

**The Governance and Implementation of Smart Growth Urban Intensification
Through Stakeholder Engagement**

By

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A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in partial
fulfillment of the requirements for the degree of

Master of Arts

In

Sustainable Energy Policy

Carleton University

Ottawa, Ontario

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Abstract

This research will investigate how principles of urban sustainability (smart growth) can be implemented in the City of Ottawa to reduce greenhouse gas emissions and energy use. The research will focus on local citizen engagement as a necessary precursor to the governance and implementation of smart growth policies. The research found that there are policy and process barriers to the meaningful implementation of urban sustainability policies. However, there is also a strong base of informed and engaged citizens who are ready and willing to play a role in the policy development process. This thesis uses stakeholder analysis theory to investigate who the key players are, what opportunities and barriers they face and how the City of Ottawa can coalesce these groups to create effective and leading urban sustainability policies.

Acknowledgements

Writing my acknowledgements section is a bit surreal as I am quite shocked that after 18 months, this research is complete. My sincere thanks goes out to anyone and everyone who has cheered me on (or consoled me), throughout this process. In particular, to my research supervisor Christopher Stoney and my thesis committee members, Glen Toner and Robert Hilton for their unwavering support and invaluable insights.

I would also like to express my deepest gratitude to all 16 of my research participants who provided me with the motivation to complete this research. The dedication and passion they bring to their communities is unparalleled and extremely contagious. This research and the progress that the City of Ottawa is making on urban sustainability is only possible because of them.

Nancy Cruz

November, 2015

This thesis is dedicated to my generation of up-and-coming community leaders. May we be as passionate, engaged and stubborn as our predecessors.

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1. Introduction

In 2014, a poll from the Environics Institute and the David Suzuki Foundation found that 63% of Canadians believed that human activities were the primary cause of climate change – a percentage that has steadily increased since 2010 (2014). While it is not clear to what degree this public opinion is driven by an increase in extreme weather events in Canada, one can infer that Canadians en masse are recognizing the impact that their lifestyles have on our climate. As explained by The European Environment Agency, human activities, dating back to the beginning of the pre-industrial era, have necessitated the large scale burning of fossil fuels. These emissions in turn, impact the properties and quantities of greenhouse gases and aerosols in the atmosphere. This ultimately alters the atmosphere's incoming (solar) and outgoing (thermal) radiation processes, which result in either a warming or cooling of the climate system (2014). Put simply, humans burn fossil fuels whenever they use electricity (assuming the electricity is not generated from renewables), or anytime they use a non-electric vehicle. The societal comforts and conveniences our society has evolved to expect, are ironically threatening our current and future standard of living. To reiterate, a growing number of Canadians understand that they are contributing to climate change, but the path forward is less clear. That is to say, now that human activities have been identified as a major climate change culprit, how do we reorganize our electricity systems, living patterns and ultimately, societal expectations?

The aim of this paper is not to argue for the fundamental restructuring of our industrial and economic systems that propagate the burning of fossil fuels. Instead, this research will focus on actions that can be and have been taken at a smaller scale but that have significant and positive impacts for both the climate and our society as a whole.

The climate change solution that this research will focus on is smart growth planning

(often synonymous with new urbanism or urban sustainability). The American Planning Association (2012) defines the concept of smart growth as an urban planning method that promotes “efficient and sustainable land development, incorporates redevelopment patterns that optimize prior infrastructure investments, and consumes less land that is otherwise available for agriculture, open space, natural systems, and rural lifestyles.” Policies to achieve these goals include “compact, transit accessible, pedestrian-orientated, mixed use development patterns and land reuse” (American Planning Association, 2012). Smart growth communities are ones that allow for reduced use of vehicles, promote transit, cycling and walking and use less land for human activities by increasing density. The environmental benefits of smart growth are evident when comparing the greenhouse gas (GHG) emissions of suburban and urban neighbourhoods. A household located in a central area such as one in downtown Toronto, produces approximately 2500 kg of GHG emissions compared to 7000 kg for a suburban one (IBI Group, 2006). The main driver of higher emissions in this study was an increased use of personal vehicles by suburban residents. Furthermore, the implications of these emissions are substantial since it is estimated that, two thirds of Canadians live in suburban-like neighbourhoods (University of Waterloo Atlas of Suburbanisms, 2012).

