

Kingsway and Knight Neighbourhood Centre Housing Area Plan

by

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B.Sc. (Environmental Science), Royal Roads University, 1999

Research Project Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Urban Studies

in the
Urban Studies Program
Faculty of Arts and Social Sciences

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SIMON FRASER UNIVERSITY
Summer 2014

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Abstract

Attempts to densify single-family neighbourhoods are often resisted by local property owners and seen to be politically challenging. Most land use policies intended to bring about intensification of existing single-family areas in Vancouver have either met with widespread resistance from neighbourhoods, or not been implemented at all. On the east side of Vancouver, the Kingsway and Knight Neighbourhood Centre Housing Area Plan (“the K&K Plan”) resulted in new zoning to introduce new forms of ground-oriented housing intended to expand housing diversity, allowing people to stay within their community as their housing needs change over time. These changes were brought in with little community resistance and even a degree of neighbourhood support.

This research project investigates the K&K Plan using development permit and census data to determine if the Plan has achieved its goals of producing a diversity of housing types that are suitable for families with children and seniors. Examination of development permit data reveals that, although the pace of development within the neighbourhood centre is only slightly greater than an adjacent single-family area, the resultant new developments provide a greater variety of housing types and increased density in an area close to transit and shopping. Further, the new housing types are generally well integrated into the existing neighbourhood in terms of their scale and design that is compatible with existing single-family housing; allowing the area to intensify and redevelop in dispersed and more organic way over time. Census data analysis suggests that there are more small children and younger adults in the study area compared to an adjacent single-family comparison area. Although this variation could suggest that the new housing types have resulted in more families with younger children, the research is not conclusive and this demographic change could be the result of other factors. The number of seniors living in the area was not greater compared to the adjacent single-family area. This analysis could be repeated in the future to examine this and other demographic data to evaluate potential effects of additional development over time within the neighbourhood.

Keywords: residential intensification; densification; single-family neighbourhood; ground-oriented housing; multi-family housing; Vancouver

Dedication

I'd like to dedicate this research project to my family and friends.

My amazing friends, partner, mother, parents in-law and sister provided me with the generous support of their time and encouragement that enabled me to get to the finish line, still sane, while working full time and caring for my son.

Acknowledgements

This research project would not have been possible without the support and guidance of a variety of individuals.

First and foremost I would like to thank my thesis advisor, Dr. Meg Holden. Her support and encouragement were invaluable in setting out reasonable goals and in giving feedback for me to deliver a well-rounded and focussed research project.

I would also like to thank my classmates and professor, Dr. Anthony Perl, of the Urban Studies Major Project course (696). Dr. Perl provided focussed and practical advice and guidance through the writing of my major project prospectus in the fall of 2013. My classmates were all very supportive and together we initiated a study group that provided an informal and less intimidating sounding board for structuring our research projects.

Finally, I would like to thank Dr. Peter Hall who guided me through the basics of statistical analysis, late in the game during my research project, to enable me to include the necessary statistical analysis. Without his generous assistance this would not have been possible.

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List of Acronyms

CA	Comparison Area
DA	Dissemination Area
K&K	Kingsway and Knight
LWH	Laneway House
MSA	Modified Study Area
NU	New Urbanism
SA	Study Area
SG	Smart Growth

Chapter 1.

Introduction and Background

The Kingsway and Knight Neighbourhood Centre Housing Area Plan (“the K&K Plan”) was adopted by Vancouver City Council in July of 2004. The neighbourhood centre is located at Kingsway and Knight Street in the City of Vancouver and extends out approximately 500 metres from the Kingsway shopping street (5-10 minute walking distance). Neighbourhood centres were identified as a concept through CityPlan in 1995 as areas appropriate for enhancement, focusing housing intensification and adding housing variety. The K&K Plan was the first of its kind, implementing the key directions from CityPlan regarding neighbourhood centres.

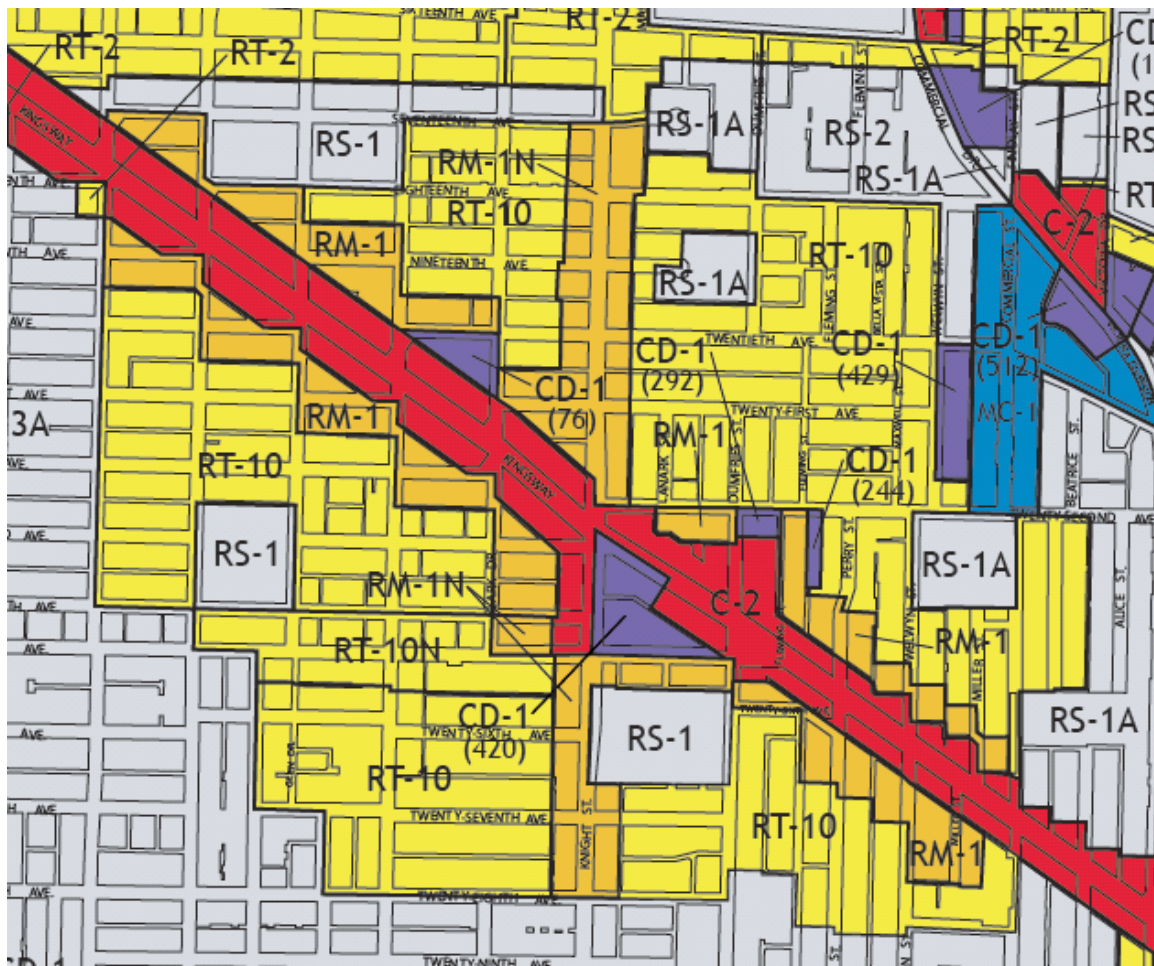
Two key directions from Cityplan that formed the foundation and intent of neighbourhood centre planning are:

- To increase housing variety, so that people will have more opportunities to live in neighbourhood centres at various ages and stages in their lives. As the region grows, more housing opportunities will mean less sprawl onto farm and green lands as Vancouver takes a portion of the region’s growth.
- To create lively neighbourhood centres that provide residents with a variety of housing, jobs, and services, and that become the public heart of each neighbourhood. Neighbourhood Centres will help the environment by reducing the need to travel long distances from home to jobs and services.

As a result of the adoption of the K&K Plan, Council approved two new zones in an existing single-family area to introduce new ground-oriented housing types and increase housing variety. The new zones, RM-1/RM-1N and RT-10/RT-10N, were developed to allow the construction of courtyard rowhouses, duplexes and small houses, as well as to encourage the retention and renovation of character houses (see Figure 1). The new housing types were intended to provide housing suitable for families and empty nesters; housing that is more affordable than single-family housing but that provides

some of the attributes of this housing type including private outdoor open space and individual front doors and porches. It was expected that housing for seniors, that would be physically accessible, could be accommodated within the neighbourhood in the existing commercial area along Kingsway in apartment units above ground floor commercial space.

Figure 1: Excerpt from the City of Vancouver Zoning Map (May, 2013)



Source: City of Vancouver

Neighbourhood centres planning, including the K&K Plan and subsequent Norquay Village Neighbourhood Centre Plan, were a key land use planning deliverable resulting from CityPlan (Vancouver's initial industrial land use policies were also delivered as a result of CityPlan). Although CityPlan was perceived as a success, a celebrated example of grassroots planning that resulted in a citywide response to

accommodate growth in neighbourhood centres, the subsequent Community Visions that were adopted by council have been criticized due to their lack of housing targets for accommodating growth. One of the key criticisms of the Community Visions process was regarding its overall effectiveness in implementing the “City of Neighbourhoods” model to accommodate growth in neighbourhood centres. This limitation can be attributed to the lack of clearly defined goals with respect to delivering housing and public realm improvements in identified neighbourhood centres. Neighbourhood Centres planning is the only land use planning initiative that stemmed from CityPlan and the Community Visions to enable the delivery of new types of housing in existing single-family areas.

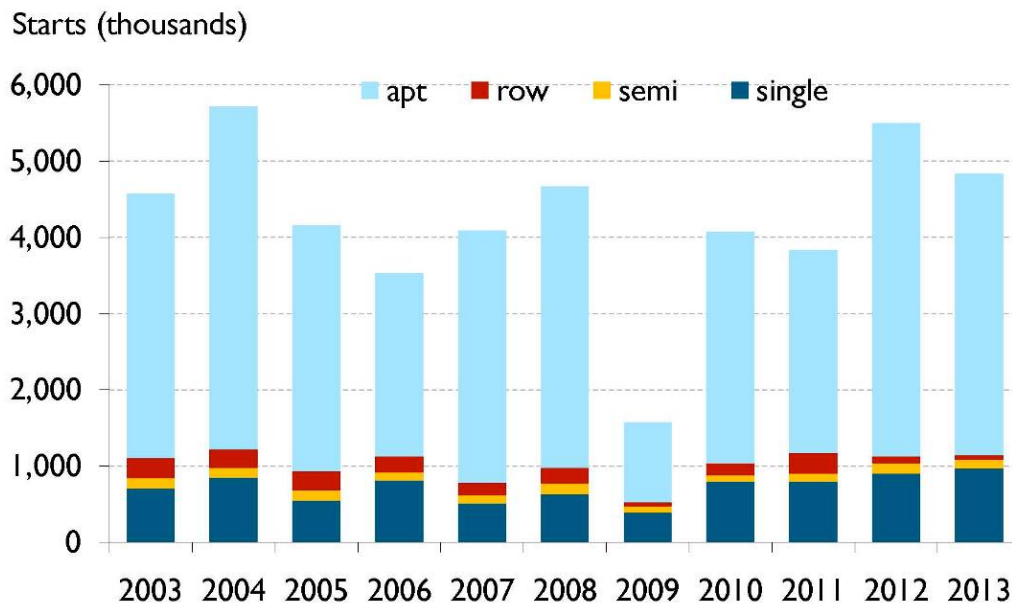
This research paper is intended to provide an evaluation of the first Neighbourhood Centre Plan, Kingsway and Knight. Although *ex post* evaluation of plans is seen to be an integral step in successful planning, it is not common practice (Talen, 1996). This research offers such an analysis, investigating the results of implementing neighbourhood centres planning, providing conclusions that can be used for future planning processes.

Given the scarce amount of land left in Vancouver that is underused or vacant, planning for the redevelopment of single-family areas represents the final frontier for accommodating population growth in Vancouver. Learning from an existing planning program that has attempted to achieve this, is important for future planning efforts. As well, this learning can be used to help inform planning processes to provide information to neighbours and community members regarding a planning program that has been underway for a number of years. This research could help illustrate the potential pace and distribution of redevelopment resulting from plans such as this and help show how redevelopment for this type of plan can happen incrementally and organically rather than overnight.

