for specialization?

Table 25a: Motivation for Specialization

Reasons	# of Responses
Business Strategy/Expertise	6
Policy Changes	1
Land Availability/Opportunities	3

Participants indicated that their firms have their individual business strategies and expertise. Infill/brownfield developers are hesitant to enter the greenfield market as they do not have expertise in greenfield developments or they are not interested in developing subdivisions. Infill developers commented on how there is increasing competition in greenfield development due to the lack of land availability and policies limiting greenfield development. On the other hand, the majority of greenfield developers seem to be interested in brownfield/infill developments. Most of the participants expressed that they are not opposed to brownfield developments

(contaminated lands), but rather, sites will have to be carefully assessed to analyze the feasibility of the remediation efforts prior to committing to the project. As a whole, there is a positive outlook from all developers regarding opportunities on infill/intensification/brownfield sites.

26. Will your development type focus likely change in the future (>2020)? If yes, what will be the change?

Table 26: Changes in Development Type from Present to Future

Type of Development (Present to Future)	# of Responses
No change	5
More infill	3
More infill and brownfield	7
Depends on opportunities	2
Total	17

Can you say more about the reason/motivation for the change?

Table 26a: Reason/Motivation for Change

Reasons	# of Responses
Land Availability/Opportunities	6
Policy Changes	2
Business Strategy	1
LRT	1
Cost of Land	2

In the future, the majority of land developers will remain in or venture into the infill market. There is limited greenfield land available, and the light rail transit presents opportunities for the infill market. One developer indicated that all sites will be assessed based on their own merits and will be compared to other potential sites in other areas/municipalities, e.g. comparing City of Kitchener's exemptions from development charges compared to the City of Waterloo's

development policies. Greenfield developers are very much interested in entering this market as they recognize that once their land holding of greenfield lands is complete, they will need to enter the infill market to remain competitive.

27. For your firm's development projects within Region of Waterloo, please indicate the approximate spatial distribution of your projects of your projects between 2011 and 2015.

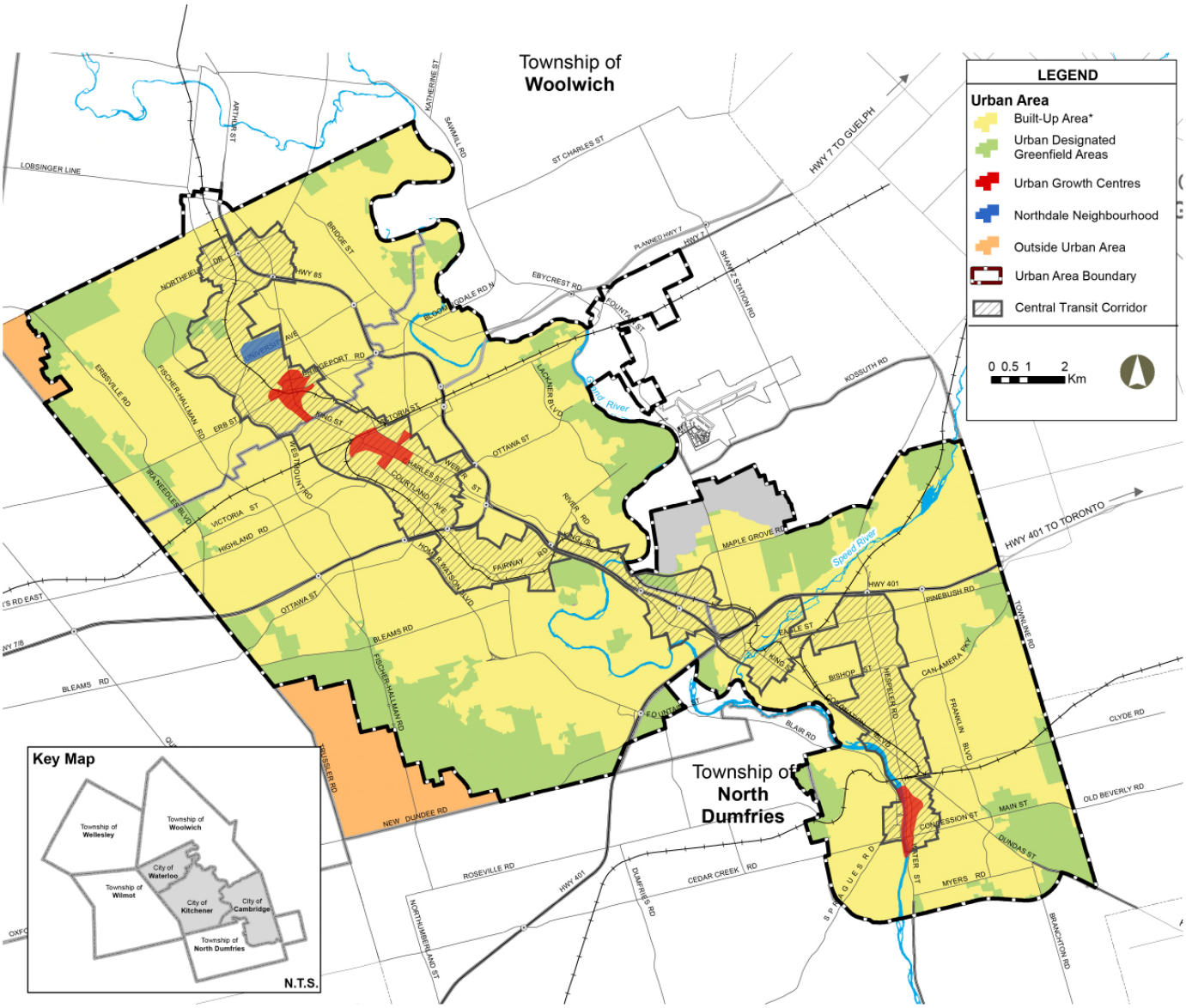


Figure Q27: Region of Waterloo

Please note that the areas highlighted in Figure Q27 are exclusive i.e. the Central Transit Corridor does not include the Northdale neighbourhood and Urban Growth Centres.

Table 27: Spatial Distribution

Areas	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Urban Designated Greenfield Areas	50	80	50	0	0	0	60	80	0	0	0	0	0	0	80	100	0
Northdale Neighbourhood	0	0	0	0	0	0	0	0	75	0	95	0	100	0	0	0	0
Urban Growth Centres	0	0	0	100	100	0	0	0	0	100	0	0	0	50	0	0	0
Central Transit Corridor	0	0	50	0	0	0	0	0	25	0	5	0	0	35	0	0	100
Built-up Areas	50	20	0	0	0	100	40	20	0	0	0	100	0	15	20	0	0
Outside Urban Boundary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

28. Has the spatial distribution of your projects changed from past (<2003) to present (2011-2015)? If yes, what was the change?

Table 28: Changes in Spatial Distribution of Projects from Past to Present

Spatial Distribution Change (Past to Present)	# of Responses
No change	9
N/A	5
Decrease in UDG	1
Increase in CTC	1
Decrease in UDG and Built-Up Areas	1
Total	17

What was the reason/motivation for the change?

Table 28a: Reason/Motivation for Change

Reasons	# of Responses
Land Availability	2
Opportunities	1

The lack of land availability in urban designated greenfield areas led to a shift to other areas.

29. Will the spatial distribution of your projects likely change in the future (>2020)? If yes, what will be the change?

Table 29: Changes in Spatial Distribution of Projects from Present to Future

Spatial Distribution Change (Present to Future)	# of Responses
No change	3
Increase in Built-up Areas and CTC	4
Increase in CTC	4
Depends on Opportunities	1
Outside Waterloo	2
Increase in Built-up Areas	2
Increase in CTC and UGCs	1
Total	17

Can you say more about the reason/motivation for the change?

Table 29a: Reason/Motivation for Change

Reasons	# of Responses
Opportunities	10
Cost/Affordability	4
Policy Changes	2
Market Demand	1

Many developers are witnessing a spatial transition from greenfield areas to built-up areas and the Central Transit Corridor (CTC). The participants indicated that the spatial changes are

because of opportunities in the corridor e.g. light rail transit, and policy changes are aiming to encourage growth in the corridor. Various provisions from planning policies allow for higher density developments, aiming to draw in more young professionals and empty nesters to this area. Some developers indicated that they are more interested in developing in particular areas of the Central Transit Corridor, specifically between Uptown Waterloo and Downtown Kitchener. The two growth centres represent the concentration of residential and commercial activity. Overall, there is a greater interest among the participants to develop in the City of Kitchener compared to the other two cities. However, this does not mean developers will restrict themselves to developing in a specific area. Most of the participants agree that as opportunities arise, they will assess these opportunities by evaluating to cost of land acquisition, development charges, and rental/ownership absorption rates, while taking into consideration municipal planning instruments.

30. For the areas that you intend to develop, please indicate your real estate sector(s) for any or all of the building type(s).

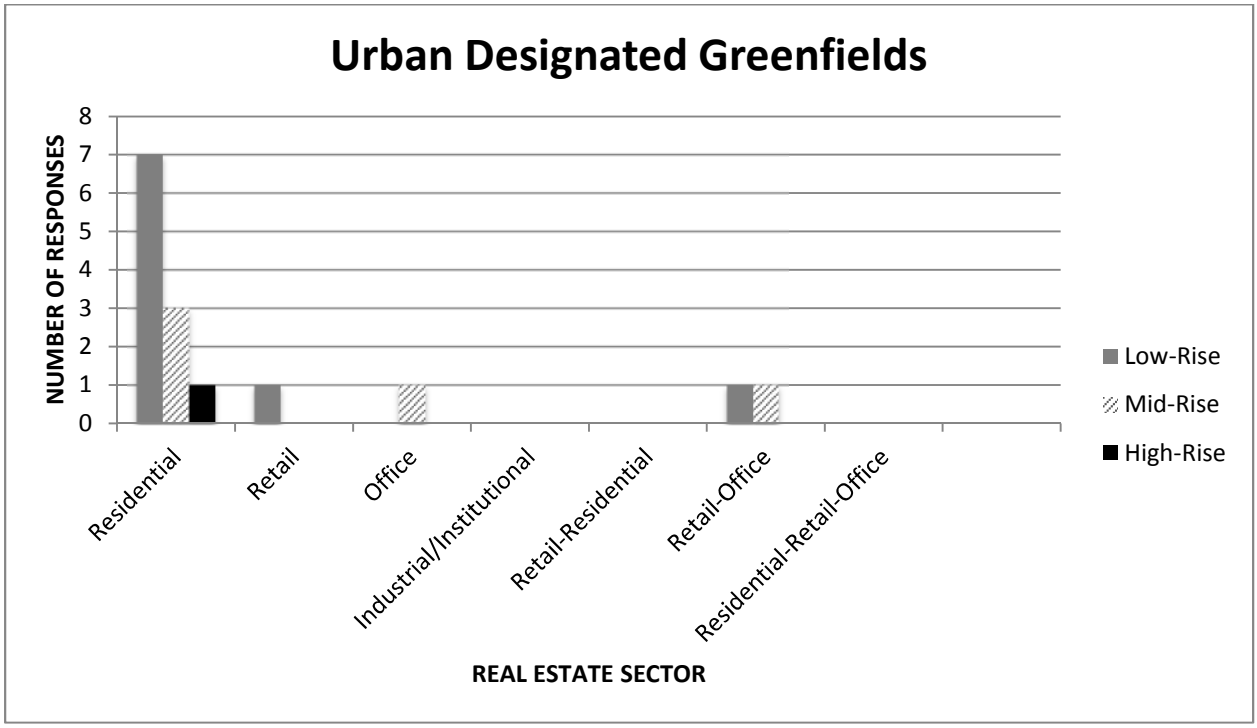


Figure Q30: Urban Designated Greenfield

The vision for urban designated greenfields areas continues to be predominately low-rise residential developments. However, some developers indicate that they are interested in moving towards higher density residential developments, introducing more stacked townhouses and some mid-rise apartments.

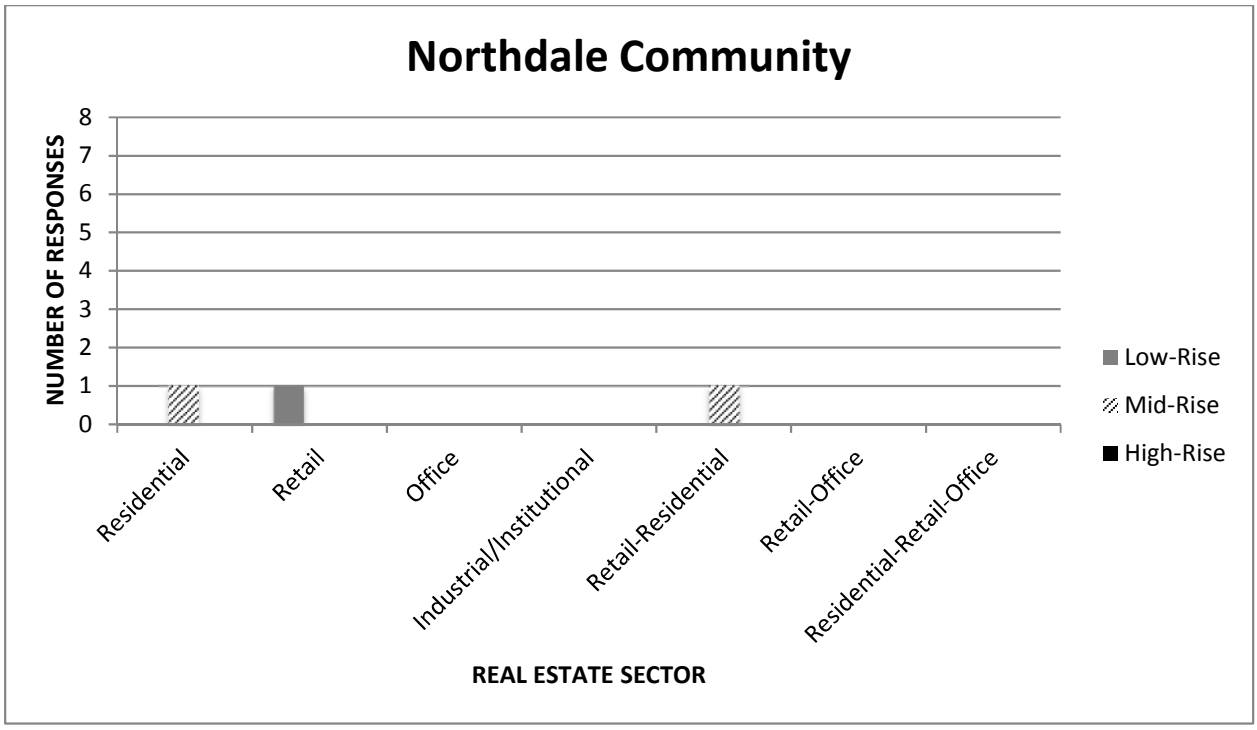


Figure Q30a: Northdale Neighbourhood

Both student housing developers and non-student housing developers are generally not interested in developing within the Northdale neighbourhood in the future. For those that are interested in developing in this area, the small sample size indicated an array of building forms and real estate sectors.

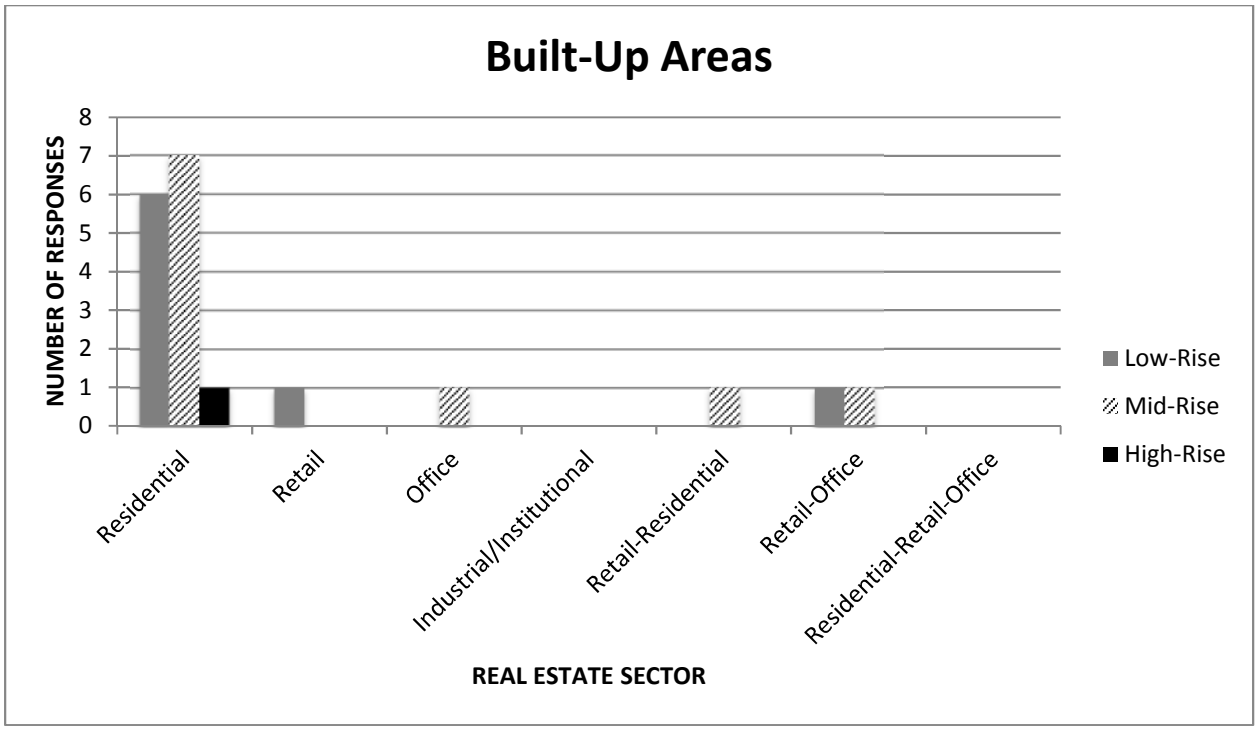


Figure Q30b: Built-Up Areas[16]

The built-up areas are witnessing the emergence of mid-rise residential-only developments. Built-up areas are essential areas between the urban core and the urban designated greenfields. There are greater density permissions in this area, allowing developers to expand from the current low-density built form.