The environmental benefits of smart growth cities are increasingly studied and documented but these solutions do not come without controversy or skepticism. The design of smart growth communities chiefly requires the prioritization and construction of medium to high density, transit and pedestrian orientated neighbourhoods (usually urban), over the further development of suburban areas. These smart growth neighbourhoods can be socially controversial (nimby-ism) and politically and economically difficult (zoning by-laws and a political system that favours and incentivizes suburbs). Moreover, smart growth communities are

usually associated with urban living, but downtown development isn't a necessary precursor to smart growth as suburban communities can integrate some of the principles described above. In fact, as will be discussed in Section 4.2, suburban communities often symbolize the front lines of cities' debates over development. The greening of existing suburban communities (e.g. improving access to rapid transit, connecting suburban communities to existing bike paths) can complement urban smart growth development plans to amplify efforts. Overall, despite the controversies surrounding smart growth development, there is a significant amount of flexibility for communities to develop policy solutions unique to their context.

This research will use the City of Ottawa as a case study to demonstrate how difficult it can be to meaningfully incorporate smart growth principles into city planning policies. City politics and clashes with citizen groups can often gridlock the urban planning process and make it difficult to proceed with planning initiatives. Given the interconnected nature of smart growth planning, multiple facets of a city must work together to ensure its coordinated implementation – therefore participation and buy in is required across societal groups.

In contrast, new urban development proposals (a key component of smart growth), in Ottawa are often debated in a highly politicized and contentious environment where city councilors and planning staff have previously been accused of being more responsive to concerns from developers than they are to local residents (Reevelly, 2012). The strained relationship between planning stakeholders is further complicated by governance and political realities at the municipal level. These include urban, suburban and rural divides as a result of amalgamation, divides between the Planning Department and City Council and institutionally embedded financial incentives favouring suburban sprawl. As a result of the competing priorities between the City, developers and citizens, the development process can be mired in controversy,

opposition and heated debate. While the City of Ottawa has formally recognized the importance of smart growth urban planning in the 2014 Air Quality and Climate Change Management Plan (AQCCMP) (2014a, 14), governance and political barriers represent significant challenges to the implementation of smart growth. This research will therefore explore the governance, regulatory and political considerations that the City must consider in implementing smart growth policies. In particular, this research will focus on the implementation of smart growth policies in urban Ottawa (inside the Greenbelt). While the literature review will cover the trends and impacts of suburban sprawl, As a part of the implementation process, it is ideal to conduct a situation analysis in advance and identify any potential challenges or opportunities associated with smart growth policy implementation.

Four main thematic areas will be explored through this research to investigate the two overarching research questions and three hypotheses.

RQ1: With climate change as the main driver, how can smart growth planning be used in Ottawa to reduce greenhouse gas emissions and energy use?

RQ2: What are the barriers and opportunities for the implementation of smart growth in Ottawa, specifically intensification and TOD according to local stakeholders?

Research Hypotheses

The data collection process aims to explore local urban planning stakeholders' experiences, perceptions and knowledge of the land use planning process and their likelihood of supporting smart growth policies. The research will subsequently gauge opportunities and barriers that the city may face in implementing smart growth policies. This will be investigated through three key hypotheses:

H1: How do local resident stakeholders perceive the notion/process of densification?

H0: Local citizen stakeholders perceive both the notion and process of densification negatively.

H2: Do stakeholders make the connection between sustainability and smart growth density? (Is this a priority?)

H0: Local citizen stakeholders who participate in the development process are generally aware of the linkages between sustainability and smart growth density but the two are regarded as separate, not complementary objectives.

H3: Are stakeholders aware of existing smart growth plans/policies, particularly in the Air Quality and Climate Change Management Plan? Do they support these policies?

H0: Local stakeholders generally have a low level of awareness about specific smart growth policies in their neighbourhoods (i.e. intensification targets). Residents are more likely to support these targets in principle as opposed to specific plans related to their neighbourhood.

While most of the interview subjects are currently, or have previously been public and vocal about their opinions regarding urban development and smart growth planning, it is a rare occasion when all these stakeholder groups are able to freely speak their opinions without concern for political repercussions. Moreover, this research offers the unique opportunity for the opinions of each group to be equally considered and assessed by a neutral third party. The aim of this analysis ultimately goes beyond the two research questions and three hypotheses. The intention of this research is to provide the Ottawa urban planning community with an opportunity to better understand each other and to create an opportunity for constructive dialogue.