Another key reason why this research is important is that it is examining a planning program that has delivered new ground-oriented multi-family housing. In the City of Vancouver, 61% of the land base, not including streets, parks and public service land, is used for single-family housing (this includes single-family housing and houses with suites and/or laneway houses) (City of Vancouver, 2001, adapted from BC Assessment Authority data from 2001). The other dominant housing type, apartment

dwelling units, make up 9% of the land base and 55% of all dwelling units in 2001 and 59% in 2006, and are found mostly within the central area of Vancouver (City of Vancouver, 2001, adapted from BC Assessment Authority data from 2001) (Statistics Canada, 2001 and 2006 Censuses). Vancouver has developed very little ground-oriented multi-family housing (see Figure 2). Additional housing variety including alternate forms of ground-oriented housing is needed in order to provide more affordable housing options than single-family housing and give all household types the ability to stay within central city neighbourhoods, close to employment, transit, shopping and recreational opportunities. As well, the reuse of existing developed land in areas already well-served by existing services, amenities and transit also serves to decrease government and private sector spending on infrastructure required for residential development. This type of planning is important for city building efforts for all metropolitan areas that are struggling with scarce land resources and/or the widespread proliferation of urban sprawl.

Figure 2: City of Vancouver Housing Starts (2003-2013)



Source: Canada Mortgage and Housing Corporation (CMHC) Starts and Completions Survey, 2013.
 Notes: apt = apartment; row = rowhouse; semi = semi-detached; single = single-detached
 CMHC data related to housing starts includes replacement housing (i.e. the majority of single-detached housing starts are replacing existing stock and do not represent additional housing units).

The CMHC generally uses housing type definitions created by Statistics Canada and used for census data. The relevant housing type definitions from Statistics Canada for ground-oriented housing types are as follows:

- Single-detached house - A single dwelling not attached to any other dwelling or structure (except its own garage or shed). A single-detached house has open space on all sides, and has no dwellings either above it or below it.
- Semi-detached house - One of two dwellings attached side by side (or back to back) to each other, but not attached to any other dwelling or structure (except its own garage or shed). A semi-detached dwelling has no dwellings either above it or below it, and the two units together have open space on all sides.
- Row house - One of three or more dwellings joined side by side (or occasionally side to back), such as a townhouse or garden home, but not having any other dwellings either above or below. Townhouses attached to a high-rise building are also classified as row houses.
- Apartment, duplex - One of two dwellings, located one above the other, may or may not be attached to other dwellings or buildings.
- Apartment, fewer than five storeys – Dwelling unit in a building with less than five storeys.
- Apartment, five or more storeys – Dwelling unit in a building with five or more storeys.

Statistics Canada's definitions vary from definitions used by the City of Vancouver that are detailed in the various Community Vision documents. The ground-oriented housing types defined for Community Visions include:

- Infill Housing - A smaller second home on a lot, usually behind the main house. Also called a 'coach house' if there is a parking garage built in to the house or 'granny flat'.
- Duplexes - A duplex provides two units on a parcel of land. The units may be side-by-side, front-to-back, or up-and-down.
- Cottages or Small Houses - Two or three standard parcels developed together to accommodate between four and eight free standing homes.
- Fourplexes and Villas (six units) - Four to six strata-titled units on one larger parcel or six units on two standard parcels.
- Traditional and Courtyard Rowhouses - A single or double row of attached housing units with separate front and rear entrances. Courtyard rowhouses would be organized around a central common space.

The City of Vancouver's definitions provide a finer-grained more-detailed definition of housing types that describes each type in terms of its urban design attributes and

potential unit density. For each of the housing types identified by Statistics Canada there could be overlap or the potential for confusion especially with a duplex identified as an “apartment”. The definitions provided by the City of Vancouver are more user-friendly and provide additional detail in identifying separate housing types, however, housing start data is not available according to the City of Vancouver’s definitions.

Neighbourhood centres planning enables the intensification of existing single-family areas close to shopping, amenities and transit. The successful intensification of previously developed urban areas is vital for all cities because of the myriad of positive results that are possible. These include an overlapping mix of social, economic, environmental benefits including:

- Increased vibrancy in existing inner city neighbourhoods including reinvestment in and better use of local shops, services, schools, and recreational and cultural amenities;
- Higher density housing than typical suburban development, making better use of scarce land resources;
- Increased housing variety allowing residents to stay in their communities as their housing needs change in turn increasing neighbourhood resiliency by enabling demographic diversity;
- Efficient use of public and private sector funds needed to support residential development as new housing tends to be located in areas with existing infrastructure;
- Less destruction to the natural environment than suburban greenfield development; and
- Support for mass transit and other modes of alternative transportation like walking and cycling (Haughey, 2001; Kelly, 2011).

1.1. Research Question

The Neighbourhood Centres planning program is a key land use planning initiative resulting from CityPlan that enabled the delivery of new housing types in existing single-family areas and merits further study and evaluation in order to aid in future planning efforts. This research project, therefore, investigates the following question related to implementation of the neighbourhood centres program:

Has the K&K Plan met its goals to provide a variety of housing types attractive for families with children and seniors?

I have utilized two main secondary data sources to answer my research question. Permit data from the City of Vancouver and census data from 2001, 2006 and 2011 are used to evaluate the outcomes of introducing two new zones, the Small House/Duplex Zone (RT-10/RT-10N) and the Courtyard Rowhouse Zone (RM-1/RM-1N). These data are used to determine if the rate of redevelopment within the neighbourhood centre area is higher than other single-family areas and whether additional families with children and seniors have been attracted to the area. To supplement the analysis of the secondary data sources, I have interviewed two of the policy planners responsible for the K&K Plan to investigate their perspectives on the Plan's relative success and limitations. I have also used photographs of a sample of new housing projects to illustrate the new housing that has been developed in the study area (SA).

Chapter 2. Literature Review

Three key bodies of literature or themes that will frame my research are:

- the history of planning and rationale for providing denser ground-oriented housing forms in Vancouver's single-family areas,
- contemporary theories of urban planning, including Smart Growth (SG) and New Urbanism (NU), that relate to infill development and urban design philosophy intended to provide denser, more walkable neighbourhoods that foster community cohesion and trust, and
- the process of implementing and evaluation of community plans and policies.

These bodies of literature provide a conceptual frame that will outline:

- the importance of this type of neighbourhood centre planning to densify existing neighbourhoods - the "why",
- the key planning philosophies and design elements that define the type of built form that would ideally result from the planning - the "what", and
- the mechanics of putting a plan into action and the resultant monitoring and evaluation - the "how".

2.1. Densification in Vancouver's Single-Family Areas

John Punter's book, "The Vancouver Achievement", examines Vancouver's modern planning practises for both the central area and inner-ring suburbs with a specific focus on urban design and community engagement tools that were utilized by planning staff (2003). In Punter's chapter describing Vancouver's CityPlan and subsequent Community Visions, he both praises and provides specific criticisms of the participatory planning that underpinned these planning processes (2003). This analysis provides valuable insight into the attempt to intensify and evolve Vancouver's single-family neighbourhoods. One of the catalysts for undertaking the CityPlan process was the realization that prescriptive zoning controls and guidelines introduced for single-family zoned areas were entrenching neighbourhood protectionism against the

intensification of these areas to provide badly needed housing choice and accommodate expected growth.

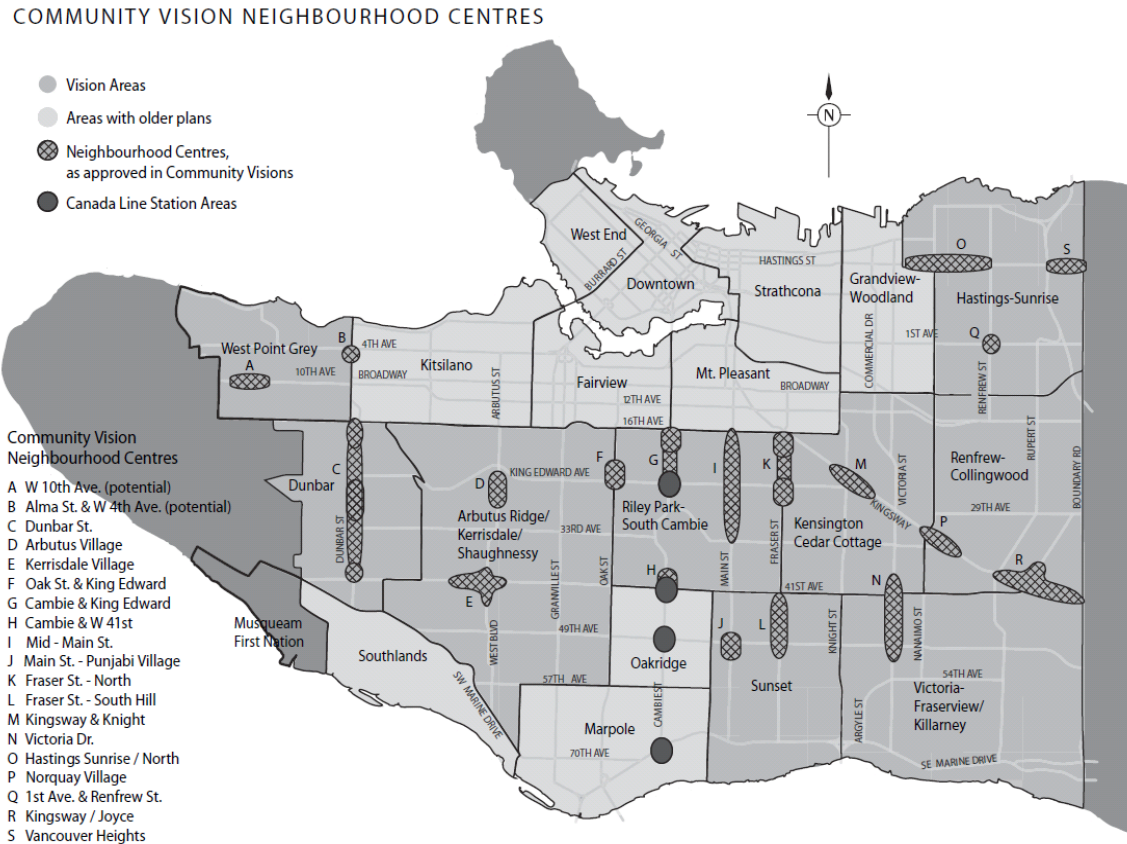
This was especially true for more affluent west side neighbourhoods that had seen widespread adoption of new single-family zones intended to combat the development of “Vancouver Specials” and “monster homes”. “Vancouver Specials” and “monster homes” were constructed to take full advantage of the development potential of Vancouver’s single-family zoning (RS-1) in terms of site coverage, height and floor area. These new houses contrasted with the generally smaller pre-war constructed homes and brought a flood of negative reaction from property owners who felt that these larger houses resulted in many negative effects including overlook, shadowing, and bulky/boxy designs. This resulted in a variety of changes to RS-1 zoning and eventually to new single-family zones that included design controls and incentives for more neighbourly and faux-heritage designs.

The phenomenon of “neighbourhood protectionism” against increased densities and infill development in existing single-family neighbourhoods is not unique to Vancouver. Amongst innumerable examples of this phenomenon, Portland, Oregon, has experienced community resistance to regional growth management including the Urban Growth Boundary (UGB) coupled with the statewide planning goal, “Goal 10” that mandates a fair share of housing be accommodated in each jurisdiction to meet housing needs. This has led to challenges to metropolitan governance even threatening it to the point where Metro had to agree to protect the character of single-family neighbourhoods within the larger framework of planning for compact growth (Abbott, 1996; Gibson and Abbott, 2002). Los Angeles has also experienced a significant share of neighbourhood resistance to densification and change in its single-family neighbourhoods. This has caused the rise of multiple powerful homeowner associations and the “slow growth” movement that has sought to preserve property values and racial exclusion within existing established single-family neighbourhoods (Davis, 1992). A more recent example of homeowner-based resistance to densification of single-family areas is the Tea Party’s movement against planning initiatives intended to promote smart growth and combat suburban sprawl (Flint, 2011).

Although the idea of neighbourhood centres planning, in Vancouver, to focus growth around local commercial shopping areas, had come forward earlier through a planning proposal in 1991; council, fearing backlash from neighbourhoods, had not given authority for the planning department to follow through. In 1992, council approved a program to prepare a citywide plan with specific definition of the public consultation process designed to collect and discuss ideas, make choices between alternatives, acknowledging trade-offs, and establish a vision for future directions. The initial comprehensive questionnaire to define directions produced consensus on issues related to public safety, movement, public places, environment, art and culture, however, there was disagreement on housing, neighbourhood character, employment, community services and decision making. In order to break this impasse, planners formulated a “Making Choices” brochure that presented four alternatives. The brochure was mailed to all households and resulted in the selection of the City of Neighbourhoods model to concentrate growth in these local neighbourhood centres to provide a wider range of housing for the young, the old, and the less affluent. This selection was seen as a breakthrough in the public process as the four alternatives had included a “no growth” scenario.

This process resulted in the adoption by council of CityPlan that ultimately set the stage for developing individual Community Visions for each of the 23 neighbourhoods in Vancouver (this eventually resulted in 9 Community Vision areas with consolidation of the City’s individual neighbourhoods, see Figure 3). One of the key criticisms of CityPlan was that while it set city-wide housing targets it did not set neighbourhood specific targets for accommodating housing and population growth (Seelig and Seelig, 1997).