[16] Built-up areas: excludes Central Transit Corridor, Urban Growth Centres, and the Northdale neighbourhood

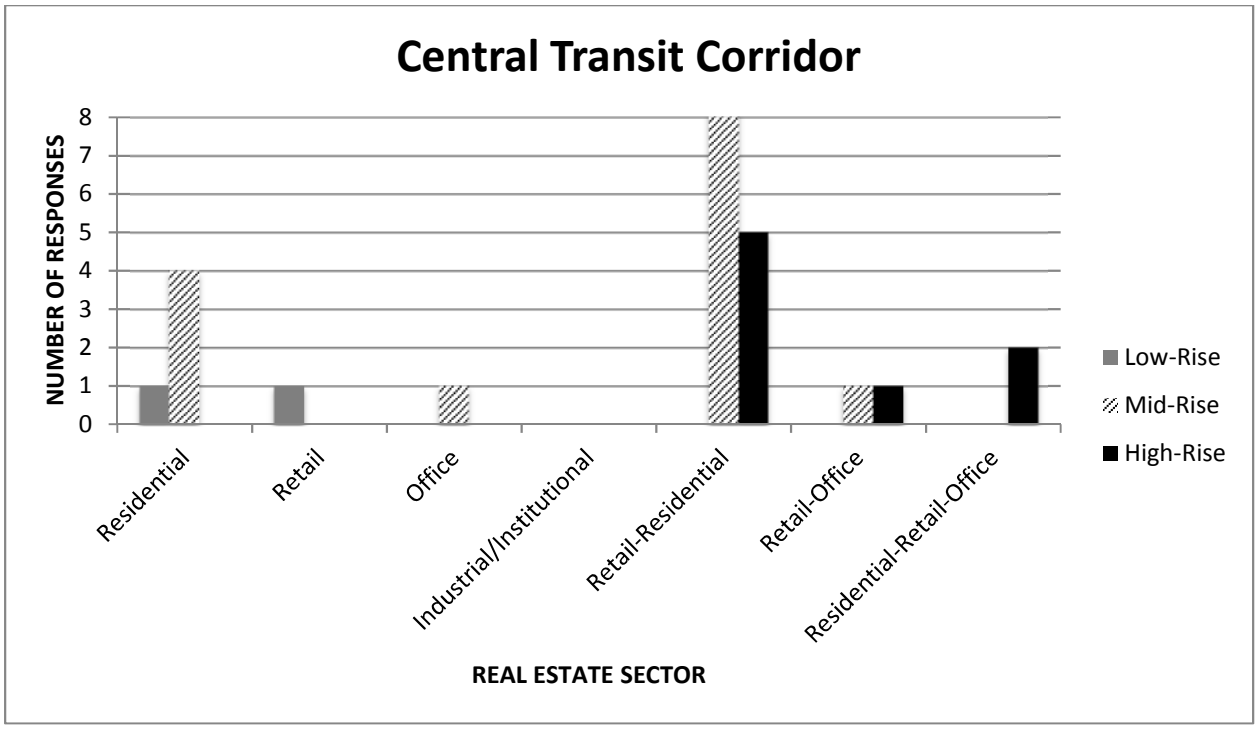


Figure Q30c: Central Transit Corridor[17]

The developers who are interested in developing in the Central Transit Corridor indicate a range of mixed-use developments, primarily retail-residential. Interestingly, there were several developers who emphasized on the need to provide more office uses in this area. Many developers are moving away from the residential-only built form.

[17] Central Transit Corridor: excludes Urban Growth Centres and the Northdale neighbourhood

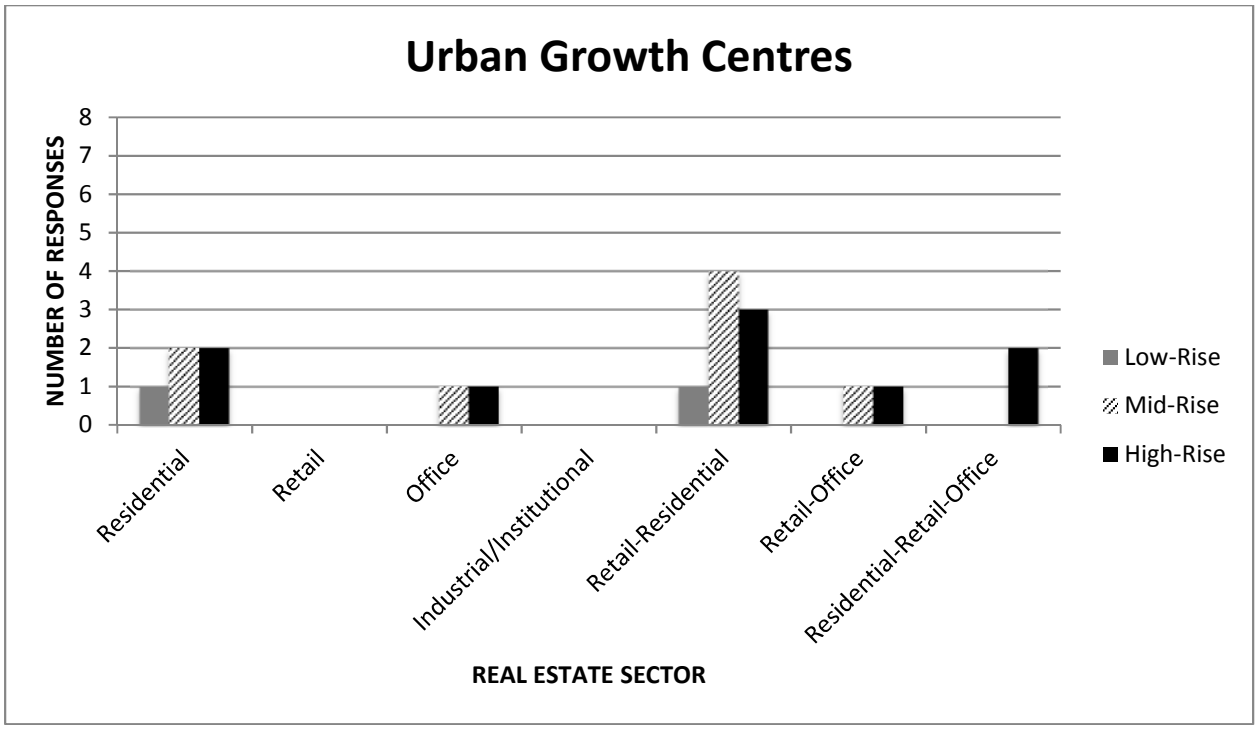


Table 30d: Urban Growth Centres

Developers are interested in an array of real estate sectors of building types within Urban Growth Centres (Uptown Waterloo, Downtown Kitchener, and Downtown Cambridge). However, there is a different housing market for each of the Urban Growth Centres, e.g. Downtown Cambridge still consists of a predominately a low density built form.

PART B

31. How do you primarily obtain market knowledge (e.g. estimates of demand and profitability)?

Table 31: Market Knowledge

Market Knowledge Sources	# of Responses
MPAC/RealNet/Teranet/Other property market sources	7
Informant (e.g. real estate agents, brokers)	16
Professional network	12
Information from local government	12
Consultants	11
Experience/Instincts	17
Direct consumer surveys/ focus groups	7
Retail Sector	1

32. Please explain the reason for your choice.

Developers reported that informants such as real estate agents are one of the most important sources for market knowledge sources. One developer stressed how real estate agents are "your feet on the ground", able to bring developers an array of valuable properties. On the contrary, other developers expressed that it is not their preference to rely on real estate agents as they may not provide sufficient information. 17 of the 18 developers interviewed indicated that their primary source of market knowledge was their own experience/instincts. The participants explained that as developers, they are most aware of what is happening in the industry on a local level i.e. through tracking the level of activity in an area. Furthermore, although some participants indicated that property market sources such as MLS are helpful, it is experience/instincts that prove to be most useful for them.

Few firms indicated that they use direct consumer surveys to see how the market responds to their proposed development and to understand the preferences of the various target markets. One firm working with in the retail sector specifically targeted local shopkeepers to understand the retail market. In general, nearly all participants selected more than one option. The participants identified the need to use as many sources as possible in order "to get as much working for us as we can".

33. What method(s) do you use to forecast future demand?

Table 33: Methods for Forecasting Future Demand

Method	# of Responses
Experience/Instincts	12
No Specific Method	5
Demographic Trends	3
Pro Forma	2

Many of the developers said that there are no specific methods to forecast future demand. These developers indicated that they cannot always forecast future demand, but rather, they use their resources to the best of their abilities.

In general, the majority of the developers specified that forecasting future demand comes down to experience and instincts, having worked in the industry for so long. Other methods as indicated by developers include: assessing demographic trends (population and employment growth), relying on gut feeling to determine the type of units that they will believe to sell, and consultation with stakeholders/other experts. Overall, there seems to be unique approaches by individual developers to forecast future demand linked to their business strategy and portfolio of work.

Specifically for the condo market, one developer noted that they can forecast market demand by the nature of how units are sold in the condo market. During the pre-construction phase, developers can analyze and assess how interested the market is by looking at the number of units sold, who is interested in the units, and the general feedback or comments about the development. The pre-construction provides key insights as to whether the product is what the market demands for.

Student housing developers emphasized that forecasting future demand can difficult due to existing policy regimes. Rather than having the flexibility to assess market demand and supply, one student housing developer noted that it does not always happen. The developer used the example of zoning changes in the Northdale neighbourhood. When Zoning By-law Amendment 2012-070 was adopted by the Ontario Municipal Board in 2013, it laid out density provisions as a measure of the number of bedrooms per hectare rather than maximum height. From the developer's perspective, the changes to density provisions resulted in the sudden influx of student housing developers seeking approvals within a short timeframe. In other words, the developer felt that forecasting future demand is not always possible or useful if other factors e.g. policy changes come into play.

34. How do you primarily obtain information on land acquisition opportunities?

Table 34: Land Acquisition Opportunities

Land Acquisition Opportunities Sources	# of Responses
Informants e.g. real estate agents, professional colleagues	15
Professional network (e.g. for joint venture opportunities)	9
Research using policy documents	3
Research using spatial information	4
Informal techniques e.g. passing by a site and door knocking for property acquisitions	13
Consultants	5

35. Has your firm been involved in land banking (i.e. buying land as investment and holding it for future use/development)?

Table 35: Land Banking

Land Banking	# of Responses
Yes	10
No	8
Total	18

36. Please explain the conditions/characteristics of the land that would make it more suitable for land banking than proceeding with development immediately.

Participants indicated that there is a set of criteria that a piece of land needs to satisfy in order to make it suitable for land banking. Although literature has shown that firms do not like to tie up their capital through land banking, the participants expressed that land banking needs to be done in order to maximize the greatest returns on large-scale greenfield developments. Many of the older firms have been involved in land banking early on. According to the developers, the firms looked for land based on three main characteristics: price, location, and policy trends. The developers indicated that they need to gage whether policies will permit residential development

on these lands in the future. They also stressed that price is a very important factor as the price of the land must be low enough to balance the risks with land banking.

For the firms that participate in land banking, the developers noted that it is because they are interested in seeing how the market develops over time. The participants claim that the Region of Waterloo's housing market is still in great speculation. They believe it is highly dependent on the success of light rail transit and an evaluation of the potential saturation of the residential market. One student housing developer noted that they "do not want to jump into a market that is oversaturated", referring to developments surrounding the two universities. Although the majority of the land banking has been done for greenfield opportunities, there are a few developers that recognize that land banking within the Central Transit Corridor is a possibility as well. These developers expressed, "if there is a great site at a great location along the Central Transit Corridor, we would consider land banking". Again, land banking would allow the developers to hold onto the land until a market is established in the core.

37. How is the building type/site plan for your new developments influenced by your previous portfolio of work?

Table 37: Building/Type Site Plan Influences

Building Type/Site Plan	# of Responses
Generally mimic previously successful building types/site plans	10
Generally move away from previously unsuccessful building types/site plans	9
Use a combination of previously successful building types/ site plans and incorporate new designs	12
Implement updates based on market research	7
Minimal influence from previous designs	2

38. Please explain the reason for your choice.

The majority of participants specified that they will use a combination of previously successful building types/site plans and incorporate new designs. Some of the developers believe that there is comfort in mimicking previously successful developments and would certainly want to move away from bad experience. Mimicking older designs can lead to efficiency in developments. However, site specific characteristics will need to be accounted such as topography, parking requirements, and availability of new technology. One developer cited that they always apply what they have learned from previous experiences/designs in the understanding of residential and commercial development. In general, the developer believes that it is important to move away from problematic elements, eliminate, revise them, and learn from these past experiences. Another developer described how they reference designs from other North American cities, using elements that are transferable to our Ontario context.

There is also a subset of the developers who believe that every project should be different and unique. The developers stress that there are differences between properties that needs to be accounted for (e.g. size, neighborhood, community character, etc.). Custom builders are known for their unique designs, staying away from cookie cutter housing. One developer said, “we want buildings to be designed for the site they sit on” in order to maximize the development potential on the site, such as sun exposure and landscaping. Although custom designs can be very costly, the developers said that the niche market is willing to pay for this attention to detail.

Overall, land developers recognize that there is a need to look at new trends and ideas in order to be the forefront of development in the Region of Waterloo. Student housing projects, in particular, have been recognized as the forefront for new architecture and building designs in the Region of Waterloo. As a result, developers from the survey have noted that they will need to draw in architectural firms from different areas (both local and outside the Region) to remain competitive in their building designs. In particular, one participant notes that new development along the Central Transit Corridor will have little room for mimicry as one of the largest target markets (young professionals from the creative class) will demand for a unique and attractive space.

39. How do you generally decide on the design of the plan of subdivision for greenfield developments?

Table 39: Plan of Subdivision

Plan of Subdivision	# of Responses
Plans are primarily designed based on best planning practices (e.g. pedestrian-oriented environments)	3
Plans are primarily designed to optimize percentage of developable area	6
Plans mimic elements of previously successful designs	5
Plans are entirely unique	2
Customized plans based on land characteristics	6
Customized plans based on market research	5
We generally prefer less, but larger lot sizes	3
We generally prefer more, but smaller lot sizes	3
Not applicable to my firm's development	5

40. Please explain the reason for your choice.

The design of plans of subdivision is not applicable to all development firms. Plans of subdivision relate to greenfield developments, of which some builder-developers purchase serviced lots from other developers. Furthermore, some participants indicated that the design of a plan of subdivision is primarily the responsibility of the consultants. In general, the participants indicated that the plan must maximize lot frontage, in order to have the greatest development yield. Although no two plans can be the same (due to difference in land characteristic), five developers stressed that successful elements from one plan can be mimicked in another. Beyond maximizing yield, two developers spoke about the importance of designing a plan of subdivision that allows for “complete communities”. According to the developers, complete communities, need to have a range of larger and smaller lot sizes in order to capture a wide range of housing types, consumer prices, and age groups. Although the participants recognize that larger lots are generally more difficult to sell, their business strategy is to have a heterogeneous neighbourhood.

41. Which of these environmental features (if any) does your firm incorporate in your developments?

Table 41: Environmental Features

Plan of Subdivision	# of Responses
Energy efficiency measures	17
Solar panel	6
Green roof	8
Stormwater management	11
Alternative heating and cooling technology (e.g. geothermal)	5
Environmentally-friendly/Sustainable building materials	13
Other[18]	3

42. What is your perception of the market for environmental features in residential homes?

All participants indicated that their firms are interested in incorporating environmental features in their developments e.g. solar panels, but many developers questioned the feasibility of green features. A few firms used examples of previous developments where they marketed green features and found that the consumer (in particularly students) did not respond to the green features as much as they had thought. The developers believe that consumers today are not willing to pay a higher price for a better, more environmentally sustainable design. However, if green features are associated with a reduction in costs e.g. energy efficiency lightbulbs, the participants indicated that they would definitely incorporate the environmental feature into their developments.