Thesis

This paper aims to describe the current relationship between local citizen stakeholders and the concept of smart-growth planning. Through an analysis of existing smart growth policies, this research will argue that the implementation of smart growth policies by the City of

Ottawa could reduce greenhouse gas emissions and energy use, both priority areas in Ottawa's Air Quality and Climate Change Management Plan (City of Ottawa, 2014a, p. 32). In addition, the argument will be made that the City must better address the barriers to smart growth implementation as identified by key local stakeholders. Existing perceptions and experiences of local citizen stakeholders must be investigated in order to determine how to best implement smart growth policies with the involvement and support of key stakeholders. Should these negative perceptions or misconceptions not be addressed, the implementation of municipal smart growth policies will be difficult, if not impossible. Ultimately this paper will argue that smart growth planning in the City of Ottawa represents an opportunity not just to brand the City as a leader in climate change efforts but, through the implementation of smart growth policies, Ottawa could become a model for citizen engagement and democratic participation in the policy process.

2. Climate Change Policy and Urban Sustainability

This section will review the scientific and policy research related to how cities contribute to climate change. Policies like smart growth planning can have significant impacts on the environmental performance of a city but, this section will investigate how policy coordination at all three levels of Canadian government is imperative to the long term success of broader urban sustainability efforts.

2.1 Cities as Climate Change Hubs

For decades, supranational global governance bodies have created climate change policies. The United Nations in particular has led international climate change policies for decades. However, given the unique challenges that face different regions, localized solutions should be developed and complemented by national and international policy frameworks. Cities

are key battleground for climate change given their significant land-use and transportation impacts. According to the United Nations, cities worldwide emit approximately 70 percent of greenhouse gases (GHGs) while occupying just 2 percent of land (United Nations, 2011). The emissions intensity of cities can be attributed to a combination of concentrated motor vehicle usage, energy demand from residents and the loss of green space. These three factors will be assessed in further detail but it is important to acknowledge that the underlying factor is a strong social construct that pits personal convenience in direct opposition to environmental conservation. The following section will assess how Canadian cities are contributing to climate change through their built form but, ultimately, individual preferences and demand are the driving force behind unsustainable cities and lifestyles. Individual preferences and cultural norms will be discussed in conjunction with data and long term trends to illustrate how imperative it is for smart growth planning to address both environmental targets and community lifestyles.

2.2 Emissions by Canadian Cities

This analysis will focus on regional and city level examples mainly in Ontario. Examples from other Canadian cities in British Columbia and Alberta will be discussed for comparative purposes. Furthermore, this section will offer a comparative context for Section 3, which details the City of Ottawa's emissions profile.

Cities are important jurisdictions in climate change policy given the concentration of population and industry activities in urban centers (World Health Organization, 2014). In Canada, over two-thirds of the Canadian population lives in a census metropolitan area (CMA). A CMA is defined as an "area consisting of one or more neighbouring municipalities situated around a core. A census metropolitan area must have a total population of at least 100,000 of which 50,000 or more live in the core" (Statistics Canada, 2011). As well, from 2012 to 2013,

the populations of CMAs grew faster than non-CMA areas (1.5% and 0.3% respectively) (Statistics Canada, 2014). Three cities, Toronto, Vancouver and Montreal, in particular are home to over 35% of the entire Canadian population (Statistics Canada, 2014). As a result of the population concentration in urban centers, these areas have come to represent significant hubs of greenhouse gas emissions. Table 1 lists the various energy and emissions profiles of these three key Canadian cities.

Table 1: Energy and Emissions Profiles: Vancouver, Montreal, Toronto

City	Total GHG Emissions (CO₂e)	% of Emissions = Transportation	% of Emissions = Buildings	% of Emissions = Other
Vancouver	2.74 million tonnes CO ₂ e (2008)	37%	55%	8% (waste)
Island of Montreal	13.7 million tonnes CO ₂ e (2003)	49%	20% (residential)	31% (waste and industry)
City of Toronto	24.4 million tonnes of CO ₂ e (2004)	35%	25% (residential)	33% (commercial + industry), 4% (waste)

Data from Pembina Institute’s Coolest Cities Report – Montreal (2010a), Toronto (2010b),

Vancouver (2010c).