Figure 3: Vancouver Community Vision areas and Neighbourhood Centres



Source: City of Vancouver, 2010

At the time that Punter wrote his book, the neighbourhood centres program had just begun for the K&K area but had not yet produced the plan or the subsequent zoning that resulted. Although there was citywide consensus on the neighbourhood centres model for the future of the city, implementation of this approach had not yet begun. The majority of the work that had started was focused on community involvement initiatives, safety, community centre improvements, greening, maintenance and recycling programs. One of the key elements of the Community Visions that had not been implemented was the neighbourhood centres plans intended to provide public realm improvements to key shopping streets and additional housing variety, mostly in the form of new ground-oriented housing. The relative success of providing this type of housing has been limited with only two neighbourhood centres plans completed and the vast majority (90%) of new housing stock delivered as apartment housing units (Tse, 2012).

Subsequent neighbourhood centre plans (after the second neighbourhood centre plan, Norquay Village) have not yet proceeded and criticism of the “top down” approach to planning, taken by the “EcoDensity” initiative have been blamed for negative widespread neighbourhood reaction to subsequent planning processes (Rosol, 2013)

Contemporary policies and plans, including CityPlan and more recently new local area plans like the Marpole Community Plan, have seen various levels of success in the densification of Vancouver’s single-family areas (see Table 1). The public debate over what is appropriate for the extent and amount of densification of single-family areas continues for every new policy or planning program that broaches this complex and controversial matter. Providing additional housing variety including alternate forms of ground-oriented multi-family housing, however, is one of the key directions that gained community support through the Community Visions. This direction, which has largely gone unrealized, was to provide more diverse and affordable housing options than single-family housing and give households, including families with children, empty nesters, and seniors, the ability to stay within central city neighbourhoods, close to employment, shopping and recreational opportunities, reducing the need for long-distance commuting and urban sprawl.

Table 1: A Comparison of City of Vancouver Policies and Plans intended to Stimulate Single-family Densification (1990 and later)

Policy Name	Year Adopted	Contribution to Single-family Densification	Drawbacks/ Other considerations
CityPlan	1995	Endorsed “City of Neighbourhoods” model to target densification of single-family areas within neighbourhood centres. Was applauded due to grassroots consultation efforts.	Required subsequent neighbourhood-specific planning to implement directions.
Community Visions	Various (1998 – 2010)	Presented individual communities with options for densification of single-family areas within neighbourhood centres, close to parks, schools, along arterial roads, etc. Was applauded due to grassroots consultation efforts.	Individual neighbourhoods were presented with the choice of whether they would accept densification with a citywide watchdog group tasked with ensuring that CityPlan goals of accommodating growth were being furthered. Required subsequent planning to permit new housing types.

Policy Name	Year Adopted	Contribution to Single-family Densification	Drawbacks/ Other considerations
Kingsway and Knight Neighbourhood Centre Plan	2006	Produced new zoning that permitted new (denser) housing types in an existing single-family area. Relative success in terms of neighbourhood consultation and feedback.	Implemented for a single neighbourhood centre (with 18 identified centres remaining still to be done).
Laneway Housing	2009	Amendments to two single-family zones (RS-1 and RS-5) to permit the development of laneway houses (rental tenure) in most of the City's single-family areas.	Initially the planning process resulted in neighbourhood controversy and resistance to the proposed rezoning. However, more recently, laneway housing has been celebrated as successful and subsequent amendments targeted areas of neighbourhood concern to minimize potential negative effects for neighbouring properties.
Norquay Village Neighbourhood Centre Plan	2010	Produced new zoning that permitted new (denser) ground-oriented housing types in an existing single-family area.	Implemented for a single neighbourhood centre (with 17 identified centres remaining still to be done). A new proposal (EcoDensity) to speed up planning for growth in Vancouver's single-family areas resulted in neighbourhood controversy and resistance to rezoning. As a result, the program was delayed (Rosol, 2013). Subsequent Neighbourhood Centre Plans have not been initiated.
Cambie Corridor Plan (Phase II)	2011	Produced a rezoning policy that allowed consideration of rezoning applications to allow apartments in single-family areas close to Canada Line Stations.	Limited consideration of densification to sites along arterial streets (i.e. planning did not consider a comprehensive area around stations). New housing was mostly limited to apartment units. Planning process resulted in some neighbourhood controversy and resistance to change in single-family areas.
Marpole Community Plan	2014	Produced new zoning and a rezoning policy to permit new (denser) housing types (ground-oriented and apartments) and consideration of rezoning of sites for apartments.	Planning process resulted in significant neighbourhood controversy and resistance to rezoning of single-family areas. Draft plan was subsequently altered to reduce potential extent of change in single-family areas.

2.2. Contemporary Theories of Neighbourhood Planning

Neighbourhood planning in Vancouver's inner-ring suburbs, while guided primarily by the particular processes and context described above has also benefitted from the larger North American movement to codify and formalize neighbourhood planning efforts. Two contemporary theories of planning that present options for neighbourhood planning are New Urbanism (NU) and Smart Growth (SG). Although these theories of planning were mostly developed after the adoption of CityPlan, Vancouver's Neighbourhood Centre planning program, with its emphasis on sensitive infill development intended to gradually densify and enhance neighbourhoods over time, encouraging housing that includes many of the attributes of single-family housing, could be characterized as a NU approach to planning. Similarly, with its intent to redevelop and intensify an existing developed area that is close to shopping, transit and amenities, neighbourhood centres planning could also be characterized as a SG approach to planning. Given their relevance for this planning program, an examination of these two approaches is warranted to provide additional insight for the research into the K&K Plan.

2.2.1. New Urbanism (NU)

NU is a movement that defines urban design guidelines for the built environment to produce compact, socially diverse and walkable neighbourhoods intended to reduce sprawl and increase community interaction. The movement emerged in the United States in the 1980s and was initiated by urban designers and architects. It ultimately resulted in the founding of the Congress for New Urbanism (CNU) and a set of 10 foundational principles encapsulated in the Charter of the New Urbanism (Trudeau, 2013). These principles describe the key features of new urbanist settlements including: the use of neotraditional aesthetics that respect local character, walkability, connectivity, quality architecture and urban design, a mix of housing types, increased densities, a mix of uses including public places like parks and civic plazas, multimodal transportation options, quality of life, and sensitivity to the environmental impact of development.

Trudeau provides an investigation into research that evaluates NU's success in promoting environmental sustainability and social interaction among residents within a neighbourhood (2013). The investigation focuses on research conducted of NU projects

developed on greenfield sites. The research that Trudeau cited indicated that the NU projects that were evaluated had a poor record for habitat protection and that several NU settlements have been shown to have more impervious surfaces than conventional suburban projects. Trudeau goes on to examine research into whether NU neighbourhoods have fostered a greater sense of community and reduced automobile travel. This research similarly focuses on suburban greenfield NU projects and generally concludes that although residents in NU neighbourhoods may walk more, they do not drive less than their suburban counterparts. As well, other research suggests that there is little interaction between socioeconomic classes in NU neighbourhoods.

In 2004, Port investigated the viability of using new urbanist principles in the intensification and redevelopment of existing neighbourhoods in Boston, Massachusetts. His thesis concluded that the use of new urbanist principles applied to retrofit existing suburbs has tremendous potential to provide additional housing and employment within existing neighbourhoods, reducing the need for continuing to develop the urban periphery and degrade our natural environment. The NU movement has been widely criticized for its use in master planned suburban greenfield development; however, the intent of the design philosophy presents an opportunity, when used within previously developed areas, to produce walkable, more socially connected neighbourhoods.

Another research study that surveyed designers, developers and planners involved in NU projects, suggests that utilizing an NU approach to redevelopment can minimize NIMBY opposition (Garde, 2007). Specifically the research suggested that NU projects have benefits derived from the community engagement and building design techniques employed. These benefits include not only minimizing NIMBY opposition but better design and compatibility with growth management regulation and minimizing environmental deterioration. If this type of approach can reduce neighbourhood resistance to change in existing neighbourhoods then examination of neighbourhood centres planning could also help to determine if an NU approach is more effective for intensifying established single-family areas in Vancouver.

2.2.2. Smart Growth

In 1996, The United States Environmental Protection Agency and the American Planning Association partnered with various public interest groups to form the Smart Growth Network to advocate for development that combats negative effects of urban sprawl (Tirado, n.d.). The basic premise is that growth or development should occur within or immediately around existing urban areas. The Smart Growth Network defines 10 principles for SG that promote preservation of natural areas; making better use of existing infrastructure and investment in already developed areas; developing compact, livable metropolitan areas that reduce reliance on the private automobile; and creating mixed-use neighbourhoods that include opportunity for people to walk to shopping, work, recreation and entertainment. Although SG principles are not as concerned with the physical design of development, they have been supported and furthered by many of the original promoters of NU and are seen to be an attempt to combat the criticism of NU for its role in justifying suburban greenfield development.

Environmental criticism of SG postulates that the attainment of a steady-state society where growth is not seen as inevitable is the only sustainable planning solution and that SG is essentially a dead end (Warner, 2006). On the other side, right-wing criticism of SG suggests that SG principles lead to lack of housing affordability and that SG is "social engineering" and results in infringement of private property rights (Bruegmann, 2005; Cox, 1999; O'Toole, 2001). Specific research into the effects of implementing SG principles has had mixed results. One study that evaluated land use changes in Washington County, Oregon, suggested that growth management policies including the Urban Containment Boundary and the Urban Growth Management Functional Plan, could be linked to positive effects in terms of connectivity, pedestrian access and density (Song & Knapp, 2004). Langlois' research comparing implementation of planning for Markham and Vaughan, Ontario, indicates that SG and NU principles may have had more limited influence over built form and street network trends (2010). However, for this study, both of the municipalities were largely developed as greenfield suburban sites and do not include well-distributed and small-scale infrastructure including neighbourhood schools and local shopping areas, characteristic of older streetcar suburbs. Therefore redevelopment of an existing developed area, such as in the case of the K&K Plan, could yield even more positive results in terms of

sustainable development due to the available infrastructure including high-quality transit, shopping, neighbourhood-based schools and parks and dense road and utility networks.

Table 2: Principles of New Urbanism versus Smart Growth

New Urbanism Principles	Smart Growth Principles
Mixed use and diversity	Mix land uses
Increased density	Take advantage of compact building design with higher density development that preserves more green space
Mixed housing	Create a range of housing choices and opportunities
Walkability	Create walkable neighbourhoods
Quality architecture and urban design	Foster distinctive, attractive communities with a strong sense of place
Sustainability	Preserve open space, farmland, natural beauty and critical environmental areas
Connectivity	Strengthen and direct development toward existing communities
Green transportation	Provide a variety of transportation choices
Traditional neighbourhood structure	Make development decisions predictable, fair and cost effective
Quality of life	Encourage community and stakeholder collaboration in development decisions

Source: New Urbanism and Smart Growth Network, 2014

With its emphasis on sensitive infill development intended to gradually densify and enhance neighbourhoods over time, encouraging housing that includes front porches and an active interface with the street, neighbourhood centres planning could be characterized as a NU approach to planning. Similarly, with its intent to redevelop and intensify an existing developed area that is close to shopping, transit and amenities, neighbourhood centres planning could also be characterized as a SG approach to planning. As shown in Table 2 the principles of NU and SG are quite similar. Using both sets of principles the K&K Plan could be characterised as both an SG and NU approach to planning. Analysis of the outcomes of implementing the K&K Plan could provide insight into whether NU and SG ideals are successful when implemented in previously

developed areas. Examining the results from this planning process through the lens of NU and SG principles will aid in the interpretation of the results of the research and determine if the principles are relevant for this specific Plan that has implemented directions from CityPlan to accommodate growth across Vancouver's single-family neighbourhoods.

2.3. Planning Implementation and Evaluation

As Hodge states, "Most planners would argue that, while it is important to prepare a plan, it is equally important to design and apply appropriate tools for guiding the decisions of participants so that the plan is achieved or implemented" (1998, p 217). Implementation or the process of operationalizing plans or policies into action can be the most difficult stage in planning. One reason for this difficulty is the disconnect between the actors involved, in that, generally policy makers are separate and even removed from those that carry out implementation activities (Patton, 1986). Key to the success of implementing plans is strong political commitment and clearly defined goals, which are translatable into objectives that can be monitored (Alexander, 1992). In summary, factors that can facilitate, or that conversely, can impede in the implementation of plans and policies include clearly identified implementation actions, political commitment, connection and interaction between policy and plan makers and implementers and defined monitoring activities for evaluating the success of implementation.

Once a plan or policy is adopted by government, all subsequent action can be defined as part of the implementation process. Implementing plans, as opposed to the creation of community plans, is a continuous process where the end state is rarely if ever achieved exactly as laid out in a plan or policy. There are various formal and informal tools and approaches that are used in the implementation of plans including policy directives, legal instruments, administrative practices and means of promoting community participation in planning (Hodge, 1998).