[18] e.g. design considerations, revitalization of older buildings, wind energy

There are a few developers in the niche market that have consumers educated in building materials and technology that are willing to pay for green technology. These consumers represent a small subset of the population, and tend to be individuals interested in a custom-design home. Furthermore, several developers stressed the importance of being the forefront of incorporating environmental features as it is part of the future. Despite the unpredictable returns, these developers are willing to take the risks and implement green technology.

In general, the overall consensus shows that developers are interested in environmental features, but feel that consumers still prioritize affordability before environmental features. The developers also believe that there will be increasing pressure to incorporate environmentally friendly features as technology becomes cheaper and more readily available, as well as due to changes to the Building Code.

43. How willing are you to be the first developer of a previously untested building/subdivision type or development location (e.g. first high-rise condo in the area, or a wood-frame mid-rise building)?

Table 43: Willingness to Develop Previously Untested Building/Subdivision Type

Willingness	# of Responses
Very willing	5
Willing	9
Not likely	4
Never	0
Total	18

44. Please explain the reason for your choice.

14 of the 18 developers interviewed stated that they were either willing or very willing to develop a previously untested building/subdivision type or development location. Although literature has shown that developers like to minimize risks, most of the developers interviewed said that they are interested in being leaders of the market. Specifically, some of the developers are involved in, or are interested in developing mid-rise wood-frame buildings in the Region of Waterloo.

Many of the firms interviewed were the first to implement a certain technology, type of building, or venturing into a new development location e.g. first LEED certified building, first green roofs in the area, first high-rise condos in the area. These developers are willing to take risks as long as they are carefully assessed through research. However, they are not as willing to create an entirely new product that has never been tested before. Rather, they are willing to test the limits of building heights, densities, design features, etc. and apply it in the Region of Waterloo context. One developer noted that they are not necessarily going to "dive into an untested area, but if the location and market characteristics are supported with policies, we are willing to do so". Nonetheless, 4 of the 18 developers indicated that they are very cautious on the type of development that they are involved in, but are not necessarily 100% opposed to taking risks. These developers believe that it depends on market characteristics and whether or not the opportunity is worth the risk.

45. What is your firm's risk profile?

Table 45: Risk Profile

Risk Profile[19]	# of Responses
Low risk – project with high certainties, low potential returns	7
Equal investment in low risk and high risk projects	8
High risk – project with many uncertainties, potential for large profit margin	3
Total	18

46. Please explain the reason for your choice.

The varying risk profiles as indicated by the participants are related to the subjective nature of risk profiling. All firms indicated that they aim to achieve low risk and high potential returns on their developments. Low-risk was interpreted as conservative projects where developers stick to what they have done and what they know. For example, one developer indicated that senior housing projects would be considered a high risk project from another developer's point of view, but as they have experience in this field, it was considered low risk. Another definition of low-risk is purchasing a fully leased building, where there are minimal returns, but there is also no need to go through an extensive approval process. On the other hand, high risk projects are directly related to unconventional projects, such as proposing a development that is not currently permitted by policies. There were three firms that indicated their firm's risk profile is high risk, and interestingly enough, these firms generally cater towards the creative class target market (young tech-savvy professionals). According to the developers, projects such as revitalization of industrial sites or heritage buildings would also fall into the high-risk category. In summary, all developers seek to minimize risks. Developers aim to assess how much they pay, how much they

[19] Note: Some of the developers indicated that risk is subjective and answered to the best of their abilities from their perspectives

get in return, and how fast the turnaround is. Developers use pro-formas to establish a preliminary assessment of the potential returns of the project, and the profit margin varies depending on the risk of the project. For example, one developer specified that their pro-forma must indicate a profit margin between 10-15% prior to considering the risks of the project. However, the pro-forma is a general estimate using the developer's best knowledge, and may not factor in site-specific issues and delays, which will increase the time and cost of the project.

46. What is your firm's primary form of finance mechanism?

Table 46: Finance Mechanism

Financing Mechanism	# of Responses
Firm's/Shareholder's cash resources	18
Vendor takeback financing	12
Bank loan(s), or other financial institutions	16
Public sector financing	0
Offshore financing	1
Syndicated Loan	3
Other[20]	2

[20] Other financing mechanisms include mezzanine financing and joint ventures.

PART C

Please note that questions in part C did not include follow-up comment questions. Further discussion of these results is provided in Section 6.

47. Your firm has been provided information on the following factors to assist you in your due diligence research for land acquisition purposes. Please indicate how significant each factor is by ranking the factor on a scale of 1 to 5.

1 – Factor has minimal significance and impact on the decision.
2 – Factor has low significance and impact on the decision.
3 – Factor has some significance and impact on the decision.
4 – Factor has high significance and impact the decision.
5 – Top factor(s), decision heavily attributed to this factor.

Table 47: Physical Attributes

Physical Attributes	Average Factor Score
A. Land Availability[21]	4.1
B. Cost to acquire land (including land assembly)	4.5
C. Existing Land Ownership	2.2
D. Environmental Conditions	3.8
E. Age of building stock	2.1
F. Availability of servicing infrastructure	4.1

[21] In some instances, land availability was interpreted differently among developers. Some defined it as whether the land was available to be developed, whereas others

Table 47a: Socio-Economic Attributes

Socio-Economic Attributes	Average Factor Score
A. Market Demand	4.4
B. Community's Socio-economic Characteristics (e.g. income)	3.6
C. Neighbourhood Resistance	2.7
D. Population Density	3.7
E. Employment Density	3.7

Table 47b: Spatial Attributes

Spatial Attributes	Average Factor Score
A. Proximity to Higher-Order transit (e.g. LRT)	4.2
B. Proximity to Public Transit (e.g. Bus GRT)	3.6
C. Proximity to Interregional Transit (e.g. GO Transit)	3.6
D. Proximity to Major Roads/ Freeways	3.6
E. Proximity to Employment Centres	3.3
F. Proximity to Retail/Shopping Centres	3.5
G. Proximity to Schools/Institutions	3.6
H. Proximity to Open Space	3.0

Table 47c: Planning/Profitability Attributes

Planning/Profitability Attributes	Average Factor Score
A. Flexible Zoning Enforcement and Supportive Policies	4.2
B. Parking ratio requirements	3.7
C. Timeframe for Approval	3.9
D. Approval costs	3.7
E. Development Charges and/or Lot Levies	4.2
F. Support from local/Regional government	3.9
G Market Value of Improved Property over Project Costs	4.3
H. Ability to Secure Financing	4.4

PART D

55. How important is access to higher-order transit (e.g. LRT) for determining where your firm develops compared to all other factors?

Table 55: Access to Higher-Order Transit

Importance Level	# of Responses
Very Important	7
Important	4
Somewhat Important	5
Not Important	2
Total	18

56. What is your firm's perception of the impacts of the Light Rail Transit on your future developments?

Table 56: Perception on Impacts of Light Rail Transit

Perception	# of Responses
Good, will have a net positive impact to the development community	11
Neutral, will have equal positive and negative impacts	6
Bad, will have a net negative impact to the development community	1
Total	18

57. Please list the Positive and Negative Impacts of LRT on the development community.

Table 57: Positive Impacts of LRT

Positive Impacts	# of Responses
Reduce Parking Requirements	2
Encourage Active Transportation	3
Opportunities for development nearby stations	4
Attractive/ PR for the Region	5
Reurbanization	2

The developers indicated that the main positive impact of LRT on the development community is that it will attract people into the area. The developers believe that the LRT will add to the urban experience, attracting and retaining professionals into the Region, opening the Region of Waterloo to a larger market. Other positive impacts include the opportunities for infill developments around specific transit stations, increased walkability within the Central Transit Corridor area, and reduced need for parking. Nevertheless, the developers identify that these positive impacts are contingent to the performance of the light rail transit, whether the rail system will successfully convert people's modal choice and able to draw people into the Region.

Table 57a: Negative Impacts of LRT

Negative Impacts	# of Responses
Taxes implications	5
No benefits for suburban areas	5
Construction	4
DC pressures	2
Driven up land prices	2
Potential low ridership/underutilization	1
Lack of available social services in core area	1

Many developers are concerned about the tax implications due to the high cost of LRT. The participants emphasized that the potential underutilization of the LRT system could lead to increased taxes and development charges, affecting new developments. Another major concern by greenfield developers is the lack of benefits to the suburban communities. The greenfield developers believe that the LRT will only benefit those living in the Urban Growth Centres within the Central Transit Corridor, and will not be able to capture the suburban demographic. Additionally, one student housing developer talked about how the LRT is not a driving factor for students to come into the Region; it is universities. The student housing developers believe that the current Grand River Transit (GRT) system is sufficient in supporting the student population.

From the opinions of the developers, it is interesting that multiple developers prefer an east-west LRT line to replace the proposed north-south extension from Kitchener to Cambridge. The developers are concerned with the lack of ridership going from Kitchener-Waterloo area to Cambridge to justify this large-scale investment. A few developers also suggested that there should be a greater emphasis on securing improved transit to move people in and out of the Region, such as an express train to Toronto.

Other negative impacts of the light rail transit system as noted by the developers include construction, parking, and lack of social services. Construction of the LRT system has impacted businesses in the area, where participants indicated that they are witnessing the filtering of small businesses. In terms of parking, one developer expressed that although there may be changes to the modal split, people will still likely own the car. It may reduce car usage, but will not have a significant impact on parking space requirements. Lastly, another developer expressed how there are insufficient social services in the core, and those living in the core will still need to use a car to go to the suburbs for these services.

Overall, there are many concerns by land developers on the light rail transit investment in the Region of Waterloo. In their perspectives, the success of the system is highly dependent on the ability of the infrastructure to attract people into the Region and to sustain a high enough ridership in order not to be a burden to taxpayers.

58. Are you more willing to develop adjacent to a Light Rail Transit Station than Bus Rapid Transit Station?[22]

Table 58: Willingness to Develop Adjacent to LRT rather than Bus Rapid Transit Station

Response	# of Responses
Yes	14
No	1
I do not know	3
Total	18

59. Please explain/elaborate.

14 of the 18 participants indicated that they prefer developing near LRT stations over Bus Rapid Transit (BRT) stations. The primary reason specified by the developers is because the Light Rail Transit is a permanent/fixed route system. The developers expressed how the LRT is considered a higher quality infrastructure compared to BRT, and is more convenient, and will attract more users. One developer said that they prefer BRT stations as they are more versatile (not a fixed path), and will better connect suburban neighbourhoods. Three participants said that they are not sure which system they prefer because of the lack of ridership data to support either systems. Overall, many developers are concerned that the majority of people in the Region still commute in cars, and are reluctant to change. As a result, the developers have difficulty in assessing either transit systems.

[22] The research team recognizes that this question should be rephrased for subsequent surveys.

60. Do you think land prices close to LRT Stations have generally become too high for developments to be attractive or feasible?

Table 60: Land Prices

Response	# of Responses
Yes, land prices have already become too high.	7
No, and this will unlikely happen in the future.	2
No, but this will likely happen in the future.	5
I do not know	4
Total	18

61. Please explain / elaborate.

Quite a few participants said that land prices have become too high. According to these developers, when looking for land around attractive LRT stations in the Region, they found that property owners have inflated their selling prices dramatically because of the proposed LRT system. Some of the developers indicated that land prices are not too high yet because they still see other developers purchasing properties. Even so, most of these developers suggest that land prices will eventually become too high where land prices will exceed the price they are willing to pay. One developer notes that high land prices in Kitchener can be the result of government subsidies e.g. development charge credits. With subsidies, developers are willing to pay more for the land, and property owners are responding accordingly.

The majority of developers agree that the price of land will fluctuate the next few years as a result of supply and demand, depending on the projects happening in the area. For example, once the market realizes that the asking price is too high and properties do not sell, the market will respond by lowering the prices.

5. Developer Typology

In this section, the paper will focus on conducting a developer typology analysis. From a review of literature on developer typologies, researchers have identified various classes and sub-classes of land developers (Zollig & Axhausen, 2011). For example, to distinguish the goals and objectives of this agent, Schüssler & Thalmann (2005) identifies that developers are either "promoters" (sell product immediately after acquisition) or "owner-occupiers" (develop, build, and manage). To identify the differences in building activity, Friedrich (2004) categorized developers as institutional, public, or private developers. Furthermore, other studies have created a unique label for sub-classes of developer typology e.g. "passive local property owning" developers, "means to mission" developers, or "value adding opportunity" developers (Coiacetto, 2001). Evidently, developer typologies are not limited to one unique classification. They can range greatly, depending on factors such as size and geographic enclaves (Ruming, 2010). No two developers are the same as developers heavily rely on previous experiences and human instincts, and there are no systematic procedure in determining where to build, what to build, when to build, and how much to sell a unit for. Although it is impossible to confine developers into one discrete typology, it is important to group like developers with one another in order to understand and predict how certain groups will react to the changing system of the land development model.

From the key informant interview process, three categories of developers have been self-identified and appropriately stratify the development activity in the Region of Waterloo: greenfield, infill, and student housing developers. The main purpose of creating such developer typologies is to create a simplification of the behaviour of key agents for our land development

model. Further, from a researcher's perspective, the analysis of the three developer subgroups will allow for a greater understanding of whether the strategies and behaviours of developers in each typology are similar. The classification can further provide insights as to what factor correlates with a certain decision for the particular subgroups. Student housing developers are recognized as a separate entity from infill/greenfield developers in the Region of Waterloo due to the prominence of educational institutions in the area (e.g. University of Waterloo) as a major driving factor attracting a large influx of intra- and international students. In addition, student housing developments have a different target market unique largely to the Northdale neighbourhood. In general, the classification of greenfield, infill and student housing developers aims to group similar developers and discriminate development firms with fundamentally different business operations.

6. Developer Typology Analysis

Table 1: Type of Residential Developers

Type of Developer	# of Firms
Greenfield	8
Infill	6
Student Housing	3

The classification of residential developers is based on the percentage of greenfield and non-greenfield development (Table 1). In this classification, greenfield developers include firms that have a majority of their developments based on gross floor area (GFA) on greenfield sites, and similarly, infill developers include firms that have a majority of their developments (based on GFA) on infill/brownfield sites. There are three developers that have 50% infill development and 50% greenfield developments. As their previous portfolio of work was predominantly greenfield, they were classified as greenfield developers. Student housing developers are 100% involved in student housing projects, developing on a mixture of greenfield and infill sites.

REAL ESTATE SECTORS

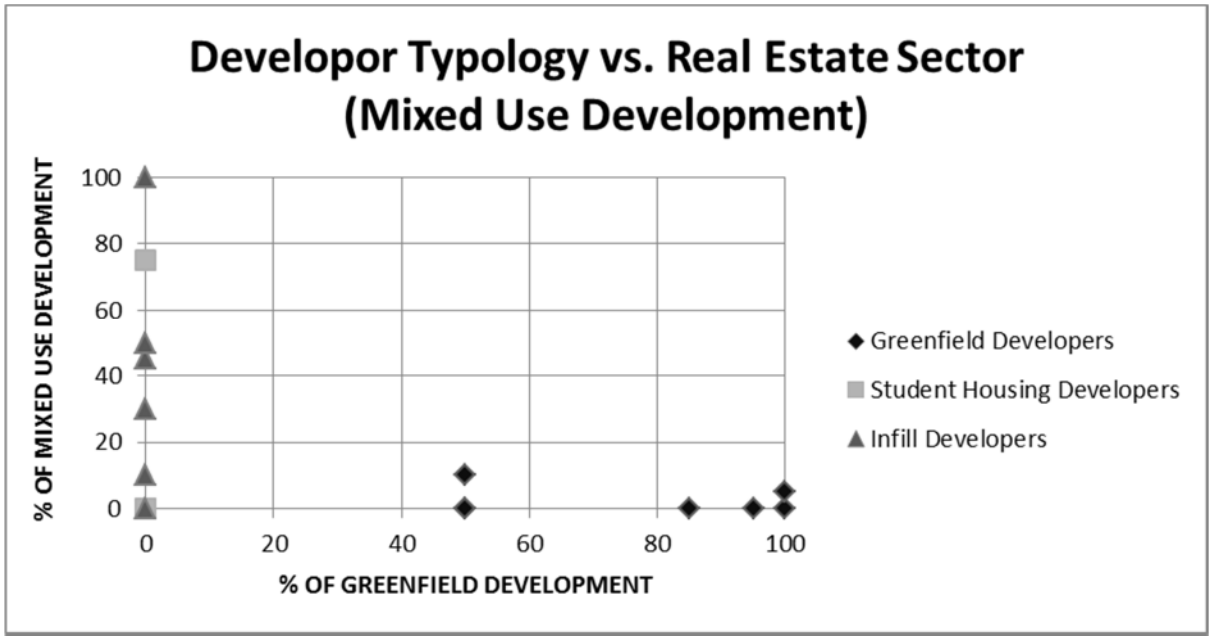


Figure 1: Developer Typology vs. Real Estate Sector

To understand the relationship between developer typologies and real estate sectors (e.g. residential only, mixed-use), Figure 2 plots the relationship between percentage of greenfield development and percentage of mixed-use development. Mixed-use development includes any mixes of two or more real estate sectors, such as: retail-residential, office-residential, and retail-office-residential. Mixed-use development excludes any single-use e.g. residential only. Mixed-use development is encouraged in urban areas, particularly within the central transit corridor.