As outlined in this table, the City of Toronto far outpaces GHG emissions compared to the other two major metropolitan areas. While there are key inferences that can be made from this data, it is not possible to make a direct comparison with this data alone as each city measures their emissions categories slightly differently. For example, Vancouver measures emissions from corporate and residential buildings combined while Toronto and Montreal data separates these two categories. As well, Toronto's transportation emissions exclude emissions from commercial and industry transportation fleets (Pembina Institute, 2010b). Despite differences in data collection and analysis, there is a pattern of transportation emissions constituting one of the most significant sources of GHG emission for these three cities. As well, Pembina cites a pattern across all major metropolitan areas that results in high, if not the highest amount of population growth occurring in suburban neighbourhoods – neighbourhoods that ultimately promote increased reliance on personal vehicles for daily transportation. Therefore, urban design to decrease vehicle reliance features prominently in the climate change or smart growth planning objectives of each city (Pembina Institute, 2010b). In Vancouver for example (the only city where transportation emissions did not represent the largest percentage of emissions), the city had the highest percentage of commuters travelling by bike or walking (Pembina Institute, 2011c).

Another key area of concern for Canadian cities is emissions from buildings, both

residential and commercial. For example, as outlined in Table 1, buildings constitute half of the Vancouver's emissions. This is as a result of the electricity and natural gas used to power buildings as well as a stock of older houses in Vancouver that are not energy efficient (City of Vancouver, 2014a).

These three cities have different emissions profiles, which can be traced back to differences in urban design, economies and weather patterns. This further illustrates why climate change policy design cannot take a top down approach since emissions profiles can vary so significantly within one country. Instead, creating an analysis framework that is malleable depending on the city will assist with identifying GHG emissions sources and impacts. The United Nations defines five key factors that impact a city's total GHG emissions:

1. Geography and weather patterns influence energy demand for lighting, cooling and heating.
2. Population size determines the volume of energy demand required.
3. Urban design determines the lifestyle patterns of residents (i.e. denser communities are more conducive to alternative modes of transportation).
4. The economic profile of a city determines the types of industries and activities that drive local business.
5. Demographics of citizens determine consumption and lifestyle patterns. (United Nations, 2011).

These factors provide a framework for determining a city's potential for GHG emissions. It is important to note that of all the factors outlined above, the only factor that can be significantly controlled by a city is urban design and urban form. This emphasizes the need to consider urban planning as a key tool for climate change action.

2.3 Climate Change Risks in Cities

As discussed in the previous section, cities across Canada have significant emissions profiles as a result of transportation patterns and energy demand. The three cities discussed above have all developed climate change targets and/or action plans, which ultimately focus on reaching a low carbon state. However, for comparative purposes, it is useful to investigate worst-case scenarios. Research is available to describe the type of impacts countries and cities can expect should emissions continue business as usual (BAU). These scenarios also provide governments and citizens worldwide with an impetus to move forward with strong climate change action plans. Climate change risks in Canada specifically will be discussed in the following section. This section however is intended to illustrate the international research and warnings coming from leading international institutions. Climate change planning done at the municipal level is ultimately works in conjunction and in support of these international targets.

The World Bank is one of the leading supranational organizations cautioning that the impacts of climate change will be felt in the form of severe weather events, temperature and precipitation changes and variability in water levels. Moreover, these impacts will likely increase in frequency and severity if current emissions trajectories continue at business as usual levels (World Bank, 2010, p. 4). It is estimated that by 2030, 59% of the world's population will live in urban areas, particularly as a result of urbanization trends in developing countries (United

Nations, 2011, p. 1). Should these newly urbanized areas adopt lifestyles and urban design patterns similar to those of Canada, emissions profiles will likely rise in tandem with urban population increases. Therefore, climate change work being done by municipalities can serve as important and useful case studies for newly urbanized cities. But, this international knowledge sharing also highlights the need for coordinated international action. Climate gains made in one country can be offset by losses in another country. The climate system does not recognize borders and countries cannot isolate themselves from the impact of climate change given the cyclical and interconnected nature of the climate system. Therefore, a discussion of climate change planning at the municipal level should consider the international context.