In the Vancouver context, discretionary zoning and site specific rezoning are used as the main formal means for implementing land use plans. Vancouver's discretionary zoning and site specific rezoning powers provided under the Vancouver

Charter facilitate negotiation with rezoning and development permit applicants to require the provision of high-quality urban design for the private and public realm. Specifically, the discretion that is embedded in most zones in Vancouver relates to the provision of good urban design, architecture, and neighbourly development. For all zones there is an outright option where there is not a direct requirement for improved urban design although typically this option is not used as it generally results in less development potential (floor area and/or height). For most of Vancouver's single-family zoned areas there is no discretion embedded in the RS-1 (single-family) zone that precipitates improved urban design. The new zones implemented as a result of the K&K Plan are an example of discretionary zoning that facilitates the construction of higher-quality denser development than surrounding outright single-family development.

Aside from direct land use controls are informal implementation activities that address policy goals of community plans concerning other aspects of a community's development over time. This includes initiatives like delivering public amenities, protecting heritage resources, enhancing neighbourhood character, and providing transportation improvements. A hallmark of Vancouver's efforts to remain a liveable city while simultaneously accommodating growth has been the attention paid to assuring that new development contributes to the community facility and amenity requirements of a growing city. Amenities - such as recreational facilities, greenways and bikeways, protection of heritage buildings, parks and libraries are important elements of a vibrant and livable community. Implementation of community plans helps inform where City expenditures and development contributions should be targeted to accommodate new and existing residents. These policy directives to inform spending on public amenities are another important informal means for implementation of community plans. The K&K Plan is an example of this as it included funding, allocated by council directly to the planning program, for public realm improvements including Kingsway street upgrading for pedestrians.

Equally important as providing the means for implementing plans, is examining the success of implementation through monitoring or evaluation of the results and outcomes of plans. Ideally, monitoring activities should be built into planning implementation to ensure that this evaluation occurs. Examining quantitative data like population growth, transit ridership, housing affordability and development density

provides a direct method of evaluating implementation of land use plans, whereas other aspects of community planning like enhanced vibrancy and revitalization of neighbourhoods are more difficult to measure and evaluate. Although challenging, the practice of evaluating implementation of plans is essential for the continued learning needed to evolve and inform planning theory and practice (Talen, 1996). Evaluating the K&K Plan and attempting to uncover potential lessons learned in terms of whether the Plan has met its intended outcomes, like adding housing variety to encourage aging in place, could help with future planning efforts in Vancouver's existing established single-family neighbourhoods.

Most evaluation of planning and policy implementation has focussed on evaluation and analysis of specific policies rather than the substance or effects of the implementing plans (i.e. *ex post* evaluation of community plans) (Talen, 1996). Studies that have evaluated the implementation of plans have tended to focus on the social and environmental effects of implementing plans to determine if plans have resulted in furthering specific principles set out in plans and policies. Studies and research that have conducted *ex post* evaluation of development plans have also focused on urban design analysis of built form characteristics and the public realm (Langlois, 2010; Song & Knapp, 2004; Tsenkova and Damiani, 2009; Southworth, 1997). This research has typically used empirical evidence, including population density and demographic data as one element of the evaluation; however, for this research project I have focussed mostly on empirical evidence of the implementation of the K&K Plan. As well, similar to the study conducted by Langlois comparing two municipalities in Ontario, I have employed the use of a comparison area (CA) that has not been rezoned, for comparison to the study area (SA) (2010). The fairly narrow scope of my research allows me to focus on whether the K&K Plan has produced additional housing variety for families with children and seniors.

Chapter 3. Methodology

For my research project I have used two main sources of secondary data to evaluate the outcomes of introducing new zones in the K&K Plan area: development permit data from the City of Vancouver and census data from 2001, 2006 and 2011. These data are used to determine if the rate of redevelopment and resultant development density within the neighbourhood centre area are higher than another comparable single-family area and whether Census data indicates if additional families with children and seniors have been attracted to the area. To supplement the analysis of the secondary data sources, I interviewed two policy planners who were responsible for the K&K Plan to investigate their perspective on the program's relative success and limitations. I have also used photographs of a sample of new housing projects to illustrate and describe the new housing that has been developed in the SA. The Office of Research Ethics has reviewed my study details and determined that ethics approval was not necessary for my research (ethics exemption letter included as Appendix A).

3.1. Census Data

Measuring the change in the number of children and seniors over time (using census data from 2001, 2006, and 2011) could provide an indication of whether the delivery of new housing types within the SA has resulted in an increase in families with children and/or seniors. I have used age data, analysing the number of children (0-4; 5-9; 10-14; and 15-19 years) and seniors (65 and over) within the SA over the three census years. The data for children is used as a proxy for indicating the presence and changes in the number of families with children. The data for seniors was split into two categories: younger seniors (65-74 years) and frail seniors (75 and over).

The census data SA was defined using census “dissemination area” boundaries to match the planning SA as closely as possible (see Figure 4). The dissemination areas do not exactly match the planning and zoning SA boundaries and this could have caused some skewing of the results. For comparison with the census data SA, I have used a similar sized area that is mostly zoned RS-1 (single-family zoning) and that is adjacent to the SA (see Figure 5). I selected this comparison area (CA) because it is a predominantly single-family area with a central shopping street that has remained unchanged in terms of its zoning. To further investigate any demographic variation between the SA and the CA I also used citywide and neighbourhood census data. Additional census data for the two areas was used including mobility of residents and dwelling types to attempt to determine the cause of variations in the two areas.

For all of the age categories for children and seniors I summarized the data for both the SA and the CA. I also summarized the age data more generally using wider age categories for the entire population including young children (0-9 years), teenagers (10-19 years), young adults (20-39 years), middle-aged adults (40-64 years, and seniors (65 and older). For these age categories I conducted statistical analysis using a chi square test to determine if there was a statistically significant difference between the SA and CA age data.

Figure 4: Census Data Study Area

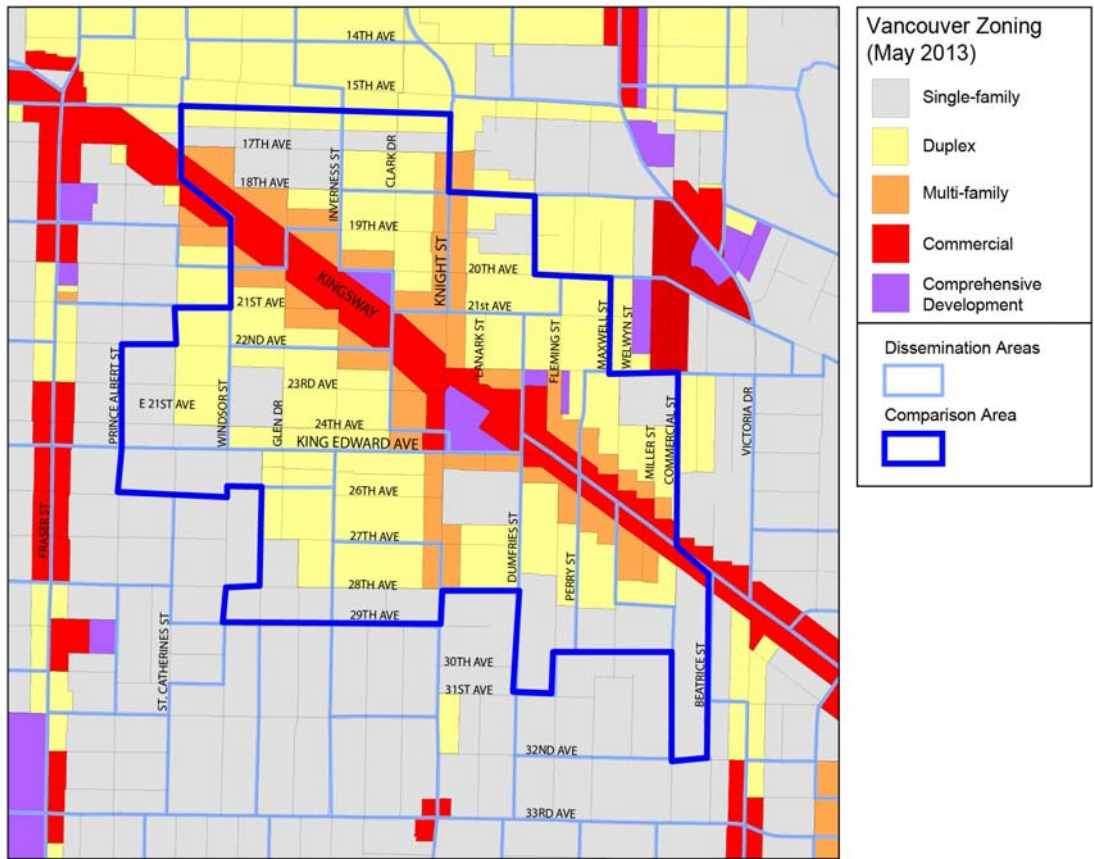
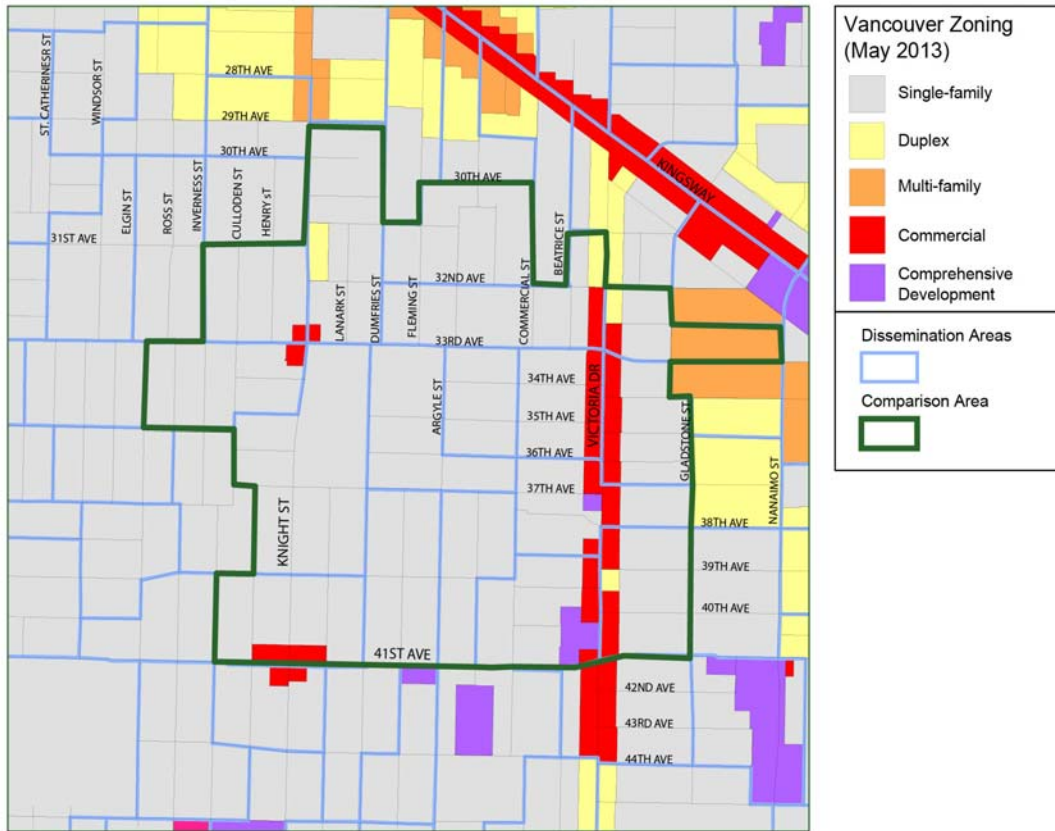


Figure 5: Census Data Comparison Area



3.2. Development Permit Data

Development permit data for the SA was used to analyse all new development within the area between 2007 and 2012. This time frame allowed me to obtain complete years of permit data (i.e. permit data for 2006 and 2013 would not cover the entire year because development permits only started to be approved for the new zones in 2006 and data for 2013 was not completed). The permit data is available through a specific City of Vancouver development permit search engine that allows for a search based on zoning classification. For the K&K Plan area, the two new zones, Small House/Duplex Zone (RT-10/RT-10N) and Courtyard Rowhouse Zone (RM-1/RM-1N), were developed for and only exist within the SA. This allowed me to obtain permit data for those specific zones for all new development within the area between 2007 and 2012.

Measuring the rate of redevelopment (using permit data) demonstrates whether the introduction of these new housing types has resulted in greater uptake by the development industry than other similar areas thus attracting additional housing to an area that has easy access to shops and amenities. As well, the permit data for the SA has been mapped and all new development approved between 2007 and 2012 has been summarized. Descriptive statistics have been used to summarize relevant information from the development permit data including units per acre achieved, total number of units by year, etc.