We hypothesized that greenfield developers will not have significant mixed-use developments within their portfolio of work, while infill developers would have many prominent mixed-use projects. We also expected that student housing developers will focus solely on the residential-only real estate sector to maximize the number of residential units.

The results show that the decisions of greenfield developers is consistent with our hypothesis, but not for infill and student housing developers. From Figure 1, greenfield developers generally do not develop mixed-use developments. Rather, they focus on single-uses e.g. residential only or commercial only developments. However, a few greenfield developers are slowly incorporating mixed-use development into their portfolio, showing a transition in real estate sectors.

Contrary to our hypothesis, infill developers are not consistently developing mixed-use buildings. In fact, only one developer has 100% of their portfolio as mixed-use development. From the qualitative interviews, many infill developers are still focusing on residential-only projects. The vision for the area around the Central Transit Corridor encourages mixed-use development; however, many infill developers expressed concerns regarding the actual demand of office and retail space in the area. Moreover, not all infill developers are interested in developing in the central transit corridor. There are other firm characteristics, e.g. size of firm and business strategy, that need to be accounted for to explain the trend between type of development and real estate sectors. For example, a smaller infill developer may not participate in mixed-use developments, as they do not have the capital or the desire to specialize in large-scale mixed-use developments.

Finally, from the relatively small sample size, there are some student housing developers moving into mixed-use developments to provide students with ample services e.g. food services. However, one student housing developer notes that the market for mixed-use development is not well-established in the area, as it is very difficult to lease retail space to potential tenants.

BUILDING TYPE

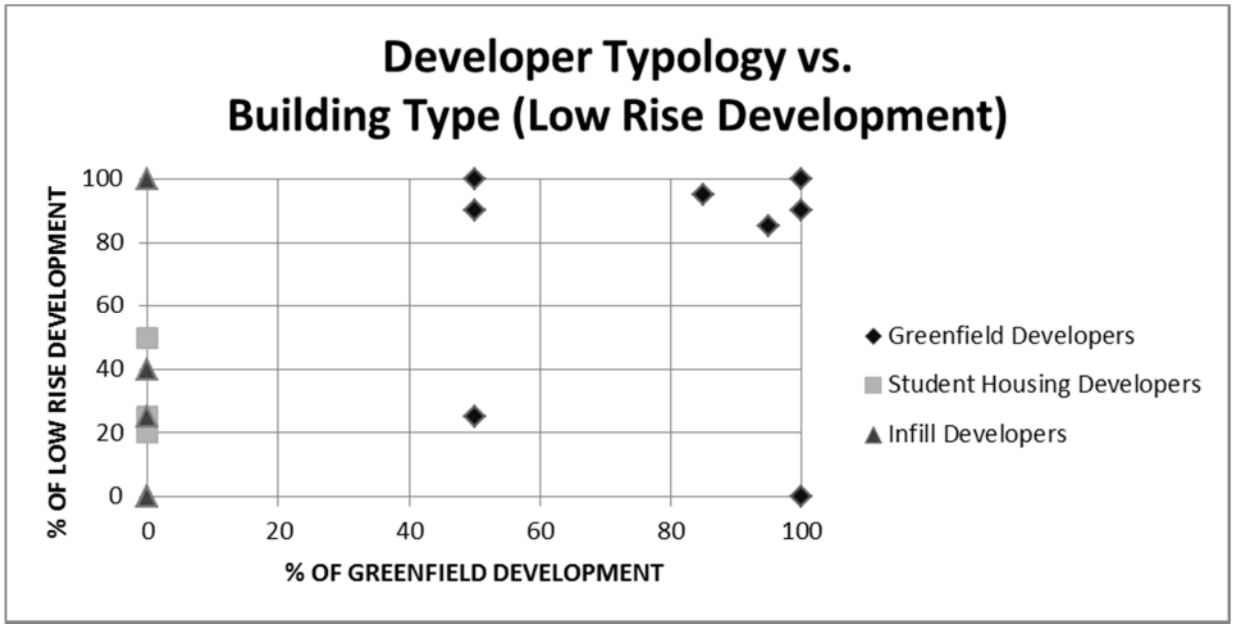
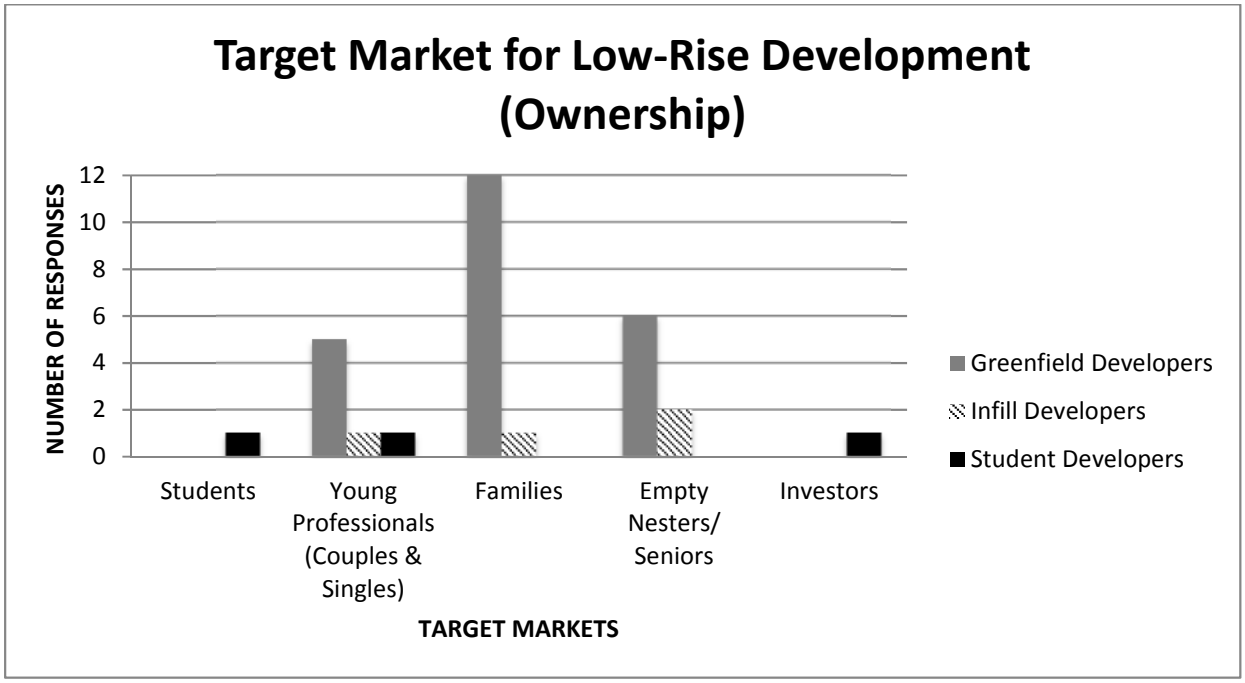


Figure 2: Developer Typology vs. Building Type

Figure 2 shows the relationship between development type and building type. From the graph, the majority of greenfield developers have most, if not all of developments as a low-rise developments. As the percentage of greenfield development decreases, some greenfield developers exhibit a transition from the low-rise built form to mid- and high-rise. On the other hand, for infill developers and student housing developers, there are not distinct trends. Most of the infill/student housing developers have a combination of low-rise and mid/high-rise developments. Qualitative responses from infill developers indicated that not all areas in the Central Transit Corridor or Built-Up Areas are suitable for mid- and high-rise development. One developer emphasized how their business strategy is to transition from low-rise to mid-rise and eventually into high-rise once the market and population/employment density in the area is established. For student housing developers, one participant explained that their firm owns a variety of assets ranging from single-detached housing to mid-rise apartments. For example,

rather than replacing all their low-rise buildings with higher density apartments, the student developer prefers to rent out their houses until there is a demand for higher density. The developer said that they do not have plans to convert their low-rise buildings into mid- and/or high-rise buildings at the moment because the housing market in the Northdale neighbourhood is oversaturated. As a result, the relationship between development type and building type is not linear for the developers as it is often a response to market conditions (e.g. demand for high-rise building type) and demographic changes.

TARGET MARKET



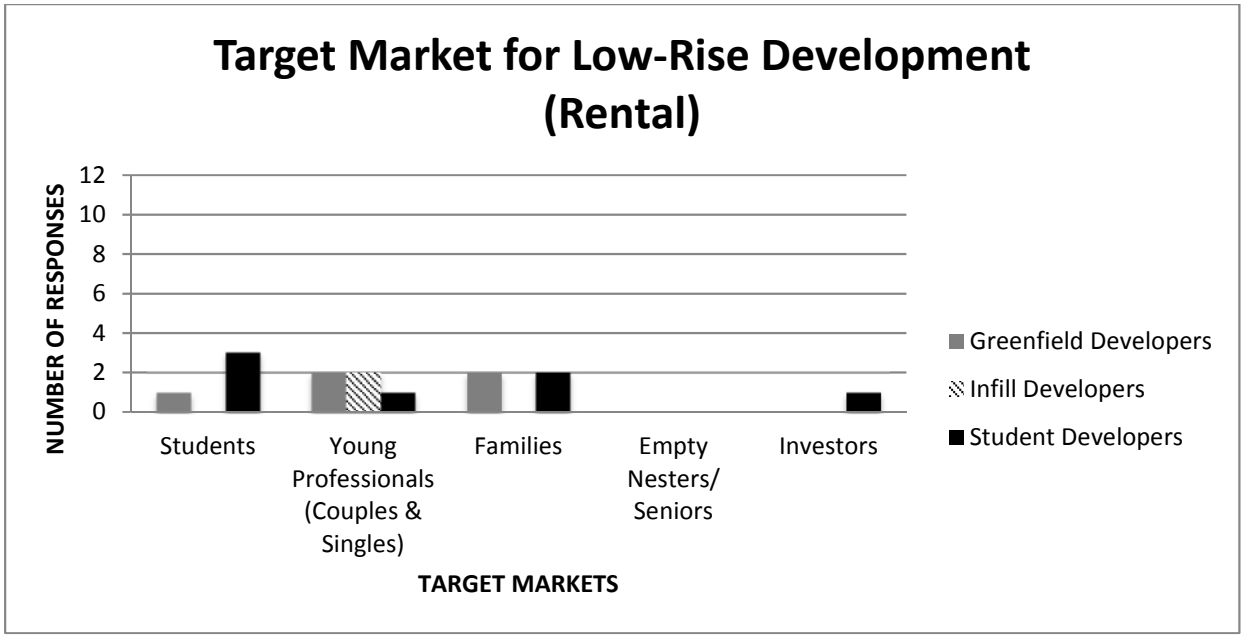
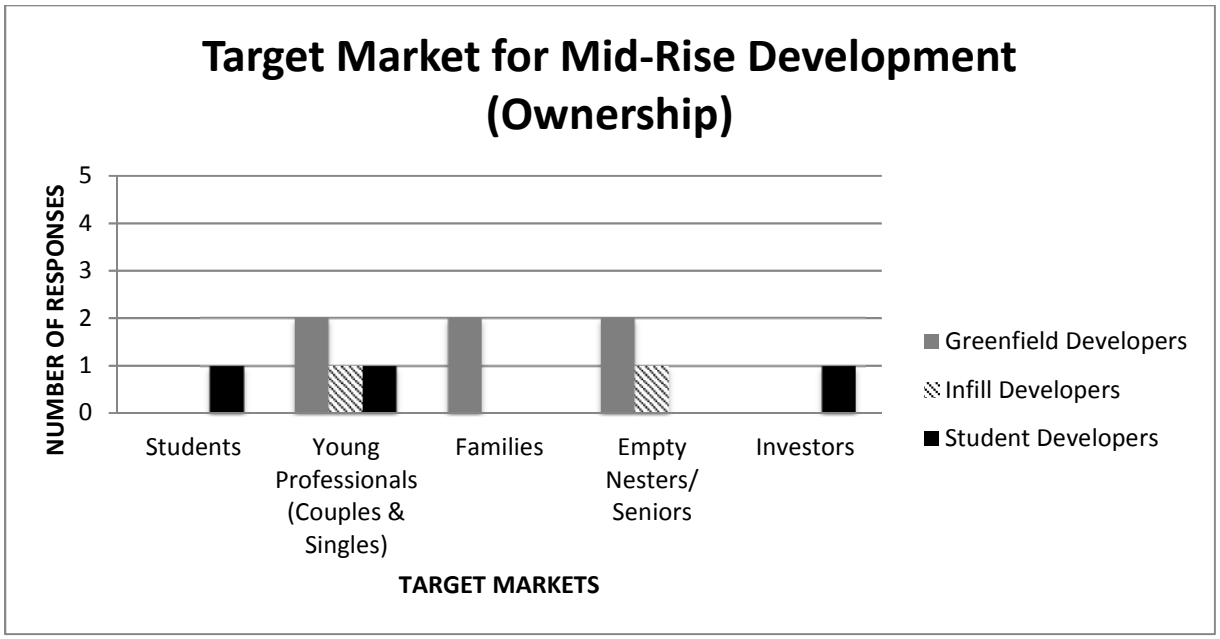


Figure 3: Target Market for Low-Rise Development



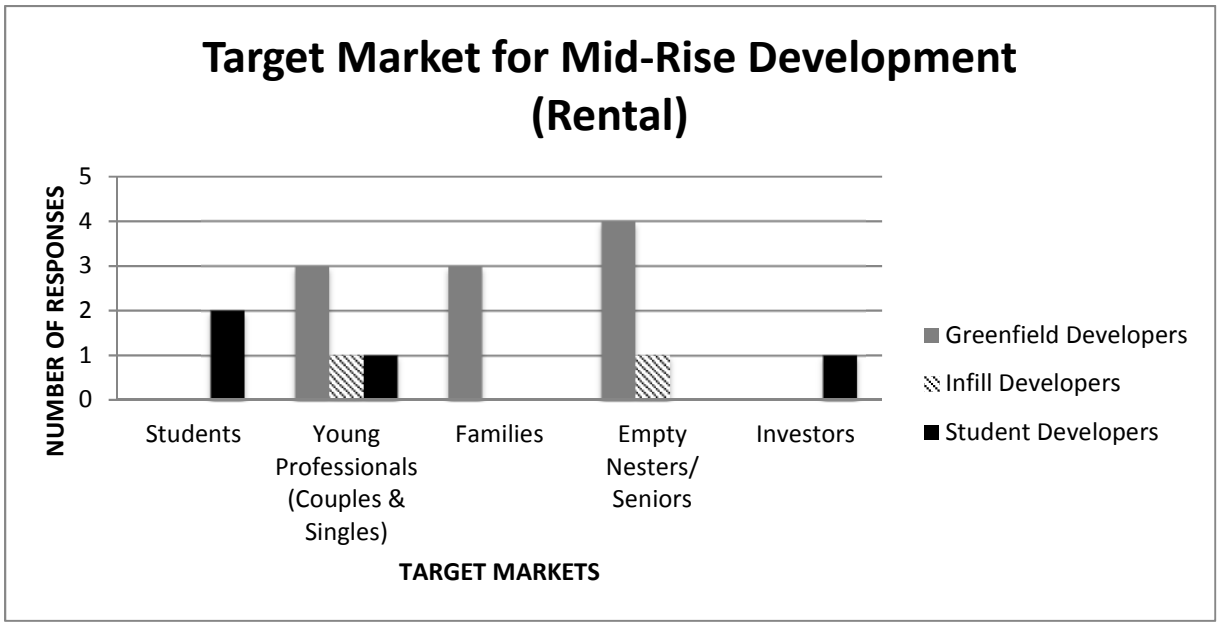
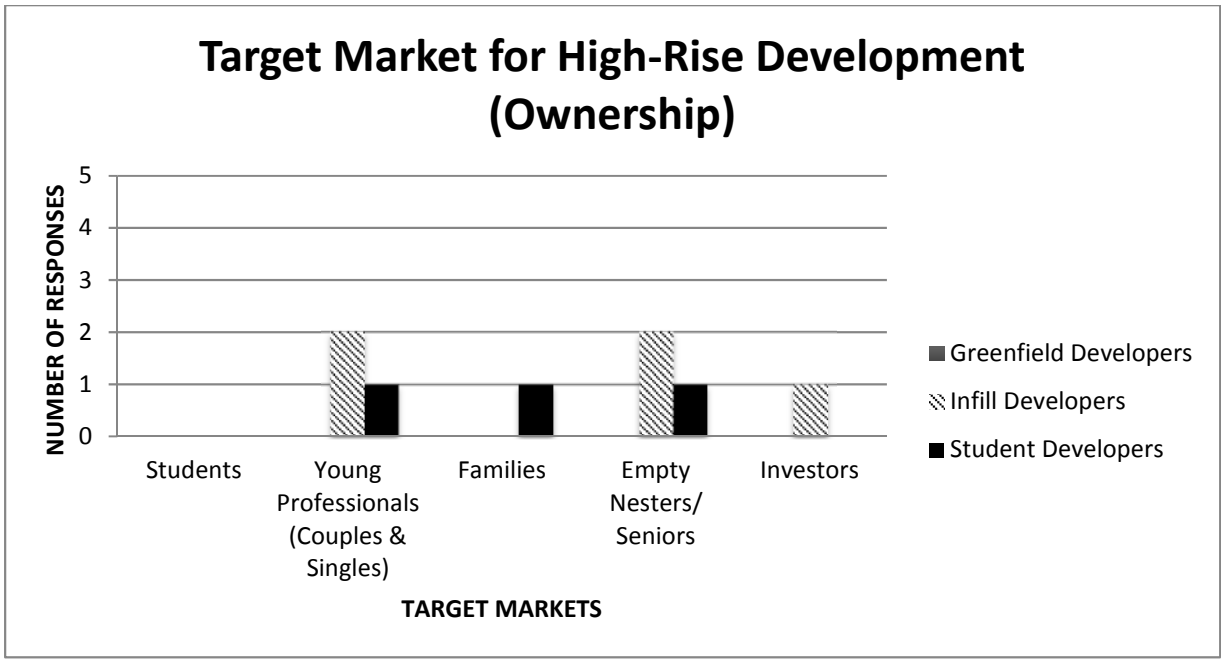