For decades, climate change policy was largely relegated to international government bodies such as the United Nations. International negotiations and agreements were used as benchmarks for policy success. In order to understand the current international policy environment, a brief historical overview will be provided.

Formal international negotiations began with the ratification of the 1992 United Nations Framework Convention on Climate Change (UNFCCC), which resulted in a series of Conference of the Parties (COP) meetings attended by UNFCCC signatories (David Suzuki Foundation, 2011). The UNFCCC is intended to provide a legal structure and forum for international negotiations on climate change. But, it does not have the jurisdiction to set legally binding emissions reduction targets or country specific legislation. Instead, the UNFCCC's ratification represented an unprecedented international agreement that publicly acknowledged the importance of climate change. The document emphasizes the importance to keep "greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system" (David Suzuki Foundation, 2011). Subsequent negotiations produced specific targets and reduction

agreements (including the Montreal Protocol, Kyoto Protocol and the 2012 Doha Amendment) (United Nations, 2014). Clarke (2008) identified the UNFCCC's major value as a form of "deliberative intergovernmentalism" which relies on the creation of international norms and to enforce otherwise non-binding legislation. As Clarke notes, this is difficult, as there may not exist consensus on climate change priorities across countries. This lack of enforcement power has negated and undermined real progress on international targets (Jacob, 2010; Patchell and Hayter, 2013; Wyatt, 2011).

While the effectiveness of international targets has been at times questionable, since the UNFCCC's ratification, there has been a subsequent rising profile of climate change in the public eye. In September 2014, the Intergovernmental Panel on Climate Change released its fifth assessment report (AR5) on the state of climate change. Held in Stockholm, Sweden, the news conference announcing the latest report called on the international community to put in place serious measures in response to the projected impacts of climate change. What differed between the news coverage for AR5 and the previous IPCC reports was that AR5 was flagged for its use of noticeably stronger language to describe the potential impacts of climate change and the likelihood that human activities contributed to these impacts. The IPCC's AR5 "Summary for Policy Makers" begins with a strong assertion that the "warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia" (IPCC, 2013, 4). The strong tone used in this opening line follows through the rest of the report. The language used in crafting this document is of particular interest considering the highly bureaucratic and politicized process involved in approving the final IPCC report. The review process for AR5 included three separate stages where draft documents were open for review from subject matter experts and governments. AR5 received 136,706 total comments

from experts and governments throughout the review process (IPCC, 2014). This means that hundreds of experts collectively agreed to emphasize and communicate a sense of urgency and certainty throughout the report.

Some of the most pertinent findings from the report include virtual certainty that the upper ocean has warmed between 1971 and 2010, a “high confidence” that Arctic sea ice and snow cover in the Northern hemisphere has decreased and that sea level rise has increased. Of particular interest to this research are the bleak findings related to greenhouse gas emissions. Specifically, “atmospheric concentrations of CO₂, methane and nitrous oxide have increased to levels unprecedented in at least the last 800,000 years” (IPCC, 2013). Furthermore, the report cites “fossil fuel emissions and net land use change emissions” as the two primary drivers of an increase in carbon dioxide by 40% since the preindustrial era (IPCC, 2013).

While the impacts of climate change will play out differently in different cities, it is evident that cities’ concentration of social, financial, human and environmental capital is at risk. Moreover, as populations of people and capital continue to increase in urban centers, the potential severity of these risks will amplify. The costs associated with climate change related impacts are also significant. In his now infamous economic review of climate change, Sir Nicolas Stern estimated that if left unmitigated, the cost of climate change impacts worldwide would be equivalent to losing between five to twenty percent of global GDP each year depending on the severity of the impacts (Stern, 2005). All in all, local solutions and policies must be cognoscente of the broader global context and international imperatives for meaningful action.

2.4 Climate Change in Canada

The global level climate change impacts identified by the IPCC offer a solid context to discuss Canada’s contributions to climate change. Countrywide contributions to climate change

are often quantified by assessing greenhouse gas (GHG) emissions from a country's combined industries and activities. Measuring Canadian emissions allows for comparisons to other countries' emissions as well as the projected impacts of these emissions. As a signatory to the United Nations Framework Convention on Climate Change, Canada is required to report annual GHG emissions. Environment Canada produces an annual National Inventory Report (NIR) using the most recent data available to calculate emissions. The 2014 report uses data from 2012. The report tracks emissions according to the methods outlined by the IPCC. There are six mandated sector categories that are reported on in the report: transportation; industry; buildings; electricity; agriculture; and waste.