As in the case of the census data, I have compared the permit data for the SA against permit data for the RS-1 (single-family) zoned sites in the CA. RS-1 permit data for the CA between 2007 and 2012 is compared with permit data in the SA. The CA permit data was obtained using a specific search function for Vancouver's development permit data that allows permits to be searched using a geographic boundary. All permit data was "cleaned" to remove permits relating to renovations and other projects that did not involve constructing new units of housing. Certain permit data were removed as they represented the legalisation of existing secondary basement suites (i.e. a new unit was not being constructed). As well, all new laneway house developments were isolated from the data set as laneway housing was brought in during the timeframe and was not originally allowed in the RS-1 (single-family) zoned area when the new zones for the K&K Plan area were adopted. Beyond the descriptive statistics conducted, a T-test was used for comparing the mean and standard deviation of permit data from the SA and CA.

The permit data, in the format collected, does not include any personal information therefore it did not need to be anonymised to remove any personal identification information. I received permission to use the permit data from Planning and Development Services at the City of Vancouver.

3.3. Photographic Analysis

For the SA, photographs of a variety of the new developments were taken by City of Vancouver staff to document new developments constructed. I have obtained permission from Planning and Development Services to use these photos in my

research. To supplement the City of Vancouver's photographs, I also took photographs of a number of new developments. The photos provide a sample of the new developments for each zone. The photos are used for illustration purposes and demonstrate a variety of building typologies. For all of the photos taken of the new developments I have filed them under their address and development or building permit application number for ease of use with the permit data. The locations of the photographed developments were also mapped.

3.4. Interview with Neighbourhood Centre Policy Planners

To provide some additional insight into the K&K Plan, I conducted one interview with two key policy planners responsible for the program. Both planners offered their written permission on a consent form for conducting the interview. The consent form explained and sought the planner's acknowledgement that, due to their public involvement in the planning program, it is possible that their identities could be surmised. The interview was an unstructured interview lasting approximately one and a half hours intended to get a more complete picture of the intended goals of the K&K Plan and to inquire about the planners' insights into the Plan's successes, failures, and lessons learned for future planning efforts. This information has been extremely valuable for rounding out my research and helping to provide conclusions.

The specific questions that I asked were:

- What was the general intent and goals of the K&K Plan?
- Do you feel that the Plan was successful overall?
- What improvements would you recommend for the Plan for use in future planning?
- Do you feel that the Plan could be used for planning in other single-family areas?
- Is there anything else you would like to tell me about the Plan?

Chapter 4. Kingsway and Knight Neighbourhood Centre Housing Area Plan: Indications of Success?

4.1. Demographic Analysis

I have used census data to measure the change in the number of children and seniors over time (from 2001, 2006, and 2011) to order to indicate whether the delivery of new housing types within the SA could have had an effect on the proportion or change in the number of families with children and/or seniors. I have used age data, counting the number of children (0-4; 5-9; 10-14; and 15-19) and seniors (65+) within the SA over the three census years. The number of children data is used as a proxy for indicating whether the number of families with children has increased over time. The data for seniors was split into two categories: younger seniors (65-74) and frail seniors (75+).

The dissemination area data has been organized to represent the two main demographic groupings (children and seniors) to determine the percent change within the SA versus the CA over the three census years. This analysis was intended to determine if it was possible to suggest that the new housing developed may have had an effect with respect to these demographic age categories for the SA compared to the CA.

Initial observation of the overall population change shows a difference between the SA and the CA with a steady population increase in the CA of over 6% for both 2006 and 2011; whereas, in the SA there was a decrease of over 2% in 2006 and an increase of over 12% in 2011 (Table 3). Looking more closely at the individual dissemination area (DA) data reveals that DA 59150370, that includes the new major development at Kingsway and Knight Street (King Edward Village), accounted for 821 additional people between 2006 and 2011 (61% of the total population increase for the SA for 2011). In order to remove this anomaly in the data, Table 4 compares a modified study area (MSA), which does not include DA 59150370, to the CA.

Table 3: Children and Seniors - Comparison Area versus Study Area

	Comparison Area (CA)			Study Area (SA)		
	2001	2006	2011	2001	2006	2011
All ages, total	9550	10160	10855	9155	8940	10010
All ages, % change		6.4%	6.8%		-2.3%	12.0%
0 to 4, total (%)	575 (6.0%)	495 (4.9%)	515 (4.7%)	560 (6.1%)	455 (5.1%)	545 (5.4%)
0 to 4, % change		-13.9%	4.0%		-18.8%	19.8%
5 to 9, total (%)	580 (6.1%)	575 (5.7%)	510 (4.7%)	560 (6.1%)	515 (5.8%)	455 (4.5%)
5 to 9, % change		-0.9%	-11.3%		-8.0%	-11.7%
10 to 14, total (%)	520 (5.4%)	555 (5.5%)	560 (5.2%)	550 (6.0%)	510 (5.7%)	525 (5.2%)
10 to 14, % change		6.7%	0.9%		-7.3%	2.9%
15 to 19, total (%)	530 (5.5%)	575 (5.7%)	675 (6.2%)	545 (6.0%)	535 (6.0%)	530 (5.3%)
15 to 19, % change		8.5%	17.4%		-1.8%	-0.9%
< 19, total (%)	2205 (23.1%)	2200 (21.7%)	2260 (20.8%)	2215 (24.2%)	2015 (22.5%)	2055 (20.5%)
< 19, % change		-0.2%	2.7%		-9.0%	2.0%
> 65, total (%)	1320 (13.8%)	1580 (15.6%)	1630 (15.0%)	1100 (12.0%)	1175 (13.1%)	1210 (12.1%)
> 65, % change		19.7%	3.2%		6.8%	3.0%
65 to 74, total (%)	820 (8.6%)	900 (8.9%)	780 (7.2%)	695 (7.6%)	680 (7.6%)	620 (6.2%)
65 to 74, % change		9.8%	-13.3%		-2.2%	-8.8%
> 75, total (%)	500 (5.2%)	680 (6.7%)	850 (7.8%)	405 (4.4%)	495 (5.5%)	590 (5.9%)
> 75, % change		36.0%	25.0%		22.2%	19.2%

Source: Statistics Canada

Note: Age data for each category is the total population in that age category for each census year.

Table 4: Children and Seniors – Comparison Area versus Modified Study Area

	Comparison Area (CA)			Modified Study Area (MSA)		
	2001	2006	2011	2001	2006	2011
All ages, total	9550	10160	10855	8640	8480	8645
All ages, % change		6.4%	6.8%		-1.9%	1.9%
0 to 4, total (%)	575 (6.0%)	495 (4.9%)	515 (4.7%)	535 (6.2%)	435 (5.1%)	485 (5.6%)
0 to 4, % change		-13.9%	4.0%		-18.7%	11.5%
5 to 9, total (%)	580 (6.1%)	575 (5.7%)	510 (4.7%)	540 (6.3%)	495 (5.8%)	410 (4.7%)

	Comparison Area (CA)			Modified Study Area (MSA)		
	2001	2006	2011	2001	2006	2011
5 to 9, % change		-0.9%	-11.3%		-8.3%	-17.2%
10 to 14, total (%)	520 (5.4%)	555 (5.5%)	560 (5.2%)	525 (6.1%)	490 (5.8%)	485 (5.6%)
10 to 14, % change		6.7%	0.9%		-6.7%	-1.0%
15 to 19, total (%)	530 (5.5%)	575 (5.7%)	675 (6.2%)	510 (5.6%)	515 (5.8%)	480 (4.8%)
15 to 19, % change		8.5%	17.4%		1.0%	-6.8%
< 19, total (%)	2205 (23.1%)	2200 (21.7%)	2260 (20.8%)	2110 (23.0%)	1935 (21.6%)	1860 (18.6%)
< 19, % change		-0.2%	2.7%		-8.3%	-3.9%
> 65, total (%)	1320 (13.8%)	1580 (15.6%)	1630 (15.0%)	1025 (11.9%)	1115 (13.1%)	1100 (12.7%)
> 65, % change		19.7%	3.2%		8.8%	-1.3%
65 to 74, total (%)	820 (8.6%)	900 (8.9%)	780 (7.2%)	655 (7.6%)	645 (7.6%)	555 (6.4%)
65 to 74, % change		9.8%	-13.3%		-1.5%	-14.0%
> 75, total (%)	500 (5.2%)	680 (6.7%)	850 (7.8%)	370 (4.3%)	470 (5.5%)	545 (6.3%)
> 75, % change		36.0%	25.0%		27.0%	16.0%

Source: Statistics Canada

Notes: Age data for each category is the total population in that age category for each census year. The MSA excludes the King Edward Village dissemination area (DA 59150370).

I conducted statistical analysis using a chi square test comparing general age categories for the CA and the MSA, as shown in Table 5. For the chi square test the null hypothesis is that the age structure for the two populations will be the same (i.e. the proportions for each age category will be similar). As shown in Table 5 the null hypothesis can be rejected for all census years and the probability that the variation in the age data between the two populations is due to chance is very small (less than 1% for all census years). This statistical analysis was also completed for all five year age categories, comparing the areas, and the result was the same.

The census data for 2001 and 2006 was used to show demographic data for the two areas prior to the K&K Plan being approved and at the time the Plan was approved. The 2011 census data is used to show demographic data after a number of new developments would have been constructed and occupied. Examining the percent values shown in Table 5 for 2001 to determine the specific age category variations

between the two areas, indicates that there is a slightly higher percentage of teenagers and a lower percentage of seniors in the MSA versus the CA. The other variations in age category proportions are much more minimal. For 2006 age data, the variations in the percent values for the age categories are similar to 2001, with a slightly higher percentage of teenagers and a lower percentage of seniors in the MSA. For 2011 age data, the variations in the percent values for the age categories have changed. There are still a lower percentage of seniors, however, there is no longer a significant difference in the proportion of teenagers and there are a higher percentage of young adults (20-39) and children (0-9) in the MSA. This indicates that there could be more families with children in the MSA compared to the CA.

Table 5: General Age Categories - Comparison Area (CA) versus Modified Study Area (MSA)

	2001		2006		2011	
	CA	MSA	CA	MSA	CA	MSA
Children (0 – 9)	1155 (12.2%)	1075 (12.4%)	1070 (10.5%)	930 (11.0%)	1025 (9.4%)	895 (10.4%)
Teenagers (10 – 19)	1050 (11.1%)	1035 (12.0%)	1130 (11.1%)	1005 (11.9%)	1235 (11.3%)	965 (11.2%)
Young Adults (20 – 39)	3150 (33.2%)	2905 (33.6%)	3050 (29.9%)	2585 (30.5%)	3105 (28.5%)	2630 (30.4%)
Middle-aged Adults (40 – 64)	2825 (29.7%)	2600 (30.1%)	3360 (33.0%)	2845 (33.5%)	3905 (35.8%)	3055 (35.3%)
Seniors (65 and older)	1320 (13.9%)	1025 (11.9%)	1580 (15.5%)	1115 (13.1%)	1630 (15.0%)	1100 (12.7%)
X²	**17.4		**23.5		**62.5	

Source: Statistics Canada

Notes: Degrees of Freedom (df) = 4

** - significant at P < 0.005

For both the MSA and the CA the number of children is decreasing from 2001 to 2011, however, the decrease is lower in the MSA.

Both the SA and the CA fall within the Kensington Cedar Cottage (KCC) neighbourhood. Age data and total population data for the SA and MSA are more similar to the KCC area overall than the CA (see Table 6). A possible explanation for this is that the CA is mostly comprised of single-family houses with a modest shopping area that does not include as many redeveloped higher density mixed-use buildings (apartments), whereas the SA and KCC generally include a larger variety of housing types and more

built out shopping areas with higher density mixed-use developments (see Tables 7 and 8). Overall high levels of mobility for Vancouver neighbourhoods could also contribute to population variations year-over-year in census data (see Table 9). For the age data for seniors and children, the overall proportion for each age category is relatively similar between the SA, MSA, CA, KCC and to a lesser extent the City of Vancouver overall as can be seen in Figures 6 and 7.