Figure 4: Target Market for Mid-Rise Development



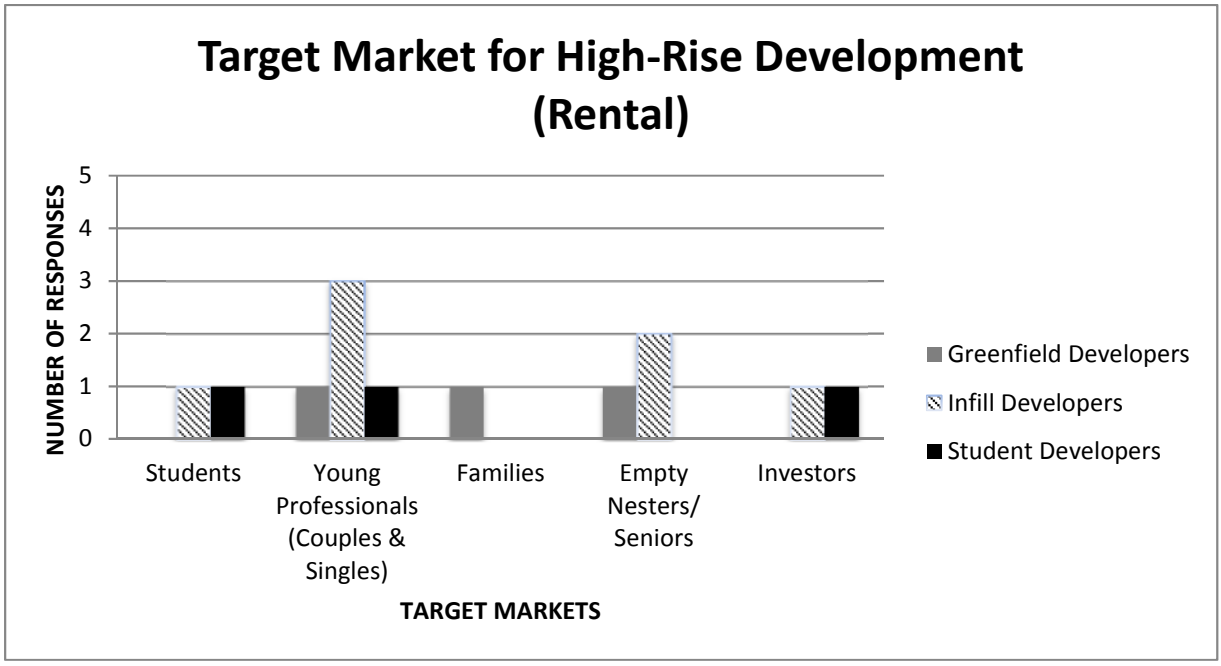


Figure 5**:** Target Market for High-Rise Development

We hypothesized that different types of developers (greenfield, infill, student housing) have their own target markets according to their business strategy. Although target markets may vary from project to project, our research shows that different types of developers have an expertise with a

certain demographic for a particular building and tenure type. Figures 3, 4, and 5 display the quantitative counts of the target markets for low-rise, mid-rise, and high-rise developments for the three categories of developers. Low-rise development includes single-detached homes, semi-detached homes, row housing, and low-rise apartments. Mid-rise developments are buildings between 4-11 stories (inclusive) and high-rise developments are greater than 12 stories. Findings show that greenfield developers have the same target markets, focusing on the three categories: families, empty nesters/seniors and young professionals. Greenfield developers are also the only type of developer that targets families. Infill developers focus predominantly on young professionals, empty nesters/seniors, and investors; they are developing prototypes specific to the needs and desires of the three markets. Finally, it appears that student housing developers are interested in expanding in more than the student market. Some student housing developers have developments catered towards young professionals, investors, and empty nesters/seniors. From the small sample, it seems that not all student housing developers are exclusively catering towards students as they have identified the need to attract other target markets.

In terms of tenure type, greenfield developers tend to focus on the ownership rather than rental markets, while student housing developers are the inverse, consistent to findings from literature. Infill developers are interested in both the ownership and rental market depending on the project.

SPATIAL DISTRIBUTION

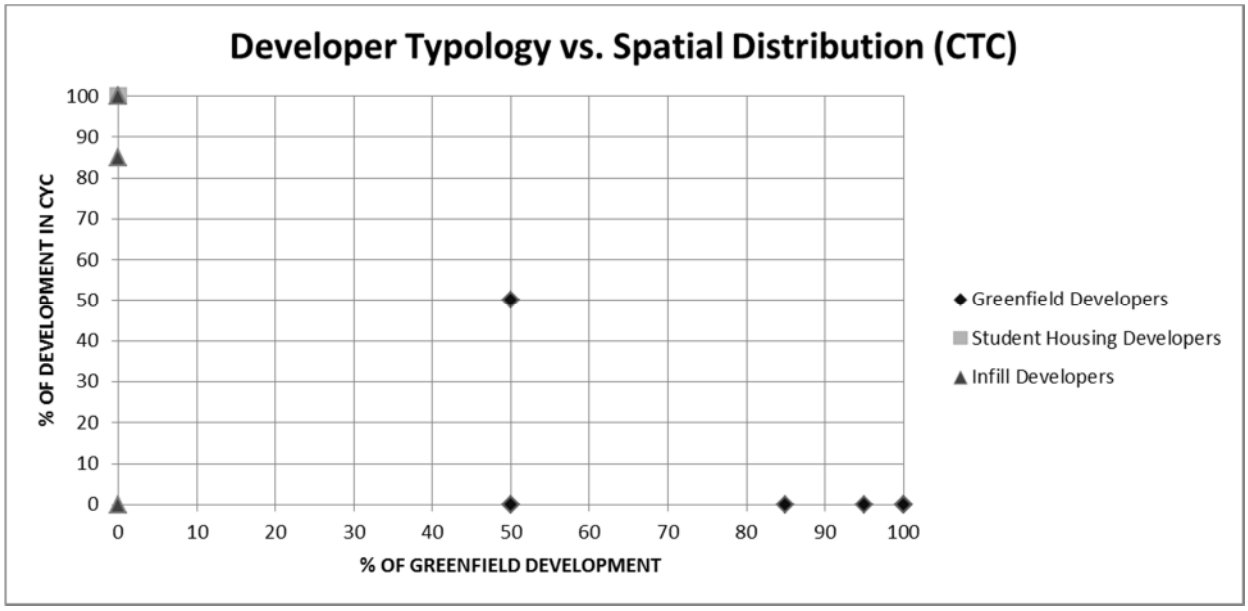


Figure 6: Relationship between % of Greenfield Development and % of Development in CTC

Figure 6 displays the relationship between the various developers' type of development and the spatial location of these developments. As previously mentioned in the summary of results, the areas are exclusive for the purpose of the analysis (e.g. Central Transit Corridor does not include the Urban Growth Centres or Northdale neighbourhood). The Central Transit Corridor is approximately 800m from the proposed ION track as shown in Figure 6a.

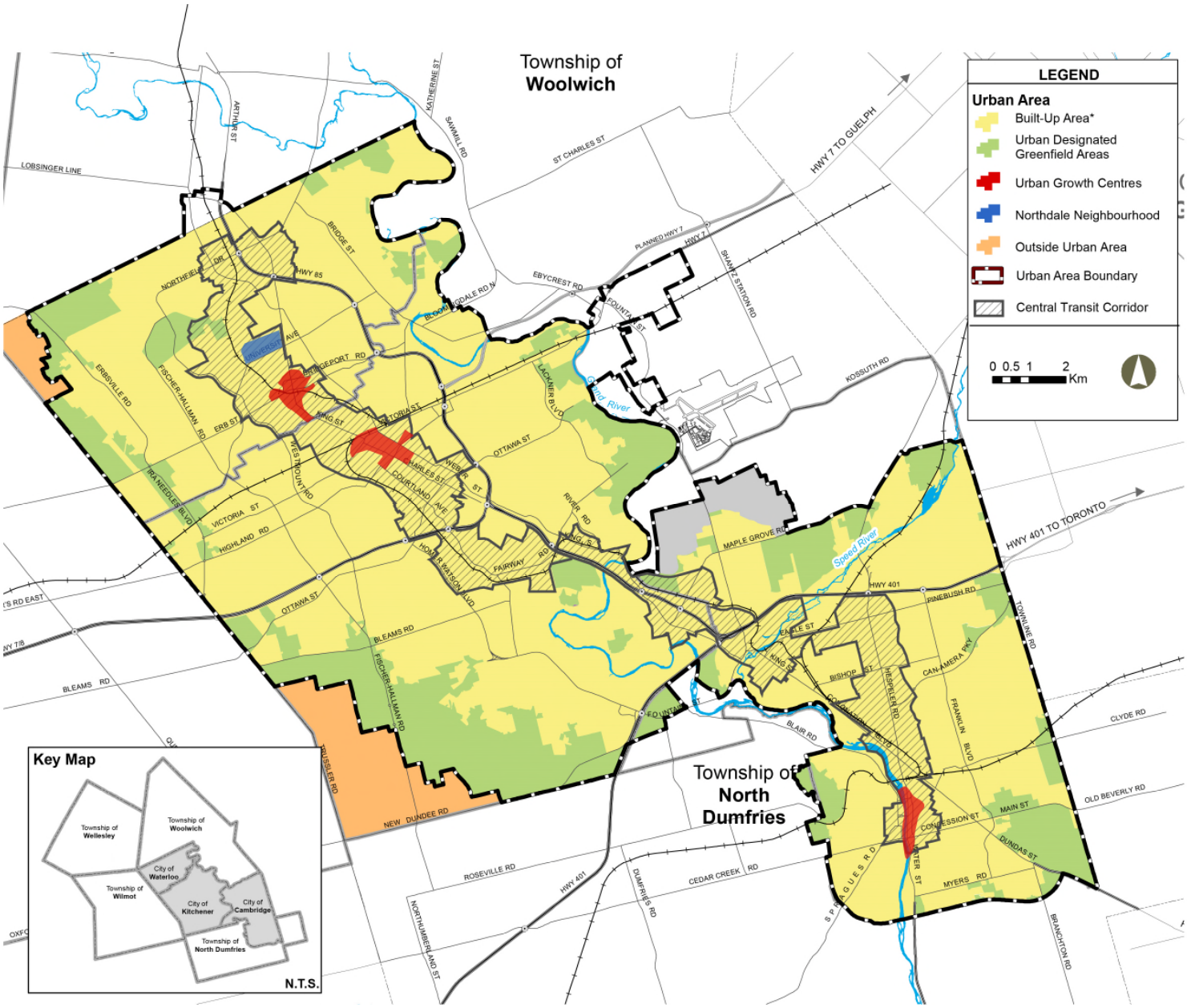


Figure 6a: Region of Waterloo

From Figure 6, infill developers develop almost exclusively 100% within the Central Transit Corridor. There is one exception, where the infill development focuses on developing in built-up areas within the vicinity of the Central Transit Corridor, but not currently inside the boundaries

of the CTC. Qualitative responses by infill developers determined that most of the infill developers are exclusively interested in areas within the Central Transit Corridor, specifically the areas between Uptown Waterloo and Downtown Kitchener. They believe that attractive stations (e.g. around these two nodes) will prosper with businesses and commercial activity, while other nodes may not be as successful.

On the other hand, student housing developers concentrate their development primarily within the Northdale neighbourhood with some in the built-up areas within the vicinity of the universities. However, as it is a small sample size, there are also numerous student housing activities that are outside this area that may not be accounted for. In the future, student housing developers believe that their expertise in mid- and high-rise developments will allow them to transition to developing outside the student demographic, and perhaps within the CTC. Many of these student housing developers expressed their interest in developing in the City of Kitchener due to policy incentives and subsidies.

Finally, greenfield developers are gradually beginning to develop within the Central Transit Corridor. Currently, a majority of greenfield developers operate in the urban designated greenfield areas and built-up areas. However, as greenfield lands become scarce, these developers are shifting their business strategies to take part in more urban infill/intensification projects within built-up areas and the Central Transit Corridor. Although they may not be of the same scale as infill developers (e.g. they may not have the expertise in high-rise developments), greenfield developers indicated that they are interested in higher density low and mid-rise developments.

PART D

FACTORS

To understand developer's decision making, we developed a list of factors that influence developers affecting the location of their projects and whether they acquire the parcel for development (Winarso, 2000; Bourne, 1977, Wang et al., 2013). The factors are grouped into four categories: physical, socio-economic, spatial and planning/profitability factors. Graphs of individual factors showing their relationship between development type and factor score can be found in Appendix A. Participants were asked to rank each factor on a scale of 1 to 5.

1 – Factor has minimal significance and impact on the decision.
2 – Factor has low significance and impact on the decision.
3 – Factor has some significance and impact on the decision.
4 – Factor has high significance and impact the decision.
5 – Top factor(s), decision heavily attributed to this factor.

A score of 5 indicated that the factor is very influential and a score of 1 indicated that the factor has minimal significance. Tables 2-5 below depict the average scores of each factor for greenfield, infill, and student housing developers.

Table 2: Physical Factors

Physical Factors	Greenfield Developers	Infill Developers	Student Developers
A. Land Availability	4.3	3.8	4.0
B. Cost to acquire land (including land assembly)	4.8	4.3	4.0
C. Existing Land Ownership	2.0	2.5	1.3
D. Environmental Conditions	3.9	3.7	4.3
E. Age of building stock	2.3	2.2	1.7
F. Availability of servicing infrastructure	4.8	3.3	4.0

Land availability and cost to acquire land are consistently scored higher for greenfield developers compared to infill/student housing developers. From the interviews, greenfield

developers emphasized the high cost of greenfield lands due to limited supply and restricted growth boundaries. Similarly, the availability of servicing infrastructure on greenfield sites is a major concern of greenfield developers. Compared to development on infill sites that generally have servicing available, greenfield developers must factor in the cost of delivering appropriate services to the subject site. Existing land ownership and the age of building stock is not a significant criteria for all three categories of developers. However, both factors are lower for student housing developers. A plausible reason for this is because a deteriorating Northdale neighbourhood can lead to lower property value (lowering the cost to acquire the property) and greater incentive for redevelopment.

Table 3: Socio-economic Factors

Socio-Economic Factors	Greenfield Developers	Infill Developers	Student Developers
A. Market Demand	4.3	4.3	4.7
B. Community's Socio-Economic Characteristics (e.g. income)	3.9	3.5	3.3
C. Neighbourhood Resistance	2.6	2.8	2.3
D. Population Density	3.5	3.8	3.7
E. Employment Density	3.1	4.2	4.0

From Table 3, the scores for socio-economic factors for all three developer categories are within +/- 0.5, with the exception of employment density. Although the sample size is too small to determine statistical significance, we use 0.5 as a threshold to determine heuristic differences. Employment density is less important for greenfield developers than infill/student developers. From the interviews, greenfield developers expressed that employment is not a driving factor that attracts people into greenfield areas. The typical suburban lifestyle requires commuting to work in urban areas. Hence, greenfield developers do not actively seek for lands that are close to employment centres. Otherwise, the three developer typologies weighed the socio-economic

factors similarly, demonstrating that socio-economic factors are generally of equal importance for all developers, regardless of their type of development.

Table 4: Spatial Factors

Spatial Factors	Greenfield Developers	Infill Developers	Student Developers
A. Proximity to Higher-Order transit (e.g. LRT)	3.4	4.7	4.3
B. Proximity to Public Transit (e.g. Bus GRT)	3.6	3.5	3.7
C. Proximity to InterRegional Transit (e.g. GO Transit)	3.4	4.2	3.0
D. Proximity to Major Roads/ Freeways	4.0	3.2	3.3
E. Proximity to Employment Centres	3.4	3.3	2.7
F. Proximity to Retail/Shopping Centres	3.4	3.5	3.7
G. Proximity to Schools/Institutions	3.9	2.8	5.0
H. Proximity to Open Space	3.3	3.4	2.7

The average scores of spatial factors vary greatly among the three developer groups. Higher-order transit is scored highest for infill developers (4.7) and lowest for greenfield developers (3.4). The reason is because many greenfield developers do not believe that light rail transit will have positively impacts on their suburban communities. Although all developers recognize that the introduction of a light rail transit system may attract more people into the Region of Waterloo, many greenfield developers emphasize that there may be more potential burdens (e.g. tax implications, construction issues, etc.) that outweighs the positive benefits of light rail transit on their developments. The results are the inverse for infill developers where LRT is seen as a driving force used to attract and retain young professionals and businesses into the Region. Similar to higher-order transit, interregional transit is also ranked highest for infill developers. Infill developers believe on the importance of interregional transit attract people from the Greater Toronto Areas into the employment centres of the Region of Waterloo. Proximity to interregional transit stations is not a significant factor for infill and student housing developers as their intended target market will not need to commute from other Regions.