The 2014 report concludes that increased energy demand and use in Canada has resulted in an increase of GHG emissions nationwide. Between 1990 and 2012, there has been a 21% growth in greenhouse gas emissions related to energy extraction, production, refining and use. This includes commercial, institutional, and transportation sectors (Environment Canada, 2014, 5). As well, fossil fuel production and refining and mining, oil and gas production have seen an increase in emissions outputs.

A second pertinent finding from the data is that according to the long-term trends, there has been a stabilization and recent decrease in emissions from the residential energy sector. Between 1990 and 2012, there was a decrease in emissions output by 5%. This long-term trend was largely attributed to an increase in the energy efficiency of household appliances and stricter efficiency requirements in building codes (Environment Canada, 2014). Although, the commercial and industrial sector (specifically building operations), saw a 7% increase during this time period.

While there appears to be national level improvements in energy use in the residential

sector, the opposite trend is seen with emissions from the road transportation sector. Any improvements in efficiency and demand management from residential consumers are substantially offset by increases in energy use associated with road transportation nationwide. As seen in the table below, between 1990 and 2012, there was a 36% increase in emissions output from the road transportation sector (including personal vehicles and light duty trucks).

Table 2: Canadian GHG Emissions (kg/CO₂e) by Sector, 1990 - 2012

Emissions by Sector	1990	2000	2005	2008	2009	2010	2011	2012
Total GHG Emissions (kg/c02e)	591	721	736	731	689	699	701	699
Residential (kg/c02e)	43	45	44	46	44	41	44	41
Commercial and Institutional (kg/c02e)	26	33	32	30	29	28	30	28
Road Transportation (kg/c02e)	97	118	130	132	132	134	132	132

Data from Environment Canada (2014). National Inventory Report.

Environment Canada cites the increase in the number of passenger kilometers vehicles travelled (KVT), particularly in the category of light trucks (including SUV's and minivans), as a significant contributor to the country's overall GHG emissions. As well, during this time period, use of light vehicle trucks increased at a rate higher than other passenger vehicles. The study notes that these trucks on average have higher fuel consumption than cars (Environment Canada, 2014, 25).

The combined emissions' impacts of the national residential sector and the road

transportation sector underscore the importance of planning as a comprehensive tool to address both issues at once. The methods used to plan cities determine the lifestyle patterns of residents (i.e. whether or not residents must rely on automobiles or if reliable transit, walking and cycling opportunities exist). These national level trends illustrate Canada's increasing use of automobiles, which are significant contributors to GHG emissions as evidenced in the above graph.

While Environment Canada's NIR provides valuable insights into the major sector emissions, it is important to bear in mind that since the data is aggregated at a national level, these emission trends could vary substantially at regional and city levels. For example, it is likely that the emissions profile of Alberta and Ontario will look very different since coal still represents 42% of Alberta's generating capacity (Province of Alberta, 2014) compared to Ontario where coal represented 0% of Ontario's energy mix in 2014 (Ontario Ministry of Energy, 2014). As a result of these regional discrepancies, it is necessary to assess emissions at regional and city levels.

In response to these emissions projections, the Government of Canada has developed four main responses as identified in their "Action on Climate Change" plan. These include:

1. GHG Emissions Reductions: The report highlights a sector-by-sector regulatory approach with a particular focus on transportation and electricity sectors. The progress cited includes Ontario's coal phase-out and stronger emissions regulations for passenger vehicles and light duty trucks.
2. Investing in Adaptation: According to the report, the Government has allocated \$235 million to "domestic adaptation initiatives" since 2006, which are intended to "help Canadians plan for climate impacts" (2). Details of investments made have yet to be released.
3. Investing in Research: The report states, "The Government of Canada's climate science is an

integral part of the global effort..." A specific area that has received support is the clean energy sector where investments in technologies and R&D total \$10 billion.

4. International Leadership: Canada has pledged financing to various international programs including \$1.2 billion for climate change projects in developing countries, and \$300 million to the Green Climate Fund.