Table 6: Census Data - Modified Study Area, Kensington Cedar Cottage, and Vancouver

	Modified Study Area			Kensington Cedar Cottage			City of Vancouver		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
All ages, total	8640	8480	8645	44560	44665	47470	545665	578040	603500
All ages, % change		-1.9%	1.9%		0.2%	6.3%		5.9%	4.4%
0 - 4 years %	6.2%	5.1%	5.6%	6.0%	5.3%	5.1%	4.3%	4.3%	4.1%
0 - 4 % change		-18.7%	11.5%		-11.6%	3.0%		4.4%	0.2%
5 - 9 years %	6.3%	5.8%	4.7%	6.2%	5.4%	4.7%	4.4%	4.1%	3.7%
5 - 9 % change		-8.3%	-17.2%		-12.8%	-7.5%		0.1%	-6.0%
10 - 14 years %	6.1%	5.8%	5.6%	5.7%	5.5%	5.0%	4.6%	4.4%	4.0%
10 - 14 % change		-6.7%	-1.0%		-3.2%	-3.5%		2.0%	-4.7%
15 - 19 years %	5.6%	5.8%	4.8%	5.8%	5.8%	5.6%	5.3%	5.1%	4.8%
15 - 19 % change		1.0%	-6.8%		-1.2%	3.7%		2.1%	-1.3%
< 19 years %	23.0%	21.6%	18.6%	23.7%	21.9%	20.4%	18.6%	17.9%	16.6%
< 19 % change		-8.3%	-3.9%		-7.3%	-1.0%		2.1%	-2.9%
> 65 %	11.9%	13.1%	12.7%	12.1%	13.0%	12.8%	12.9%	13.1%	13.6%
> 65 % change		8.8%	-1.3%		7.4%	4.7%		8.0%	7.8%
65 - 74 years %	7.6%	7.6%	6.4%	7.3%	7.2%	6.4%	6.8%	6.7%	6.9%
65 - 74 % change		-1.5%	-14.0%		-1.2%	-5.6%		4.5%	7.6%
> 75 %	4.3%	5.5%	6.3%	4.9%	5.8%	6.4%	6.1%	6.5%	6.7%
> 75 % change		27.0%	16.0%		20.3%	17.3%		11.9%	8.0%

Source: Statistics Canada

Notes: Age data for each category is the total population in that age category for each census year. The MSA excludes the King Edward Village dissemination area (DA 59150370).

Table 7 Dwelling Types: Study Area, Comparison Area and Modified Study Area

	Comparison Area			Study Area			Modified Study Area		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
Single-detached house	55%	33%	27%	53%	29%	23%	54%	30%	27%
Semi-detached house	0%	1%	1%	2%	3%	2%	2%	1%	2%
Row house	0%	0%	0%	0%	1%	0%	0%	0%	0%
Duplex*	37%	48%	54%	34%	52%	44%	35%	53%	49%
All ground-oriented housing	92%	82%	82%	89%	84%	70%	91%	84%	78%
Apartment, less than five storeys	8%	18%	17%	10%	19%	18%	8%	17%	18%
Apartment, five storeys or more	0%	0%	0%	1%	0%	13%	1%	0%	4%
All apartments	8%	18%	17%	11%	19%	31%	9%	17%	22%

Source: Statistics Canada

Note: In 2006 there was a change made to the definition of duplex that seems to have identified more duplexes than before. One possible explanation is that prior to 2006 a number of single-family houses with basement suites were identified as single-detached houses whereas in 2011 they were reclassified as duplexes.

Table 8: Dwelling Types – Kensington Cedar Cottage versus Vancouver

	Kensington Cedar Cottage (KCC)			City of Vancouver		
	2001	2006	2011	2001	2006	2011
Single-detached house	47%	25%	23%	28%	19%	18%
Semi-detached house	2%	2%	2%	2%	2%	2%
Row house	2%	2%	2%	3%	3%	3%
Duplex*	29%	45%	45%	11%	17%	17%
All ground-oriented housing	80%	73%	72%	44%	41%	40%
Apartment, less than five storeys	19%	27%	25%	34%	35%	33%
Apartment, five storeys or more	1%	0%	2%	22%	24%	27%
All apartments	19%	27%	27%	55%	59%	60%

Source: Statistics Canada

Note: In 2006 there was a change made to the definition of duplex that seems to have identified more duplexes than before. One possible explanation is that prior to 2006 a number of single-family houses with basement suites were identified as single-detached houses whereas in 2011 they were reclassified as duplexes.

Table 9: Mobility – Kensington Cedar Cottage versus Vancouver

	Kensington Cedar Cottage (KCC)			City of Vancouver		
	2001	2006	2011	2001	2006	2011
Percent of the population who have moved in the last 5 years	45%	41%	N/A*	52%	50%	N/A*

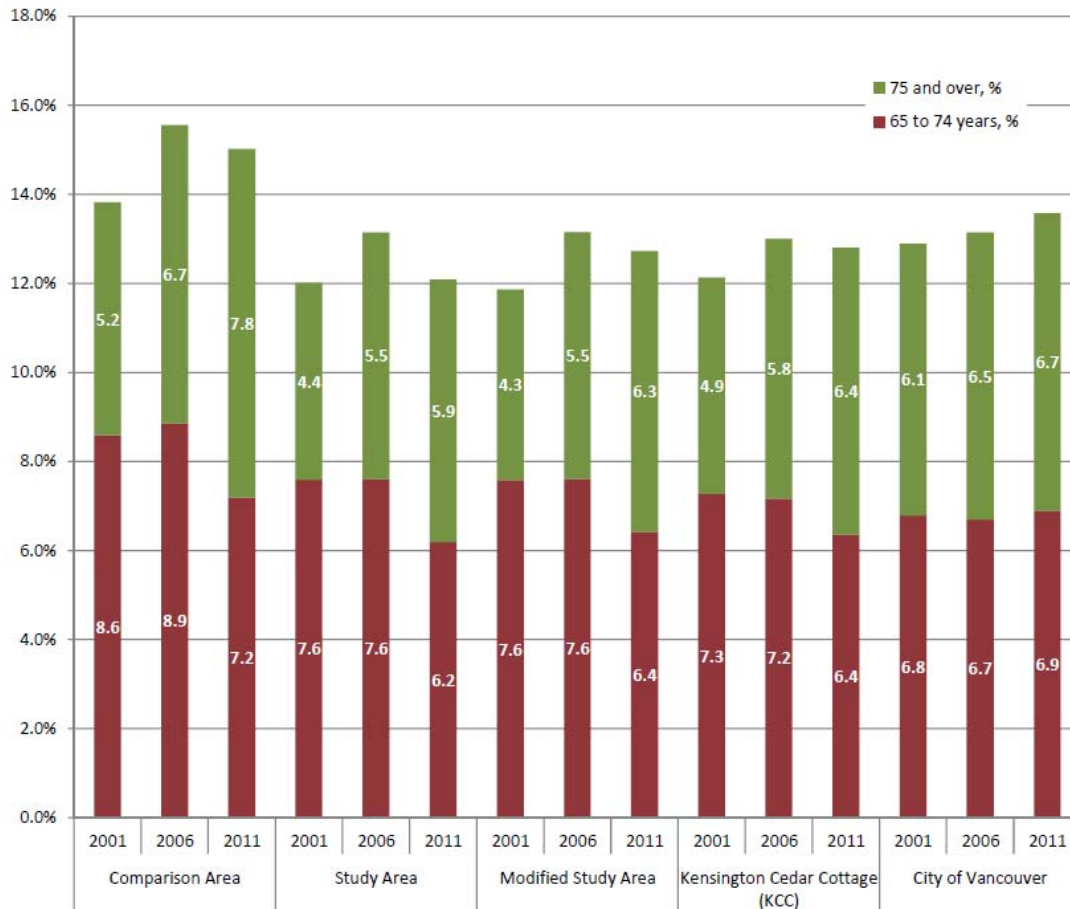
Source: Statistics Canada

Note: In 2011, due to changes in the long form household survey, mobility data was unavailable.

Figure 6: Census Data – Proportion of Children



Figure 7: Census Data – Proportion of Seniors



Census data analysis indicates that there are more children and young adults in the MSA compared to the adjacent single-family CA in 2011. Although this variation could suggest that new housing types have resulted in more families with younger children, the research is not conclusive and this demographic variation could be the result of other factors. The number of seniors living in the SA was less compared to the CA for all three census years analysed. These analyses could be repeated in the future to further examine demographic data to evaluate potential effects of additional development over time within the neighbourhood.

4.2. New Development

4.2.1. Study Area Development Permits (2007 – 2012)

Development permit data for the SA was used to analyse all new development within the area between 2007 and 2012. Permit data for the SA has been mapped and all new development approved between 2007 and 2012 has been summarized. As in the case of the census data, the permit data for the SA is compared against permit data in the CA. RS-1 permit data for the CA between 2007 and 2012 is used to compare with permit data in the neighbourhood centre SA.

New development in the SA as shown in Figure 8 is well distributed across the SA. The majority of new development occurred in the RT-10/RT-10N area with only 16 new developments in the RM-1/RM-1N area. Table 10 summarizes all of the new developments in the SA (2007-2012) and Table 11 summarizes new RS-1 development approved in the CA (2007-2012). Table 12 compares development permits for the SA and CA using a T-test for each variable including the development site area, number of units, average floor area per unit and average floor area for all development approved. Tables 13 and 14 provide a summary of the housing types approved in the SA and CA.

Figure 8: New Development in the Study Area (2007 – 2012)

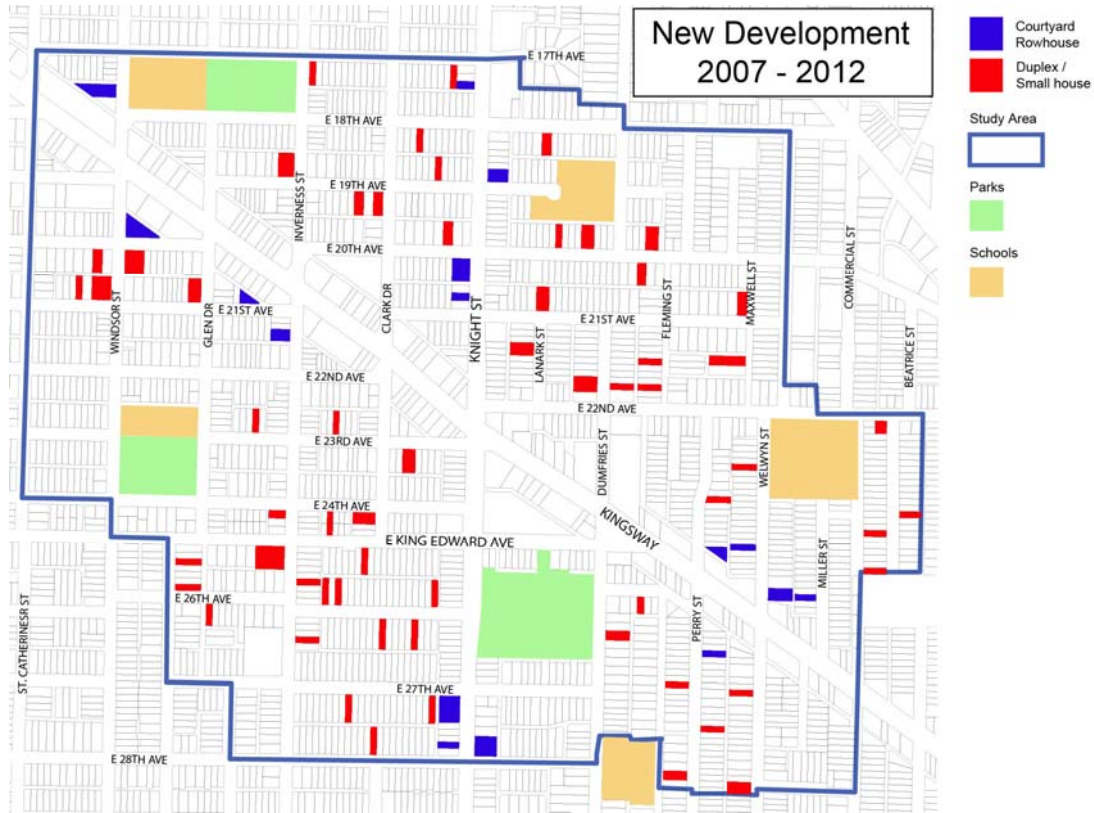


Table 10: New Development in the Study Area (2007 – 2012)

Development Permit Issued (Year)	Number of Developments	Site Area (sq. ft.)	Rate of Redevelopment	Number of Units	Units/acre	Units/hectare
2007	16	94052	1.4%	56	26	64
2008	12	86299	1.3%	36	18	45
2009	17	59429	0.9%	44	32	80
2010	7	37155	0.6%	19	22	55
2011	14	69188	1.0%	49	31	76
2012	15	69416	1.0%	58	36	90
All Years	81	415539	6.1%	262	27	68

Source: City of Vancouver

Note: The rate of redevelopment was calculated by dividing the development site area by the total site area of all sites zoned RT-10/RT-10N and RM-1/RM-1N.

Table 11: New Development in the Comparison Area (2007 – 2012)

Development Permit Issued (Year)	Number of Developments	Site Area (sq. ft.)	Rate of Redevelopment	Number of Units	Units/acre	Units/hectare
2007	17	66922	0.7%	24	16	39
2008	10	47433	0.5%	14	13	32
2009	6	26667	0.3%	10	16	40
2010	29	115241	1.3%	41	15	38
2011	14	57947	0.6%	25	19	46
2012	31	124242	1.4%	56	20	49
All Years	107	438452	4.8%	170	17	42

Source: City of Vancouver

Note: The rate of redevelopment was calculated by dividing the development site area by the total site area of all sites zoned RS-1 within the CA.

As shown in Tables 10 and 11, the total number of developments within the SA is slightly lower than the CA. However, the average rate of redevelopment, using site area, is higher for the SA than the CA (1.0% versus 0.8%). Also the total number of units approved in the SA is much higher than the CA (by approximately 35%). Consequently, the unit density is also much higher for the SA than the CA.