It is interesting to note that all three developer types ranked public transit (e.g. Grand River Transit) very similarly. The close ranking can be linked to GRT's servicing both the urban and suburban areas; students also have a transit pass and rely on public transit as means of transportation within the Region of Waterloo. Proximity to major roads/freeways scored highest for greenfield developers, consistent with our hypothesis. The majority of suburban consumers rely on the use of automobile for travelling within and outside the Region. As a result, it is important for greenfield development to be located close to major arterial roads and/or freeways to minimize travel times.

Looking at proximity to employment centres, student housing developers ranked this factor the lowest among the three developer typologies. The reason is because students do not frequently need to access employment areas, and rather, their most important factor is proximity to schools/institutions. It is interesting that proximity to open space for all three developer types is fairly low and the lowest for student developers. We hypothesized that greenfield developers would rank access to open space (specifically, private open space) of great importance. Contrary to our hypothesis, greenfield developers ranked this factor an average score of 3.3, similar to infill developers (3.4). A potential reason for the low rank is the lack of clarity in the definition of open space (e.g. whether it is private and/or public open space). Often, the term can be interpreted as public open space (e.g. parks), excluding golf courses and other private open spaces. Another reason for the low rank can potentially be due to the high cost of having access to open space. One developer noted that not all demographics are willing to pay a premium price for open space.

Table 5: Planning/Profitability Factors

Planning/Profitability Factors	Greenfield Developers	Infill Developers	Student Developers
A. Flexible Zoning Enforcement and Supportive Policies	4.1	4.2	4.7
B. Parking ratio requirements	4.0	2.8	5.0
C. Timeframe for Approval	4.3	4.2	3.0
D. Approval costs	3.9	3.3	4.0
E. Development Charges and/or Lot Levies	3.9	4.2	5.0
F. Support from local/Regional government	4.3	3.5	4.0
G Market Value of Improved Property over Project Costs	4.0	4.7	4.3
H. Ability to Secure Financing	4.3	4.5	4.7

Finally, Table 5 depicts the scores for planning/profitability factors. The scores for parking ratio range greatly between the three developer types. Infill developers ranked this factor of low significance as access to public/higher-order transit has significantly reduced parking ratio requirements in the area. However, student developers stress the need for municipalities to be flexible with parking requirement in order to maximize efficiency of development on smaller parcels and because all university students have a transit pass. Overall, all developers ranked planning/profitability factors of high importance, indicating that planning policies and financial security are important criteria that influence the decisions of land developers.

LIGHT RAIL TRANSIT

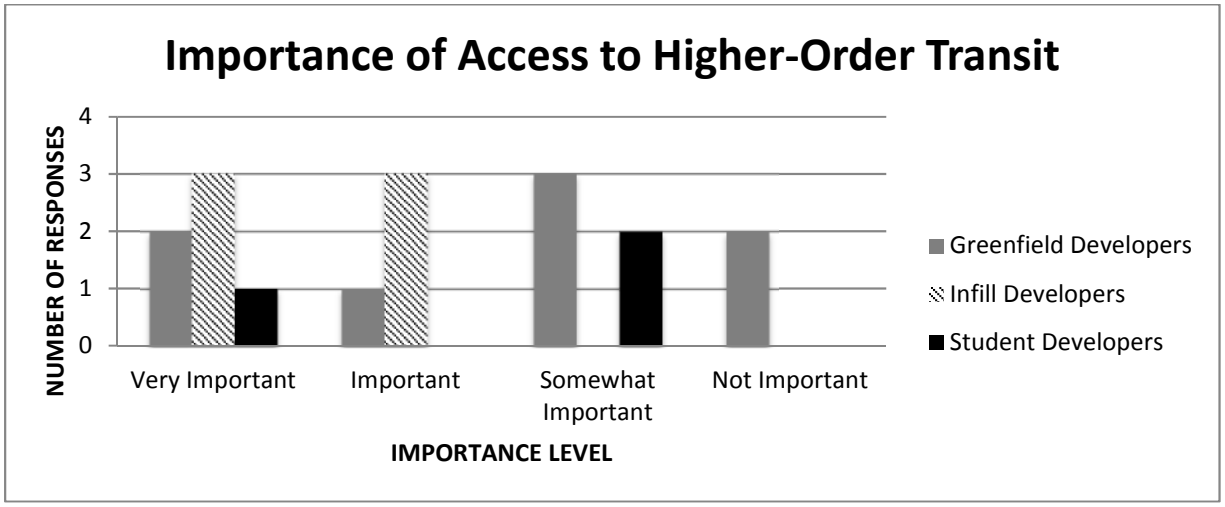


Figure 7: Importance of Access to Higher Order Transit

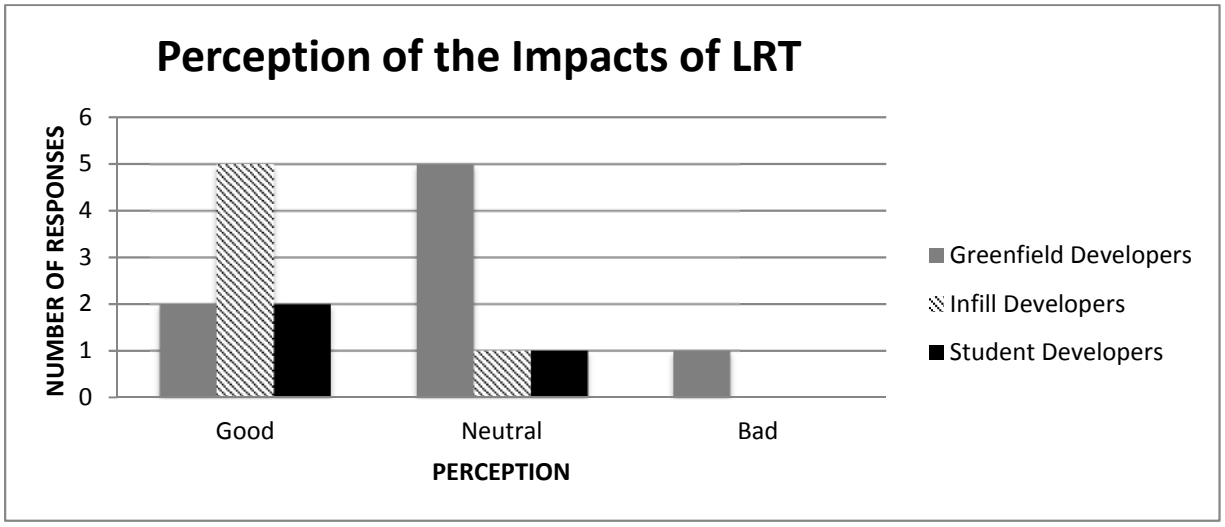


Figure 8: Perception of Impacts of Light Rail Transit

Analyzing the relationship between development type and developer's perception of Light Rail Transit, it is evident that infill developers and greenfield developers have opposing stances on LRT impacts. Infill developers generally have a positive perception of the impacts of light rail transit, and believe that it is important/very important to have access to higher-order transit for their developments. The positive perception is because infill developers associate light rail transit

with reduced parking requirements, increased public relations for the Region, and opportunities for development within the Central Transit Corridor. On the contrary, greenfield developers have differentiating outlooks on the impacts of LRT and access to higher order transit. Some greenfield developers indicate that there may be positive impacts (e.g. reurbanization opportunities, higher values of home, drawing people into the Region); these greenfield developers are also the ones that are interested in participating in urban infill projects within the core area. On the other hand, other greenfield developers strongly believe that there are negative implications of proposing a light rail transit system in the area. These greenfield developers expressed that there will be pressure on municipalities to increase development charges and taxes, leading to higher land prices in the area, and the proposed route of the LRT does not address the needs of suburban communities. Finally, student housing developers are relatively neutral in their perspective of impacts of LRT on their developments. They recognize both positive and negative impacts, but it is not a significant factor for student housing projects.

7. Conclusions & Recommendations

This research paper is the first step in understanding the role of developers in the land development process. The overall goal of the study is to determine the factors that influence developer's decision making, their trends in development from past, present to future, and their strategies/behaviours as key agents in the land development model. For this particular research paper, we identified the heterogeneity of developers and classified developers using a self-identified typology: greenfield developers, infill developers, and student housing developers. From a combination of literature, in-person interviews, and primary data analysis of the responses from the 18 developers (17 residential, and 1 non-residential), findings show that the three sub-classes of developers exhibit their own distinct characteristics and behaviours on certain matters, but are similar for others.

In general, greenfield developers have the tendency to develop single-use, low-rise developments, as well as focus on families or first-time home buyers as part of their target markets. Infill developers are generally interested in mixed-use, mid- and high- rise projects intended for a diverse market (e.g. young professionals, empty nesters, and investors) located within the Central Transit Corridor. Finally, student housing developers prefer higher density developments or maintaining existing low-density residences, concentrating in the area around the Northdale neighbourhood; they are also interested in expanding beyond the saturated student housing market.

Growth targets and built boundaries outlined in provincial plans (e.g. Growth Plan for the Greater Golden Horseshoe and the Greenbelt Plan) have allocated higher densities in urban

areas, while restricting development on greenfield lands outside the urban boundary. As a result, land developers are slowly transitioning from greenfield development to infill development. This transition partially explains why our results show that although one typology has a general tendency to behave in a certain manner, there were variations in the results e.g. some greenfield developers are interested in mid and high-rise built form. Another reason for these variations is due to the speculation within the current housing market in the Region of Waterloo. Many developers indicated that would like to develop high-rise mixed-use development, meeting policy objectives and creating economies-of-scale. However, developers have expressed their uncertainty of the success of light rail transit and whether or not there is a demand for the abundance of residential units. Rather than proceeding with high-rise, mixed-use development in the Central Transit Corridor, many developers prefer to proceed with incremental transitions to higher density low-rise and mid-rise residential developments. A gradual transition will allow developers to minimize their risks. On the other hand, some developers have already developed large-scale projects in the Central Transit Corridor; these firms desire to be the leaders and the fore-front of development in the Region of Waterloo. Although the land development process is complex and unpredictable in nature, developers use a combination of market sources as well as their experience and instincts to make informed decisions.

Looking at factors that affect developer decision making, results show that certain groups weigh specific factors of higher significance. For example, greenfield developers emphasize the importance of land availability, cost of land, proximity to major roads and freeways, and availability of servicing infrastructure. To them, it is primarily physical characteristics of the land that will determine whether the proposed development is feasible. Infill developers on the

other hand, believe that spatial characteristics e.g. access to transit, is one of the most important categories when determining where to build. Infill developers recognize that their developments are more attractive to consumers if they are in a good location. Thirdly, student developers stress the need to be in close proximity to schools/institutions, a priority for the student market. Otherwise, the rankings for all the developer groups are consistent for most factors e.g. socio-economic conditions of the community.

Finally, looking at the perception of light rail transit through the lens of each developer group, it is evident that there are different opinions of development in the Central Transit Corridor. Infill developers generally believe that the positive impacts of LRT outweigh the negatives, while greenfield developers are the opposite. Student housing developers are not as impacted by light rail transit implications, and are generally neutral on the proposed infrastructure. The negative perception of the Light Rail Transit system is primarily related to the success of the system, whether it is able to influence the population's modal choice, and attract people to come live and work in the Region.

Overall, the study was able to provide insights on the characteristics of each developer type. For next steps, we recommend to study the quantitative and qualitative data of the interviews to conduct further analysis and identify sub-classes of developer typology. It is evident that the classification of developers according to their development type (greenfield, infill, and student housing) is not sufficient as there are variations in the results. Furthermore, we recognize that the sample collected is too small to be of statistical significance. We recommend further data collection with residential developers in the Region of Waterloo to ensure a representative

sample. Nonetheless, the data collected will provide insights on models to be implemented in our land development model, and qualitative responses are crucial to understand the current market. For the post LRT study, it is important to track the transition of greenfield developers to infill developers, and whether their perceptions of the market have changed. Light Rail Transit presents a huge opportunity for the Region of Waterloo to expand their development market to intra- and international consumers. However, how the key agents (e.g. developers, government bodies, consumers) interact will determine the success or failure of the land development model in the Region of Waterloo.

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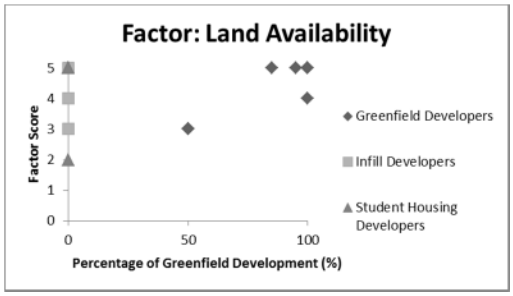
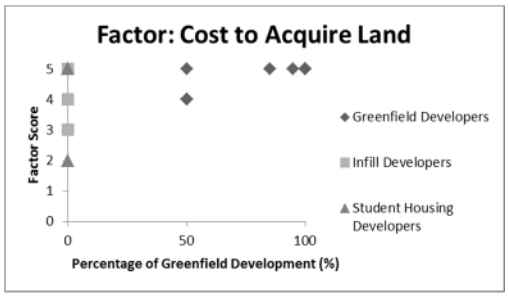
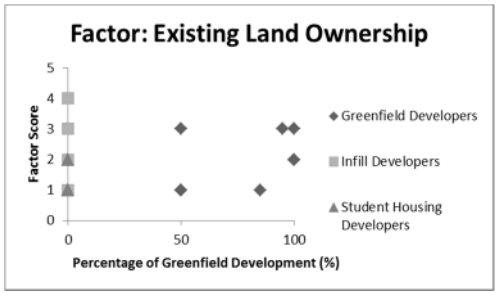
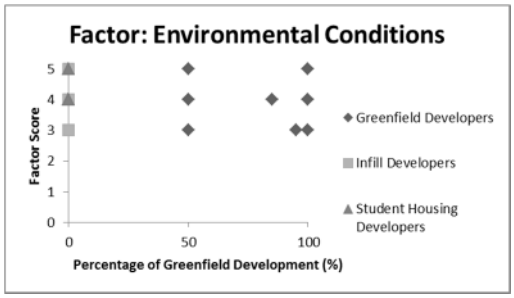
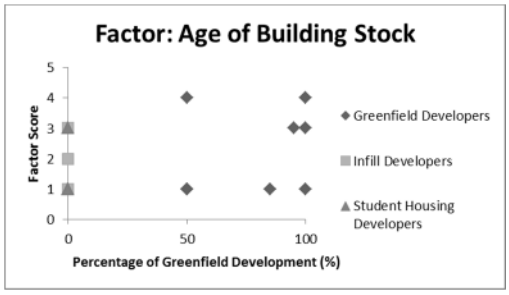
9. Appendix A: Factors