Key domestic and international climate change players have questioned the success of these federal government efforts. The 2013 Climate Change Performance Index ranked Canada 58 out of 61 countries on a scale of climate change action and achievements. The only three countries with lower scores than Canada were Kazakhstan, Iran and Saudi Arabia (Climate Action Network Europe, 2014, 7). The Government's own, Commissioner of the Environment and Sustainable Development reported in 2014 that the Government and federal departments were making "unsatisfactory progress" towards establishing plans to reduce greenhouse gas emissions and to report and evaluate on efforts (Commissioner of Environment and Sustainable Development, 2014).

Despite the controversy surrounding Canada's climate change record, given the country's multi-jurisdictional governance structure, provinces and municipalities have significant power to implement sustained and rigorous climate policies. There are notable climate change policies being developed across Canada but the following section will specifically discuss how the Province of Ontario is working on this issue. Given the research focus on the City of Ottawa, Ontario was chosen since climate policies developed by the province can impact and guide Ottawa's policy environment.

2.5 Climate Change in Ontario

The Government of Ontario has taken steps towards developing climate change

mitigation and adaptation policies. In 2014, the Ontario government renamed the Ministry of the Environment to the Ministry of the Environment and Climate Change. The Ministry, currently under the leadership of Toronto Centre MPP, Glen Murray, has an “expanded portfolio,” which includes “developing policies for the low carbon transition in Ontario’s communities” (Office of the Ontario Premier, 2014).

As part of its mandate, the Ministry publishes an annual Climate Change Update. In 2014, Ontario had the country’s third lowest emissions intensity levels and second lowest level of emissions per capita (Ontario Ministry of the Environment and Climate Change, 2014, 15). As well, the province surpassed its 5% GHG reduction targets for 2014 compared to 1990 emission levels. As discussed in the previous Section, the phase out of coal fired electricity plants is identified as the major policy initiative driving the province and country’s emissions reductions (Ontario Ministry of the Environment and Climate Change, 2014, 4). While these provincial, short-term trends are positive, analyzing sector level emissions reveals potential areas for improvement. Table 3 below compares sector emissions levels between 1990 and 2012. During this 22-year period, the three sectors that experienced an increase in emissions were the transportation, buildings and waste sectors. The transport and buildings sector combined represent 51% of the provinces total emissions and the increase in both sectors is largely attributed to population growth that has resulted in an increase in road transportation vehicles and new buildings (Ontario Ministry of the Environment and Climate Change, 2014, 21). This is in line with the national level findings.

Table 3: Percentage of Total Ontario Emissions by Sector, 1990 vs 2012

Sector	Percentage of total emissions, 1990	Percentage of total emissions, 2012
--------	-------------------------------------	-------------------------------------

Transportation	26%	34%
Industry	36%	30%
Buildings	15%	17%
Electricity	14%	9%
Agriculture	6%	6%
Waste	3%	4%

Finally, the report notes that each sector has been targeted with policies aimed at reducing emissions with the ultimate goal of a provincial-wide reduction of 15% below 1990 levels by 2020 and an 80% reduction by 2050 (Ontario Ministry of the Environment and Climate Change, 2014, 4). Existing emissions policies include the Greater Golden Horseshoe Growth Plan, a regional transit plan, new building code legislation, the Long Term Energy Plan (including the coal phase out), Feed-in-Tariff programs to encourage renewable energy and lastly, landfill gas regulations. These combined initiatives are projected to reach the 2020 reduction targets, but the plan mostly hinges on reductions through the electricity system. Only 16% of the emissions reduction policies are aimed at the transportation and building sector which is minimal considering that these two sectors make up just over half of provincial emissions (Ontario Ministry of the Environment and Climate Change, 2014, 19). Regardless, the climate change report does provide a transparent inventory of existing emissions levels and reductions plans. Furthermore, considering that the buildings and transit sectors are also regulated under municipal jurisdiction, it is partially the responsibility of municipalities to regulate and set reduction targets for these sectors at a local level. Overall, Ontario has made significant strides in this policy area and there is tangible political will to move forward with further plans. Therefore,

a strong provincial policy environment provides a key foundation for municipal actions. The following section will look specifically at the City of Ottawa's record on climate change policy.