Table 12: New Development - Comparison Area (CA) versus Study Area (SA)

Variable	CA versus SA	Mean	Standard Deviation	T-test Significance
Site Area (sq. ft.)	CA	4097	849	0.000
	SA	5651	2724	
New Floor Area (sq. ft.)	CA	2868	594	0.000
	SA	4166	2973	
Average Unit Size (sq. ft.)	CA	2033	731	0.000
	SA	1375	403	
Number of Units per Development	CA	1.6	0.6	0.000
	SA	3.3	2.5	

Source: City of Vancouver

For the permit data, I conducted statistical analysis using a t-test comparing the means and standard deviations for the site area for each development, the average floor area per unit, the average floor area per development and the number of units per

development, for the SA and CA. The means and standard deviations are summarized in Table 12. The results indicate that there are a higher average number of units per development, a lower average unit floor area and a higher average floor area per development for new development in the SA for the years tested. These results are shown to be statistically significant for all variables.

Table 13: New Development by Type in the Study Area (2007 – 2012)

Development Type	Number of Developments
Small House and/or Duplex (includes small house infill development)	52
Courtyard Rowhouse	10
Character Retention with Infill	10
Single-family House	9
Total	81

Source: City of Vancouver

As shown in Table 13, the majority of new development within the SA was either small house or duplex development within the RT-10/RT-10N area (64% by development type). This is not surprising given that the RM-1/RM-1N area makes up only 23% of the total area that was rezoned. Nine single-family developments were approved in the SA with five in the RT-10/RT-10N area and four within the RM-1/RM-1N area. This type of development could be occurring in the area because it is a much faster and simpler process for gaining approval. The other development types are processed using a discretionary design review that takes longer and usually requires additional consultant fees.

Table 14: New Development by Type in the Comparison Area (2007 – 2012)

Development Type	Number of Developments
One-family dwelling	49
One-family dwelling with secondary suite	52
One-family dwelling with laneway house	1
One-family dwelling with laneway house and secondary suite	5
Total	107

Source: City of Vancouver

New development types in the CA, as summarized in Table 14, were fairly evenly divided between single-family houses with and without a secondary or basement suite. RS-1 zoning was amended in 2009 (during the analysis period) to allow development of laneway housing across the City and to allow additional density for more livable (less depressed with better light access) basement suites. Six developments were approved within the CA that included a laneway house.

Analysis of development permit data demonstrates that the development of new housing types in the SA has resulted in a higher rate of redevelopment than within the CA. This suggests that the introduction of new housing types within the SA has resulted in greater uptake by landowners and the development industry than the adjacent single-family CA, thus attracting additional housing to an area that has easy access to shops and amenities. As well, the new housing types result in higher unit densities, therefore making better overall use of the existing land base, while still providing family-friendly ground-oriented housing.

4.2.2. Photos of New Developments

The following photos show examples of new developments constructed in the SA. There are 23 new developments represented with 14 in the RT-10/RT-10N area and nine in the RM-1/RM-1N area. Of the new developments photographed, there are 11 examples of duplex and small house development, five character retention with infill development and seven courtyard rowhouse examples. Figure 9 is a map of the new developments shown in the photos. The numbers correspond to the numbers shown in the title of each photo.

Figure 9: Map of Photographed Developments

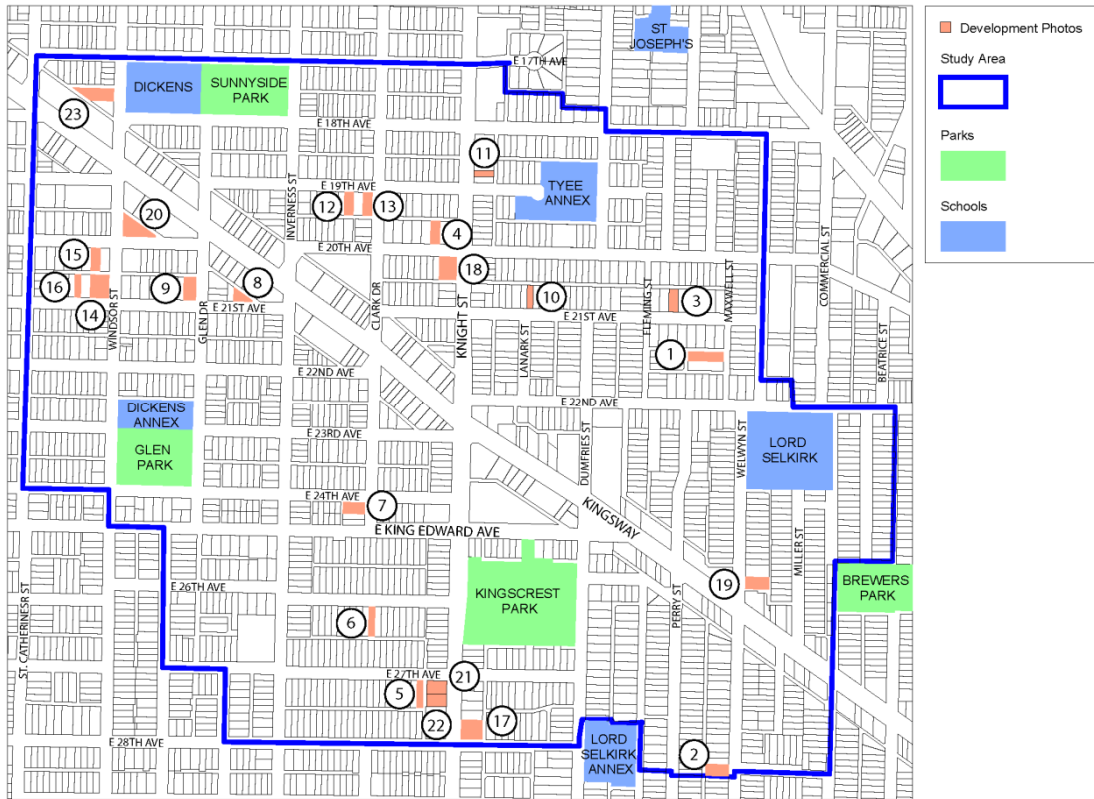


Figure 10: 3773 Maxwell Street – Duplex and Small Houses (1)



Notes: Redevelopment of a single large parcel with two two-storey single-family houses and two three-storey duplexes. Zoning = RT-10; Number of units = 6.
Source: City of Vancouver

Figure 11: 4449 Welwyn Street – Duplex and Infill (2)



Notes: Redevelopment of two parcels with two three-storey duplexes and one two-storey single-family house. Zoning = RT-10; Number of units = 5.
Source: City of Vancouver

Figure 12: 1621 East 21st Avenue – Character Retention and infill (3)



Notes: Redevelopment of a single parcel to retain and convert the existing character house into two units and develop an infill coach house at the rear of the site. Zoning = RT-10; Number of units = 3.
Source: City of Vancouver

Figure 13: 1375 East 20th Avenue – Character Retention and infill (4)



Notes: Redevelopment of a single parcel to retain and convert the existing character house into two units and develop an infill coach house at the rear of the site. Zoning = RT-10; Number of units = 3.
Source: City of Vancouver

Figure 14: 1366 East 27th Avenue – Duplex (5)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RT-10; Number of units = 2.
Source: City of Vancouver

Figure 15: 1304 East 26th Avenue – Duplex (6)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RT-10; Number of units = 2.
Source: City of Vancouver.

Figure 16: 1294 East 24th Avenue – Character Retention and Infill (7)



Notes: Redevelopment of two parcels to relocate and retain the existing character house and develop two two-storey single-family houses and one infill coach house on the balance of the site. Zoning = RT-10; Number of units = 4.
Source: City of Vancouver

Figure 17: 1139 East 21st Avenue – Duplex (8)



Notes: Redevelopment of a single parcel with one three-storey duplex. Zoning = RT-10; Number of units = 2.
Source: City of Vancouver.

Figure 18: 1099 East 21st Avenue – Duplex and Small House (9)



Notes: Redevelopment of two parcels with two two-storey single-family houses, one two-storey duplex and one two-storey coach house at the rear of the site. Zoning = RT-10; Number of units = 6.
Source: City of Vancouver

Figure 19: 1447 East 21st Avenue – Duplex (10)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RT-10; Number of units = 2.
Source: City of Vancouver.

Figure 20: 3482 Knight Street – Duplex (11)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RM-1N; Number of units = 2.
Source: City of Vancouver.

Figure 21: 1268 East 19th Avenue – Character Retention and Infill (12)



Notes: Redevelopment of a single parcel to retain and convert the existing character house into two units and develop an infill coach house at the rear of the site. Zoning = RT-10; Number of units = 3.
Source: City of Vancouver

Figure 22: 3507 Clark Drive – Character Retention and Infill (13)



Notes: Redevelopment of a single parcel to retain the existing character house and develop an infill single-family house at the rear of the site. Zoning = RT-10; Number of units = 2.
Source: Michelle McGuire

Figure 23: 3699 Windsor Street – Small Houses (14)



Notes: Redevelopment of two parcels with two two-storey duplexes, two two-storey single-family houses and one two-storey coach house at the rear of the site. Zoning = RT-10; Number of units = 7.
Source: Michelle McGuire

Figure 24: 988 East 20th Avenue – Duplex (15)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RT-10; Number of units = 2.
Source: Michelle McGuire.

Figure 25: 945 East 21st Avenue – Duplex (16)



Notes: Redevelopment of a single parcel with one two-storey duplex. Zoning = RT-10; Number of units = 2.
Source: Michelle McGuire.

Figure 26: 1401 East 28th Avenue – Courtyard Rowhouse (17)



Notes: Redevelopment of two parcels with 9 three-storey courtyard rowhouses. Zoning = RM-1N;
Number of units = 9.
Source: City of Vancouver.

Figure 27: 1390 East 20th Avenue – Courtyard Rowhouse (18)



Notes: Redevelopment of three parcels with 10 three-storey courtyard rowhouses. Zoning = RM-1N;
Number of units = 10.
Source: Michelle McGuire.

Figure 28: 4178 Welwyn Street – Courtyard Rowhouse (19)



Notes: Redevelopment of two parcels with 6 three-storey courtyard rowhouses. Zoning = RM-1;
Number of units = 6.
Source: Michelle McGuire.

Figure 29: 1001 East 20th Avenue – Courtyard Rowhouse (20)



Notes: Redevelopment of two parcels with 10 two-storey courtyard rowhouses. Zoning = RM-1;
Number of units = 10.
Source: Michelle McGuire.

Figure 30: 4317 Knight Street – Courtyard Rowhouse (21)



Notes: Redevelopment of two parcels with 6 three-storey courtyard rowhouses. Zoning = RM-1N;
Number of units = 6.
Source: Michelle McGuire.

Figure 31: 4341 Knight Street – Courtyard Rowhouse (22)



Notes: Redevelopment of two parcels with 6 three-storey courtyard rowhouses. Zoning = RM-1N;
Number of units = 6.
Source: Michelle McGuire.

Figure 32: 3341 Windsor Street – Courtyard Rowhouse (23)



Notes: Redevelopment of two parcels with 9 three-storey courtyard rowhouses. Zoning = RM-1;
Number of units = 9.
Source: Michelle McGuire.

The variety of developments shown in the photos give a sense of the type of developments approved in the area and their overall fit alongside existing single-family housing within the SA. The height of the approved developments is similar to existing adjacent development (two and a half up to three storeys) and the overall density is in keeping with surrounding existing development as well. This allows these new developments to be compatible with existing adjacent single-family housing and to fit within the overall pattern of development in a neighbourly way over time. Further the entire area is able to be redeveloped at higher densities, incrementally without rapid, wide-scale displacement of existing buildings and people.

4.3. Interview with Planners

I interviewed two planners at the City of Vancouver who were integral to developing and implementing the K&K Plan. I asked five general questions that were intended to gain insight into the general intent and goals of the K&K Plan as well as the perceived successes or lessons learned from the Plan. Both planners were generous with their time and very knowledgeable about the central theme of my research question. The information provided was invaluable for my research and provides many further opportunities for future study.

With respect to the general intent and overall goals for the K&K Plan both planners indicated that one central goal of the Plan was to increase the diversity of housing types in close proximity to transit and an existing shopping area. The increased diversity of housing types focussed on opportunities for home ownership. Specifically for the RT-10/RT-10N zone the intention was to introduce new housing types that provided many of the attributes of single-family housing including front doors, private outdoor space and larger units with two or more bedrooms. As well, these new housing types were assumed to provide a more affordable home ownership option for people than adjacent single-family housing. However, this relative affordability was not a key rationale presented for introducing the new housing types (i.e. it was a more obvious and assumed outcome; not a key political or community rationale supporting the change).