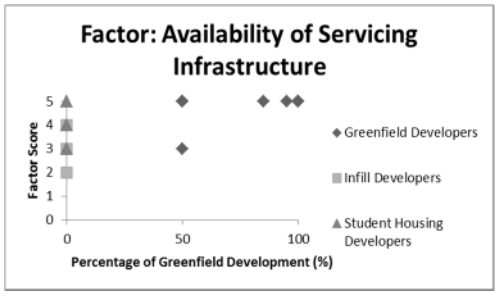


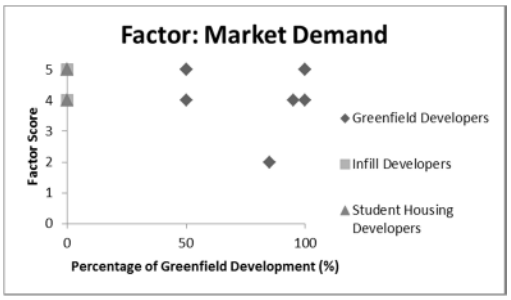


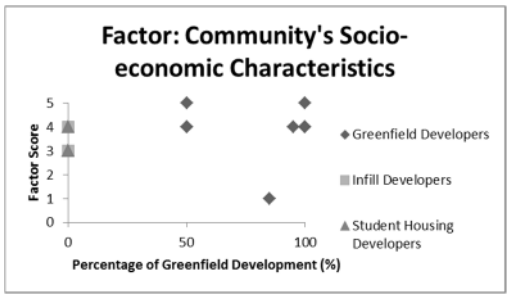


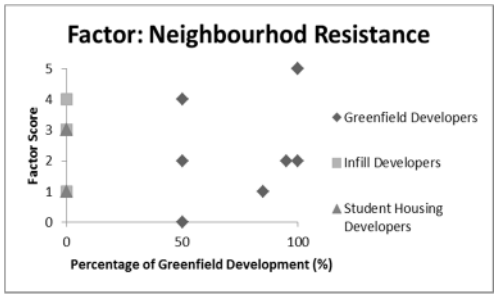


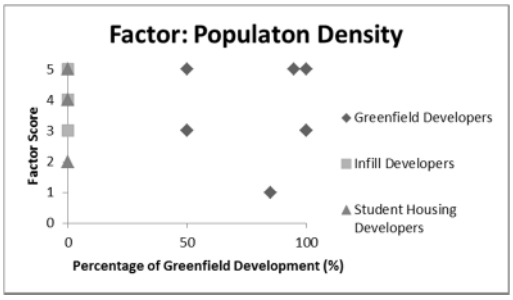


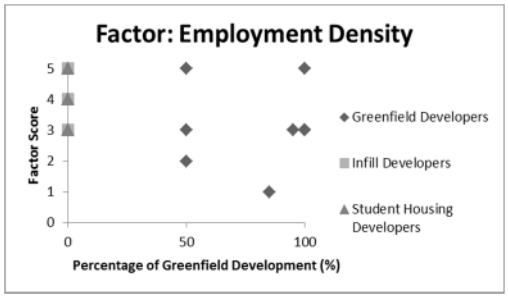


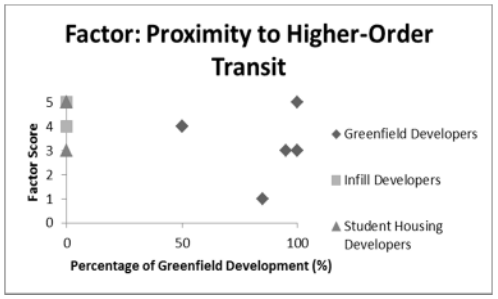


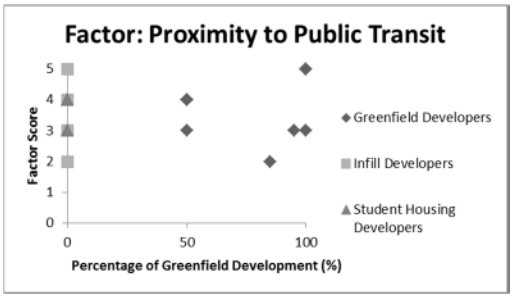


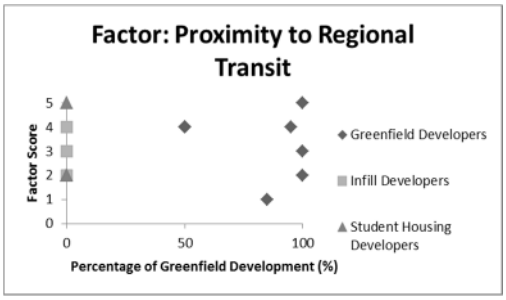


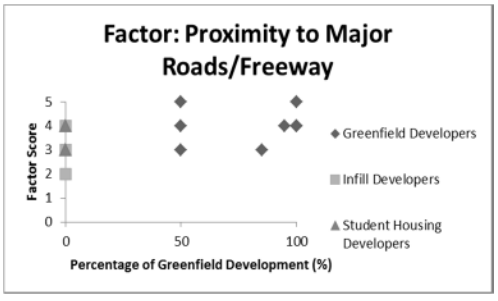


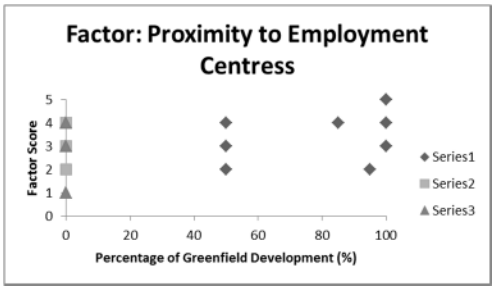








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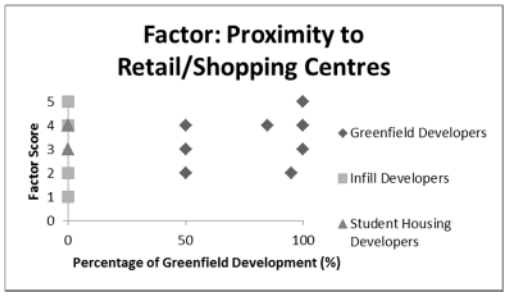
Factor Score
Percentage of Greenfield Development (%)
Series1
Series2
Series3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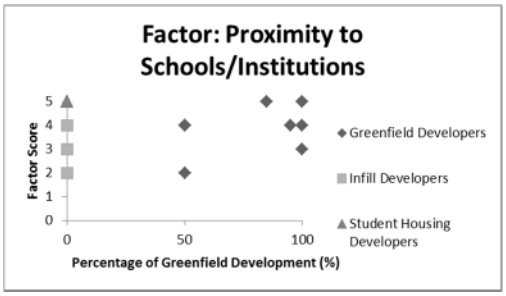
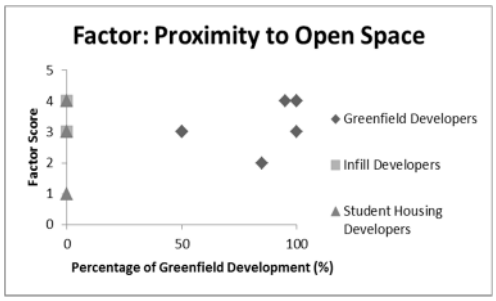
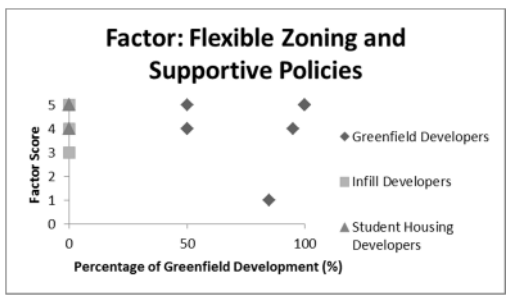
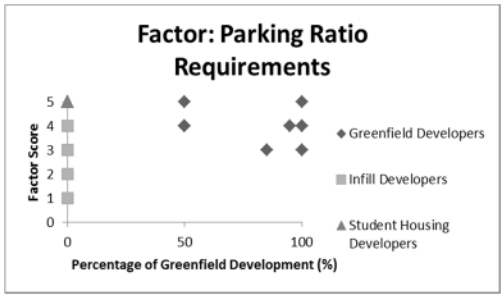
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Proximity to Schools/Institutions
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Proximity to Open Space
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Flexible Zoning and Supportive Policies
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers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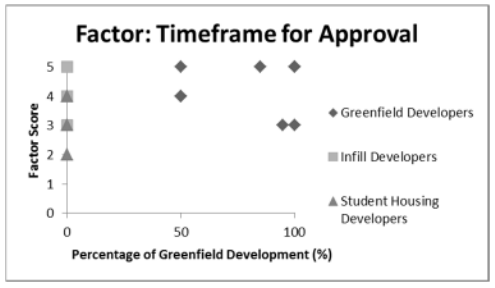
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers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Factor Score
Percentage of Greenfield Development (%)
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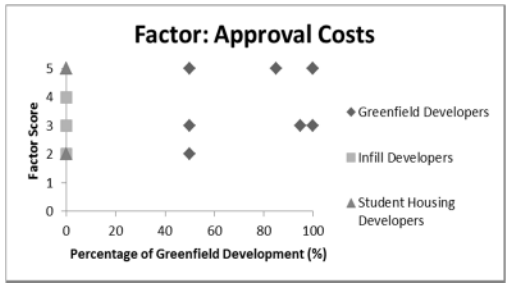
Infill Developers
Student Housing Developers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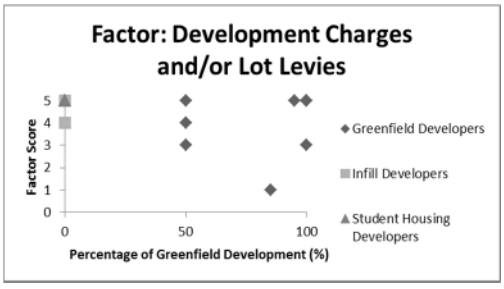
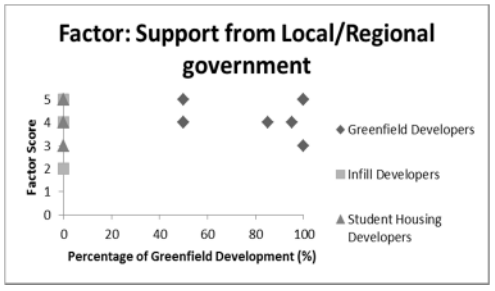
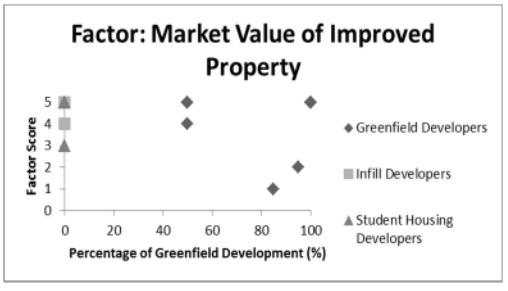
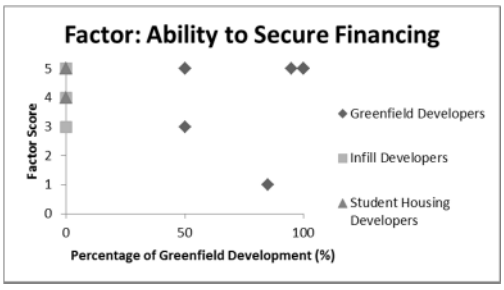
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Development Charges and/or Lot Levies
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Support from Local/Regional government
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Market Value of Improved Property
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers


Factor: Ability to Secure Financing
Factor Score
Percentage of Greenfield Development (%)
Greenfield Developers
Infill Developers
Student Housing Developers

Appendix B: Survey

UNIVERSITY OF WATERLOO **Understanding Developers' Decision Making in the Region of Waterloo**				
DATE OF INTERVIEW	**PARTICIPANT NO.**			
Type of Interview: (please check the appropriate box right)	**In-Person**	**Telephone**	**Mail-in**	**Web**

INTRODUCTION

We are a research team led by professors Dawn Parker and Jeff Casello at the School of Planning, University of Waterloo, working to profile the land development industry in the Region. We are interviewing professionals in the development industry to gain insights on development trends and discern impacts of the light rail transit (LRT) on land use patterns in the Region. We also seek to better understand developer decision making in order to improve efforts to model future development patterns in the area.

This survey is anonymous and the information that you provide will not be associated to yourself or your firm. The information gained will also contribute to graduate student research and academic publications.

PART A – FIRM'S INFORMATION

1. How many **years** has your firm worked in the land development industry?

   - ☐ 1-5 years
   - ☐ 6-10 years
   - ☐ 11-20 years
   - ☐ 21-30 years
   - ☐ 31+ years

2. How would you best describe your firm's **business model**? Please select all that apply.

   - ☐ Private Firm – Incorporated
   - ☐ Private Firm – Partnership
   - ☐ Private Firm – Public (publicly traded shares)
   - ☐ Private Firm – Sole Proprietorship
   - ☐ Public Agency
   - ☐ Other, please specify:_____

3. What **business operation(s)** are your firm involved in? Please select all that apply.

   - ☐ Land Development
   - ☐ Building/Construction
   - ☐ Property Management
   - ☐ Real Estate/Investment
   - ☐ Marketing/Sales
   - ☐ Other, please specify: _____

4. What is your firm's approximate **number of units sold** for residential projects **in the Region of Waterloo** in 2014?

   - ☐ Single Detached (in Units): _____
   - ☐ Semi-Detached (in Units): _____
   - ☐ Row Housing (in Units): _____
   - ☐ Apartments (in Units): _____

5. How large is your firm in terms of **paid employees** (full-time staff not including contractors)?

   - ☐ 1-5 employees
   - ☐ 6-25 employees
   - ☐ 26-100 employees
   - ☐ 101-300 employees
   - ☐ 301 or more employees

6. In what **municipality** is your firm's headquarters located?

   - ☐ Kitchener
   - ☐ Waterloo
   - ☐ Cambridge
   - ☐ Other, please specify: _____

7. Please indicate the approximate percentage of the number of your firm's current projects **located in the Region of Waterloo** relative to your total project portfolio.

   _____ %

Note that all subsequent questions on your firm's project refer to projects located in the Region of Waterloo only.

REAL ESTATE SECTOR

8. Please indicate the approximate percentages of your firm's projects in the following **real estate sector(s) between 2011 and 2015**.

Sectors	Percentage (based on GFA)
Mixed-Use (Retail - Residential)	%
Mixed-Use (Retail - Office)	%
Residential Only	%
Retail Only	%
Office Only	%
Industrial/Institutional Only	%
Other (please specify below):	%
Total	**100 %**

9. Has your real estate sector focus changed from **past (<2003) to present (2011-2015)**. If yes, what was the change?

   ☐ No change
   ☐ Yes, please specify the change: _____

10. What was the reason/motivation for the change?

    _____

11. Will your real estate sector focus likely change **in the future (>2020)**? If yes, what will be the change?

    ☐ No change
    ☐ Yes, the trend from past to present will continue into the future
    ☐ Yes, please specify the change: _____

12. Can you say more about the reason/motivation for the change?

    _____

BUILDING TYPE

13. For your firm's residential developments, please indicate the approximate percentage of your firm's number of projects with the following **building type(s) between 2011 and 2015.**

Building Types	Percentage (based on number of projects)
Low-rise (1-3 storeys)	%
Mid-rise (4-11 storeys)	%
High-rise (12+ storeys)	%
Total	**100 %**

14. Has your building type focus changed from **past (<2003) to present (2011-2015)**. If yes, what was the change?

    - ☐ No change
    - ☐ Yes, please specify the change: _____

15. What was the reason/motivation for the change?

    _____

16. Will your building type focus likely change **in the future (>2020)**? If yes, what will be the change?

    - ☐ No change
    - ☐ Yes, the trend from past to present will continue into the future
    - ☐ Yes, please specify the change: _____

17. Can you say more about the reason/motivation for the change?

    _____

TARGET MARKET

18. For **up to 3** housing types developed by your firm between 2011 and 2015, please indicate their corresponding **target market(s) and tenure type(s)**. More than one target market and tenure type may be selected as shown in the example below.

    In the example shown below this developer's target market for their Mid-Rise Apartments are students (rental), young professionals (rental).

Building Type		Students	Young Professionals (singles/couples)	Families with children	Empty Nesters / Seniors	Other: ___________
Example:	Mid-rise Apartments	☐ *Own* ☑ *Rent*	☐ *Own* ☑ *Rent*	☐ *Own* ☐ *Rent*	☐ *Own* ☐ *Rent*	☐ *Own* ☐ *Rent*
(select one) ☐ Single-Detached ☐ Semi-Detached ☐ Row House ☐ Low-Rise Apartment ☐ Mid-Rise Apartment ☐ High-Rise Apartment		☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent
(select one) ☐ Single-Detached ☐ Semi-Detached ☐ Row House ☐ Low-Rise Apartment ☐ Mid-Rise Apartment ☐ High-Rise Apartment		☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent
(select one) ☐ Single-Detached ☐ Semi-Detached ☐ Row House ☐ Low-Rise Apartment ☐ Mid-Rise Apartment ☐ High-Rise Apartment		☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent	☐ Own ☐ Rent

19. If your firm develops student housing, please indicate the approximate percentage of your **firm's student housing projects** relative to total project portfolio **between 2011 and 2015.**

	Percentage (based on GFA)
Student Housing Projects / Total Housing Projects in the Region %	%

20. Has your proportion of student housing projects changed from **past (<2003) to present (2011-2015)**. If yes, what was the change?

    - ☐ No change
    - ☐ Yes, please specify the change: _____

21. What was the reason/motivation for the change?

    _____

22. Will your proportion of student housing projects likely change **in the future (>2020)**? If yes, what will be the change?

    - ☐ No change
    - ☐ Yes, the trend from past to present will continue into the future
    - ☐ Yes, please specify the change: _____

23. Can you say more about the reason/motivation for the change?

    _____

BUILDING SIZE

24. If your firm develops low-rise residential developments, please indicate the percentage of developments with the following **size characteristics between 2011 and 2015**.

Size Characteristics	Percentage (based on number of units)
Less than 2000 SF	%
2000-3000 SF	%
3000-4000 SF	%
4000 SF or more	%
Total	**100 %**

25. Has the size composition of your low-rise residential developments changed from **past (<2003) to present (2011-2015)**? If yes, what was the change?

    ☐ No change
    ☐ Yes, please specify the change: _____

26. What was the reason/motivation for the change?

    _____

27. Will the size composition of your low-rise residential developments likely change **in the future (>2020)**? If yes, what will be the change?

    ☐ No change
    ☐ Yes, the trend from past to present will continue into the future
    ☐ Yes, please specify the change: _____

28. Can you say more about the reason/motivation for the change?

    _____

29. If your firm develops mid- and/or high-rise apartment buildings, please indicate the percentage of developments (excluding student housing) with the following **size characteristics between 2011 and 2015**.