Overall both planners felt that the K&K Plan could be characterized as successful. Specifically, they referenced the success of introducing new types of housing that were not available, at that time, in any existing zone in Vancouver. As well, part of the success of the K&K Plan was attributed to the architectural testing that had been done for the new housing types and how this helped to achieve new housing that respected the existing single-family context and allowed for smaller lot consolidations and stand-alone development. The relatively small study area size was also referenced as contributing to the success of the K&K Plan, as a manageable, smaller study area.

Although the K&K Plan was described as generally successful, subsequent changes that occurred in 2009 to allow laneway housing (LWH) across the City, have overshadowed the results of introducing these new housing types. With LWH and

increased density for secondary suites, the entire landscape or basis for intensifying existing single-family areas changed. Because the overall density that is possible in RS-1 and RS-5 zoned areas (represents the majority of the single-family land base in Vancouver) is higher than all RT or duplex zoned sites across the City, single-family zoning outstrips most of the areas that are currently zoned for duplex development in terms of development density. This presents an opportunity to go back to the RT-10/RT-10N area to introduce the potential for more widespread development of LWH and/or infill housing. Basically the idea would be to add density to these new zones to bring them above the permitted density than surrounding single-family zoned areas with the introduction of LWH and secondary suites.

From a public process perspective, the K&K Plan was also seen as a success, in that, when the new zones were brought in there was wide-spread political and community support for the proposed changes. This was in large part due to the relationship formed between staff and the community-based working group that became advocates for the K&K Plan. The working group worked very closely with staff on developing the zones and there was also strong political support for the program including having one Councillor that lived in and was an advocate for planning in the neighbourhood. In part, the process was also a success due to the strict adherence to the K&K Plan's terms of reference. This was not the case in the subsequent Neighbourhood Centre Plan process for Norquay Village, where the terms of reference changed multiple times during the process and the relationship with the working group was not as positive or collaborative. As noted previously, the "EcoDensity" initiative, aimed at speeding up planning for accommodating growth in Vancouver's single-family areas, has been cited as a catalyst for neighbourhood resistance to the Norquay Village Neighbourhood Centre Plan and other subsequent planning efforts (Rosol, 2013).

One key factor that was mentioned in relation to the initial success of the public process for the K&K Plan was the King Edward Village site which was the site of the former Safeway grocery store in the neighbourhood. Safeway Canada had put a covenant on the site that would not allow another grocery store to locate there. This had left the neighbourhood without a grocery store and subsequently the site had become home to a used goods store that was known for selling stolen merchandise. When the rezoning application was approved for a large development that included a grocery store

on this site, neighbourhood representatives applauded at the public hearing (not a common occurrence at public hearings!).

With respect to potential limitations of the K&K Plan or possible areas for improvement, the fact that the Plan did not propose intensification for commercial sites on Kingsway was seen as a missed opportunity to revitalize the shopping area. Also, although the K&K Plan implemented public realm improvements to Kingsway to improve the street for pedestrians, improved linkages across the neighbourhood could have been identified for pedestrian and cyclist routes as was done in the subsequent Norquay Village Neighbourhood Centre Plan. Another area for improvement was the opportunity for allowing secondary suites in the new housing types. This was also done for the Norquay Village Neighbourhood Centre Plan zones.

In response to the question about whether the K&K Plan could be used for other single-family areas the planners answered with a qualified yes. Specifically one planner felt that it would be likely that both new zones could be used in any single-family area now (if they included modifications to add the potential for LWH, additional density and secondary suites). It was felt that the implementation of citywide planning to allow additional density for secondary suites and introduce LWH, had tempered community reaction to this type of relatively modest change to single-family areas. Specifically the RT-10/RT-10N zones could potentially be applied in all single-family areas and accepted by neighbourhoods due to the housing type's compatibility with existing single-family housing. This type of change would likely not have been politically palatable in the past; however, the planners felt that there might now be qualified neighbourhood support for citywide changes such as this. This would introduce additional opportunities for ground-oriented housing that was compatible with existing single-family housing and that allowed for more affordable family-friendly ground-oriented housing. Also, the strategy of providing the denser, townhouse zone (RM-1/RM-1N), as a buffer between the higher density shopping street and the surrounding lower density RT-10/RT-10N area was seen as successful and thought to be well suited for use in other single-family areas that were adjacent to shopping areas.

Additional insights into planning efforts for single-family areas were also discussed. Both planners felt that, generally people still place a very high value on

existing single-family housing and neighbourhood character and planning for these areas needs to take care regarding widespread destabilization of this community value. This would include careful analysis of potential transitions from new housing types to existing, assuming that not all properties will change, and that the new housing types could be sitting next to older houses in perpetuity. As well the planners felt that denser housing types, like the stacked townhouse, should not be spread over too wide of an area as they do not necessarily provide as neighbourly of a transition to existing single-family housing in terms of their height and density. If denser zones that do not provide good transitions are exported too widely it was felt that, negative (non-neighbourly) transitions would exist for much longer.

One planner discussed the benefits of approaching planning in single-family areas on a citywide level instead of a neighbourhood-by-neighbourhood basis. In order to achieve this, a variety of zones would need to be developed catered to specific neighbourhood conditions. A citywide approach could allow for more principle-based planning that would provide sensitive transitions to existing housing to retain the highly-valued single-family character of these existing neighbourhoods while still introducing a significant amount of higher density ground-oriented housing.

Overall the interview with these two City planners was very illuminating with the perspective that studying the K&K Plan in isolation was challenging. The introduction of additional density for LWH and secondary suites in single-family area across Vancouver changed the landscape for planning in these areas in Vancouver. However, investigation into the results of the new zones could be useful for exportation to citywide planning in single-family areas.

Chapter 5. Conclusions

Attempts to densify single-family neighbourhoods are often resisted by local property owners and seen to be politically challenging. Policies intended to bring about intensification of existing single-family housing areas in Vancouver have either not been implemented or have met with widespread resistance from neighbourhoods. The K&K Plan resulted in new zoning for an East Vancouver neighbourhood, enabling the construction of new forms of ground-oriented housing intended to provide housing variety to allow people to stay within their community as their housing needs change. These changes were brought in with little community resistance and a degree of neighbourhood support.

The research examined development permit and census data to evaluate outcomes of introducing the new zones in the K&K Plan. These data were used to determine if the rate of redevelopment and resultant development density within the K&K Plan area is higher than another comparable single-family area and whether census data indicates if additional families with children and seniors have been attracted to the area. To supplement the analysis of the secondary data sources, I interviewed two policy planners who were responsible for the K&K Plan to investigate their perspective on the Plan's relative success and limitations. I also used photographs of a sample of new housing projects to illustrate and describe the new housing that has been developed in the SA.

Examination of development permit data reveals that, although the pace of development within the neighbourhood centre is only slightly greater than an adjacent single-family area, the resultant new developments provide greater variety of housing and higher density of units for the existing land base. Further, photographic analysis suggests that the new housing types are generally well integrated into the existing neighbourhood, allowing the area to intensify and redevelop in a dispersed, more organic way over time.

The variety of developments shown in the photographs give a sense of the type of developments approved in the area and their overall fit beside existing single-family housing within the SA. The height of the approved developments is similar to existing adjacent development (two to three storeys) and the overall density is in keeping with surrounding existing development as well. This sympathetic design and scale allows these new developments to be compatible with existing adjacent single-family housing and to fit within the overall pattern of development in a neighbourly way over time. Further, the entire area is able to be redeveloped at higher densities, incrementally without rapid wide-scale displacement of existing housing and people.

Census data analysis completed for this research is not entirely conclusive for answering the demographic dimension of the research question. Census data analysis indicates that there are more small children and younger adults in the SA compared to an adjacent single-family CA in 2011, five years after new ground-oriented multi-family housing was permitted in the SA. Although this variation could suggest that the new housing types have resulted in more families with children living in the SA the research is not conclusive and this demographic change could be the result of other factors. The number of seniors living in the area did not increase compared to the adjacent single-family CA. This analysis could be repeated in future to examine demographic data to evaluate potential effects of additional development over time within the neighbourhood.

The interview with the two key policy planners was instrumental in rounding out this research in order to provide additional insight into planning efforts more generally for single-family areas. Both planners felt that, generally people still place a very high value on existing single-family housing and neighbourhood character and planning efforts need to be very careful about widespread destabilization of this community value. Their advice was that planning programs aiming to densify and bring in new housing types need to include careful analysis of potential transitions from new housing types to existing housing such as was done for the K&K Plan. This approach assumes that not all properties will change, and that the new housing types could be sitting next to older houses in perpetuity. Both planners felt that the planning program could be characterised as generally successful. However, due to the introduction of widespread changes to the majority of single-family area in Vancouver, they felt that the entire landscape for this type of planning had changed and it was difficult to consider the K&K

Plan in isolation. One conclusion from this was the potential benefit of approaching planning in single-family areas on a citywide scope instead of on a neighbourhood-by-neighbourhood basis. A citywide approach could allow for more principle-based planning that would provide sensitive transitions to existing housing to retain the highly-valued single-family character of these existing neighbourhoods while introducing higher density ground-oriented housing equitably across the city's neighbourhoods.

Examining the results from this planning process, using development permit and photographic analysis, suggests that the K&K Plan could be characterized as a NU and SG planning approach. As well, the intent of the neighbourhood centres planning program, with its emphasis on sensitive infill development intended to gradually densify and enhance neighbourhoods over time, with new housing that includes front porches and an active interface with the street, is in keeping with a NU approach to planning. Similarly, with its intent to redevelop and intensify an existing developed area that is close to shopping, transit and amenities, the program could also be considered a SG approach to planning.

The housing produced through the redevelopment of this existing developed area for the K&K Plan versus a greenfield site has yielded positive results due to the well distributed and smaller scale infrastructure that is available, enabling the incremental development of a higher density mixed-use neighbourhood that is close to transit, services and amenities. The K&K Plan could be described as supportive of the main principles for both SG and NU planning theories, including respecting local character and promoting walkability, connectivity, a mix of housing types, increased densities, and making better use of existing infrastructure and investment in an already developed area. This demonstrates how NU and SG principles can be used successfully for planning within a city neighbourhood versus a greenfield site. Due to these characteristics that are supportive of the main principles of NU and SG, the K&K Plan could be used to help inform future efforts to provide a unified set of planning principles that would build on the success of this and other planning efforts.

The positive neighbourhood response associated with the K&K Plan has been attributed to the consensus building efforts of CityPlan and the subsequent Community Visions. Although one of the SG principles is "encourage community and stakeholder

collaboration...”, a revised unified planning theory would need to further address this important dimension in order to provide the basis for foundational principles that could be used for other planning efforts. This key element for a revised set of planning principles needs to be addressed within its intent, recognizing that without a degree of neighbourhood support, planning efforts to change established residential neighbourhoods will not reach their full potential or could be scrapped altogether.

5.1. Future Research

While my research did result in conclusions regarding the K&K Plan, the size of the SA was somewhat limited and the Neighbourhood Centres program has not recently been replicated in subsequent neighbourhoods in Vancouver. As Vancouver struggles with the attempts to densify single-family neighbourhoods, the need to better understand the tangible results including density and demographic analysis from previous efforts will be important.

A first suggestion for future research would be to repeat or expand the demographic analysis completed using census data 10 years further out. Another interesting way to build on the findings of this research would be to conduct a comparison between the K&K Plan and the subsequent Norquay Village Neighbourhood Centre Plan. Another area for study could be a comparison of the housing types produced through the K&K Plan and the citywide LWH initiative to consider the results in terms of density and demographics. This type of study could compare and contrast a neighbourhood-based planning program against a citywide initiative to help gain a better understanding of the relative benefits of each of these approaches. One recommendation for another type of data that could be gathered and analysed with any of these suggested areas of research would be conducting post-occupancy interviews with residents of new housing and interviews with residential developers.

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Appendix A.

Ethics Exemption Letter



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Exemption to Research Ethics Review

12 December 2013

RE: Ethics Application 2013s0728

Michelle McGuire
Urban Studies
Simon Fraser University

In accordance with our phone correspondence of 2013 December 12 and the Study Details submitted for the above noted study, in which you describe a project that complies with the Tri Council Policy Statement as shown below, please take this correspondence as exemption from the requirements of Research Ethics Review.

Under the Tri Council Policy Statement studies are exempt from institutional review when they involve the following:

- 1) "Research that relies exclusively on publicly available information that is legally accessible to the public and appropriately protected by law and/or it is publicly accessible and there is no reasonable expectation of privacy" (Article 2.2).

The primary data sources for your study are Census Data and Development Permit data, both of which are available to the public (albeit for a fee) and appropriately protected by law.

- 2) "In some cases, research may involve interaction with individuals who are not themselves the focus of the research in order to obtain information... This is distinct from situations where individuals are considered participants because they are themselves the focus of the research" (Article 2.1).

Your proposed informational interview with [REDACTED] meets this definition, given that you are asking technical questions about the Kingsway and Knight Neighbourhood Centre program and her professional (as opposed to personal) views on the program's development, implementation and outcomes.

Sincerely,