Size Characteristics	Percentage (based on number of units)
Less than 750 SF	%
750-1000 SF	%
1000-1250 SF	%
1250 SF or more	%
Total	**100 %**

30. Has the unit size composition of your mid- and/or high-rise apartment buildings changed from **past (<2003) to present (2011-2015)**? If yes, what was the change?

    - ☐ No change
    - ☐ Yes, please specify the change: _____

31. What was the reason/motivation for the change?

---

32. Will the unit size composition of your mid- and high-rise apartment buildings likely change **in the future (>2020)**? If yes, what will be the change?

    - ☐ No change
    - ☐ Yes, the trend from past to present will continue into the future
    - ☐ Yes, please specify the change: _____

33. Can you say more about the reason/motivation for the change?

DEVELOPMENT TYPE

34. Please indicate the approximate percentage of your firm's projects categorized under the following **development types** between 2011 and 2015.

Development Type	Percentage (based on GFA)
Greenfield Development	%
Brownfield Development	%
Other Infill/Intensification Development	%
Total	**100 %**

35. Has your development type focus changed from **past (<2003) to present (2011-2015)**? If yes, what was the change?
    - ☐ No change
    - ☐ Yes, please specify the change: _____

36. What was the reason/motivation for the change?

_____

37. If you remain specialized in a single development type, what is your motivation for specialization?

_____

_____

38. Will your development type focus likely change **in the future (>2020)**? If yes, what will be the change?

    - ☐ No change
    - ☐ Yes, the trend from past to present will continue into the future
    - ☐ Yes, please specify the change: _____

39. Can you say more about the reason/motivation for the change?

_____

40. For your firm's development projects within the Region of Waterloo, please indicate the approximate spatial distribution of your projects between 2011 and 2015 (refer to Figure 1 below).

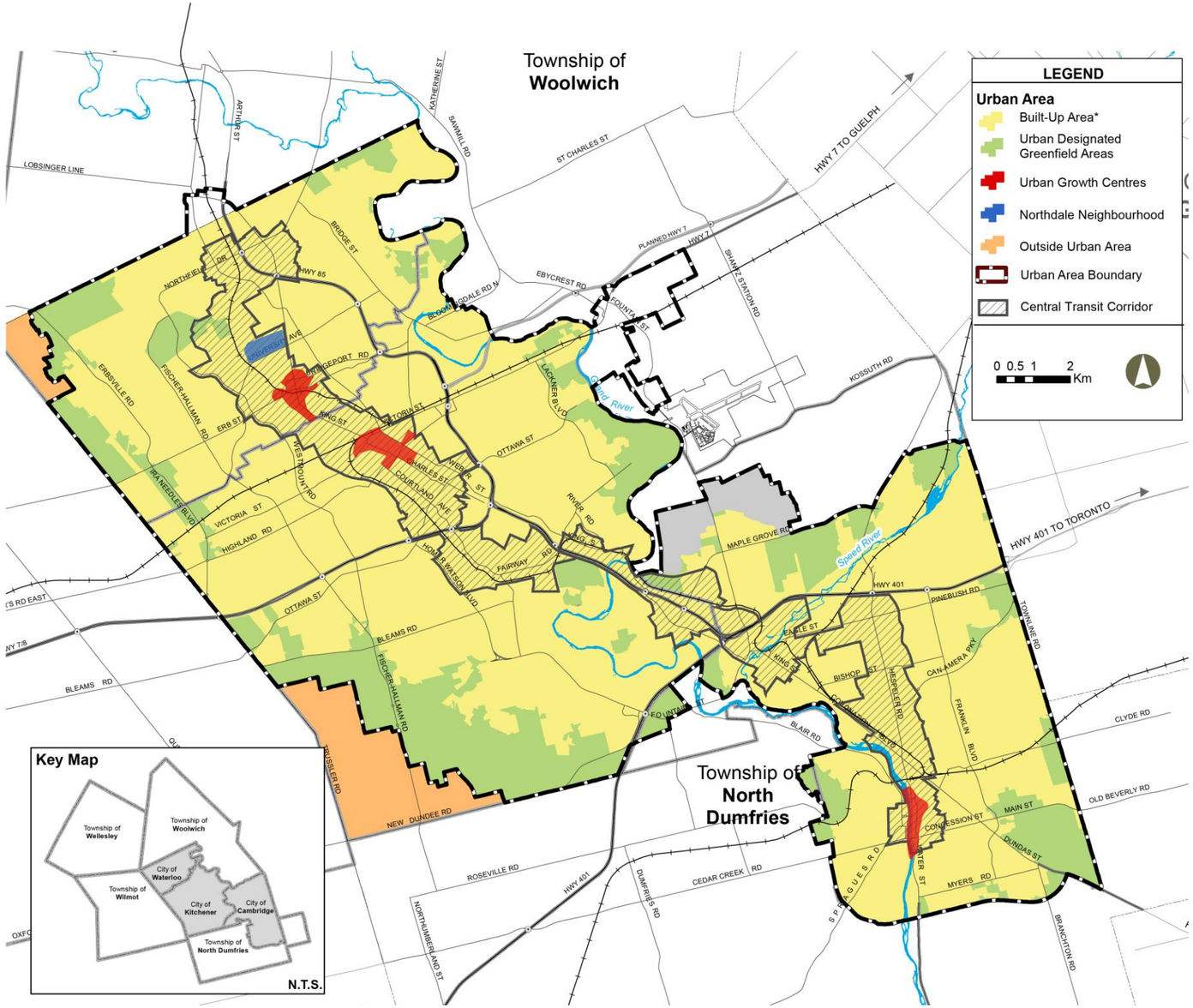


Figure 1 – Key Map of the Region of Waterloo (Region of Waterloo, 2015)

	Areas	Percentage (based on GFA)
A	Urban Designated Greenfield Areas	%
B	Northdale Neighbourhood	%
C	Urban Growth Centres (UGCs) – Uptown Waterloo, Downtown Kitchener	%
D	Central Transit Corridor (excluding UGCs and Northdale)	%
E	Built-Up Areas (excluding CTC)	%
F	Outside Urban Area Boundary	%
Total		**100 %**

41. Has the spatial distribution of your projects have changed from **past (<2003) to present (2011-2015)**? If yes, what was the change?

    - ☐ No change
    - ☐ Yes, please specify the change: _____

42. What was the reason/motivation for the change?

---

43. Will the spatial distribution of your projects likely change **in the future (>2020)**? If yes, what will be the change?

    - ☐ No change
    - ☐ Yes, the trend from past to present will continue into the future
    - ☐ Yes, please specify the change: _____

44. Can you say more about the reason/motivation for the change?

---

45. In the chart below, please indicate **the areas** you are **interested in developing** and the corresponding **real estate sector(s)** and **building type(s).**
In the example shown in the first section, the developer is interested in developing low- rise and mid-rise residential in Urban Designated Greenfield Areas.

Areas		Building Type	Real Estate Sectors					
			Residential	Retail	Office	Industrial/ Institutional	Mixed Use	Other:____
Example:	*Urban Designated Greenfield Areas*	*Low-Rise*	*X*					
		Mid-Rise	*X*					
		High-Rise						
A	Urban Designated Greenfield Areas	Low-Rise						
		Mid-Rise						
		High-Rise						
B	Northdale Neighbourhood	Low-Rise						
		Mid-Rise						
		High-Rise						
C	Urban Growth Centres (UGCs) – Uptown Waterloo, Downtown Kitchener	Low-Rise						
		Mid-Rise						
		High-Rise						
D	Central Transit Corridor (excluding UGCs and Northdale)	Low-Rise						
		Mid-Rise						
		High-Rise						
E	Built-Up Areas (excluding CTC)	Low-Rise						
		Mid-Rise						
		High-Rise						
F	Outside Urban Area Boundary	Low-Rise						
		Mid-Rise						
		High-Rise						

PART B - DEVELOPER'S BEHAVIOUR

46. How do you obtain **market knowledge** (e.g. estimates of demand and profitability)? Please select all that apply.

- ☐ MPAC/RealNet/Teranet/Other property market sources
- ☐ Informant (e.g. real estate agents, brokers)
- ☐ Professional network
- ☐ Information from local government
- ☐ Consultants
- ☐ Experience/Instincts
- ☐ Direct consumer surveys/focus groups
- ☐ Other, please specify: _____

47. Please explain the reason for your choice.

_____

_____

48. What method(s) do you use to **forecast future market demand**?

_____

_____

_____

49. How do you obtain information on **land acquisition** opportunities? Please select all that apply.

- ☐ Informants e.g. real estate agents, brokers
- ☐ Professional network (e.g. for joint venture opportunities)
- ☐ Research using policy documents
- ☐ Research using spatial information
- ☐ Informal techniques e.g. passing by a site and door knocking for property acquisition
- ☐ Consultants
- ☐ Other, please specify: _____

50. Has your firm been involved in land banking (i.e. buying land as investment and holding it for future use/development)?

- ☐ Yes
- ☐ No

51. If you indicated yes in **Question 50**, please explain the conditions/characteristics of the land that would make it more suitable for land banking than proceeding with development immediately.

---

52. How is the **building type/site plan** for your new developments influenced by your previous portfolio of work? Please select all that apply.

- ☐ Generally mimic previously successful building types/site plans
- ☐ Generally move away from previously unsuccessful building types/site plans
- ☐ Use a combination of previously successful building types/site plans and incorporate new designs
- ☐ Implement updates based on market research
- ☐ Minimal influence from previous designs

53. Please explain the reason for your choice.

---

54. How do you generally decide on the design of the **plan of subdivision** for greenfield developments? Please select all that apply.

- ☐ Plans are primarily designed based on best planning practices (e.g. pedestrian-oriented environments)
- ☐ Plans are primarily designed to optimize percentage of developable area
- ☐ Plans mimic elements of previously successful designs
- ☐ Plans are entirely unique
- ☐ Customized plans based on land characteristics
- ☐ Customized plans based on market research
- ☐ We generally prefer less, but larger lot sizes
- ☐ We generally prefer more, but smaller lot sizes
- ☐ Not applicable to my firm’s development

55. Please explain the reason for your choice.

---

56. Which of these (if any) environmental features does your firm incorporate in your developments?

- ☐ Energy efficiency measures
- ☐ Solar panel
- ☐ Green roof
- ☐ Stormwater management
- ☐ Alternative heating and cooling technology (e.g. geothermal)
- ☐ Environmentally-friendly/Sustainable building materials
- ☐ Other, please specify: _____

57. What is your perception of the market for environmental features in residential homes?

---

58. How willing are you to be the **first developer** of a previously untested building/subdivision type or development location (e.g. first high-rise condo in the area, or a wood-frame mid-rise building)?

- ☐ Very willing
- ☐ Willing
- ☐ Not likely
- ☐ Never

59. Please explain the reason for your choice.

---

60. What is your firm's **risk[1] profile**?

- ☐ Low risk – project with high certainties, low potential returns
- ☐ Equal investment in low risk and high risk projects
- ☐ High risk – project with many uncertainties, potential for large profit margin
- ☐ Other, please specify: _____

61. Please explain the reason for your choice.

_____

_____

62. What are your firm's primary sources of capital for development? Please select all that apply.

- ☐ Firm's/Shareholder's cash resources
- ☐ Vendor takeback financing
- ☐ Bank loan(s), or other financial institutions
- ☐ Public sector financing
- ☐ Offshore financing
- ☐ Syndicated loan
- ☐ Other, please specify: _____

[1] Risk: "the combination of the probability of an event and its consequences" (Royal Institution of Chartered Surveyors, 2003, p.7)

PART C: FACTORS

63. Your firm has been provided information on the following factors to assist you in your due diligence research for land acquisition purposes. Please indicate how significant each factor is by checking the appropriate box below.

1 – Factor has minimal significance and impact on the decision.
2 – Factor has low significance and impact on the decision.
3 – Factor has some significance and impact on the decision.
4 – Factor has high significance and impact the decision.
5 – Top factor(s), decision heavily attributed to this factor.

Physical Attributes	1	2	3	4	5
Land Availability (e.g. size of site, ease of land conversion – listed for sale)					
Cost to acquire land (including land assembly)					
Existing Land Ownership					
Environmental Conditions					
Age of building stock					
Availability of servicing infrastructure					
Other (please specify below):					

Please **CIRCLE** the single most significant factor in the table above.

Socio-Economic Attributes	1	2	3	4	5
Market Demand					
Community's Socio-economic Characteristics (e.g. income)					
Neighbourhood Resistance (e.g. NIMBY)					
Population Density					
Employment Density					
Other (please specify below):					

Please **CIRCLE** the single most significant factor in the table above.

Spatial Attributes	1	2	3	4	5
Proximity to Higher-Order transit (e.g. LRT)					
Proximity to Public Transit (e.g. Bus GRT)					
Proximity to Regional Transit (e.g. GO Transit)					
Proximity to Major Roads/ Freeways					
Proximity to Employment Centres					
Proximity to Retail/Shopping Centres					
Proximity to Schools/Institutions					
Proximity to Open Space					
Other (please specify below):					

Please **CIRCLE** the single most significant factor in the table above.

Planning/Profitability Attributes	1	2	3	4	5
Flexible Zoning Enforcement and Supportive Policies					
Parking ratio requirements					
Timeframe for Approval					
Approval costs					
Development Charges and/or Lot Levies					
Support from local/regional government					
Market Value of Improved Property over Project Costs					
Ability to Secure Financing					
Other (please specify below):					

Please **CIRCLE** the single most significant factor in the table above.

PART D1: DEVELOPING IN THE CENTRAL TRANSIT CORRIDOR

64. How important is **access to higher-order transit** (e.g. LRT) for determining where your firm develops compared to all other factors?

- ☐ Very important
- ☐ Important
- ☐ Somewhat important
- ☐ Not important

65. What is your firm's perception of the impacts of the Light Rail Transit on your future developments?

- ☐ Good, will have a net positive impact
- ☐ Neutral, will have equal positive and negative impacts
- ☐ Bad, will have a net negative impact

66. Please list the **Positive and Negative Impacts** of LRT on the development community.

Positive Impacts	• • •
Negative Impacts	• • •

67. Are you more willing to develop adjacent to a **Light Rail Transit** Station than **Bus Rapid Transit**[2] Station?

- ☐ Yes
- ☐ No
- ☐ I don't know

[2] e.g. the ION Bus Rapid Transit between Fairview Park Mall (Kitchener) and Ainslie Street Terminal (Cambridge)

68. Please explain/elaborate.

69. Do you think **land prices** close to LRT Stations have generally become too high for developments to be attractive or feasible?

- ☐ Yes, land prices have already become too high.
- ☐ No, but this will likely happen in the future.
- ☐ No, and this will unlikely happen in the future.
- ☐ I don't know

70. Please explain/elaborate.

PART D2: DEVELOPING IN THE CENTRAL TRANSIT CORRIDOR

The following questions pertain to one of your recent development projects along the central transit corridor.

71. What is the name of the development?

_____

72. What year was the project first conceived?

_____

73. What were the major motivations for this project? Please select all that apply.

- ☐ Market Demand Forecast
- ☐ Land Availability
- ☐ Light Rail Transit
- ☐ Location
- ☐ Other, please specify: _____

74. Was this the first project for you for this building type?

- ☐ Yes
- ☐ No

75. Was this the first project of this building type in the surrounding area?

- ☐ Yes
- ☐ No

76. Please indicate the primary target market(s)

- ☐ Students
- ☐ Young Professionals (Singles/Couples)
- ☐ Families with Children
- ☐ Empty Nesters/ Seniors
- ☐ Other, please specify: _____

77. Was this project considered a low, medium or high-risk project at the time of project initiation?

- ☐ High risk
- ☐ Medium risk
- ☐ Low risk

78. Was any part of the development process influenced by the LRT?

- ☐ Yes
- ☐ No

79. Please explain/elaborate.

---

80. Were the sale price and return on investment less, equal or greater than your initial estimate?

- ☐ Less than
- ☐ Equal than
- ☐ Greater than

81. Does the outcome of this project make you more or less likely to invest in the core area in the future?

- ☐ More likely
- ☐ Less likely
- ☐ No change

Thank you for your participation.

Please indicate below whether you would like to receive further updates on this project including a link to our study webpage and an invitation to attend a briefing session on the results of this study.

- ☐ Yes, I would like to receive further updates.
- ☐ No, I would not like to receive further updates.

If you have any questions or concerns, please contact Dr. Dawn Parker at the University of Waterloo at 519-888-4567 ext. 38888, by e-mail at dcparker@uwaterloo.ca, or fill out the additional comments box below.

We would like to assure you that this study has been reviewed by, and received ethics clearance through the Office of Research Ethics, University of Waterloo. If you have any questions regarding your participation in this study, please contact Dr. Maureen Nummelin, Chief Ethics Officer, Office of Research Ethics at maureen.nummelin@uwaterloo.ca or 519-888-4567 Ext. 36005.

Additional Comments:

References:

Region of Waterloo (2015). Regional Official Plan. Retrieved from: http://www.regionofwaterloo.ca/en/regionalGovernment/PreviousROP.asp

Royal Institution of Chartered Surveyors. (2003). The management of risk - yours, mine and ours, RICS Project Management Faculty, London.