3. The City of Ottawa and Climate Change

3.1 Ottawa's Climate Change Commitments

Following the examination of global, national, provincial and municipal approaches to climate change, this section will discuss and compare Ottawa's record of GHG emissions and action on climate change. This section will strictly focus on climate change indicators and policies. Section 3.4 will detail the policy and political environment that will impact the development and implementation of smart growth and climate change plans more broadly.

As a member of the Federation of Canadian Municipalities (FCM) Partners for Climate Protection Program (PCP) the City of Ottawa is required to annually measure and report on its greenhouse gas emissions, air quality indicators and energy use data (FCM, 2014). In 2012, the City of Ottawa reached the highest benchmark in the program, Milestone 5: Monitoring Progress and Reporting Results. Milestones 1 - 4 focus on developing climate change and emissions standards, targets, and implementation plans (Federation of Canadian Municipalities, 2014). In 2014, the City of Ottawa was one of 21 reporting municipalities in Canada to have reached this milestone. This milestone was achieved once the City committed to reporting and tracking its GHG emissions levels to the PCP. This reporting and analysis is done through the Air Quality and Climate Change Management Plan (AQCCMP). More detail on the AQCCMP will be provided below.

Overall, the FCM PCP program offers an important avenue through which Canadian cities can promote and monitor their progress on climate change action. That being said since cities largely develop climate change strategies within their own city boundaries, the data, targets and reporting formats differ quite substantially across the country. This does not negate the value

of formal strategies and commitments, but upon closer inspection, it is evident that there are a few data collection and reporting requirements in Ottawa specifically that call into question the effectiveness of the PCP. As well, the PCP certification is primarily focused on establishing policy frameworks, not necessarily on whether or not the targets and frameworks are effective at reducing emissions. Even though the City reached the fifth milestone, it did not meet its GHG reduction targets (City of Ottawa, 2014a). A more extensive discussion about the AQCCMP's limitations will be discussed below.

3.2 The 2014 Air Quality and Climate Change Management Plan

2004 AQCCMP

In 2003, Ottawa City Council approved the Environment strategy and the development of an Air Quality and Climate Change Management Plan. Prior to amalgamation, the Regional Municipality of Ottawa and the former City of Ottawa committed to an emissions reduction of 20% below 1990 by 2005. This target was done in conjunction with Canadian government's 2002 ratification of the Kyoto Accord. After amalgamation, the initial reduction targets set by the region were extended to instead be met by 2012 (City of Ottawa, 2004, 9). The subsequent 2004 AQCCMP was an important document along with the Ottawa 20/20 Growth Management Strategy and the first post-amalgamation Official Plan. These three combined documents fundamentally emphasized the need for the newly amalgamated city to grow strategically and sustainably (City of Ottawa, 2004, 50).

While there appeared to be an impetuous to establish sustainability objectives in the new city, 1998 data in the 2004 AQCCMP projected that the City would miss its 2005 community reduction targets. Relative to 1990 levels, corporate GHG emissions decreased by 12% in 1998, which initially led the City to set a 20% reduction target by 2005 (City of Ottawa, 2004, 30). On the other hand, community GHG emissions (which include corporate), increased by 43% in

1998, primarily due to increased activity in the waste and building sectors. As a result of this significant increase, the City chose to extend its reductions deadline to 2012 (City of Ottawa, 2004, 31). The 2004 AQCCMP targets would be reassessed and analyzed for progress in 2012.

2014 AQCCMP

Ottawa based environmental groups expressed concern in mid-2012 when no formal announcement had been made regarding the fate of the then expired AQCCMP (it had formally expired in 2012). In response to public criticism about the unknown status of the AQCCMP, City Council's Environment Committee authorized a GHG inventory roundtable to take place and include relevant stakeholders. Noticeably, the motion passed during the June 27th environment committee proceeding but it did not mention a proposed date for this roundtable (Hodgson, 2012a). By summer 2012, in response to "little communication from City Hall" (Hodgson, 2012a), community leaders and organizations such as Ecology Ottawa, Climate Ottawa and then Green Party Candidate Kevin O'Donnell, began asking the Mayor and then Environment Committee Chair, Maria McRae on Twitter for updates on the Roundtable using the Twitter hashtag campaign #ottghg (Cote, Celeste, 2013).

At the same time, the Environment Committee, under the force of a Municipal Freedom of Information Request, were forced to make public the 2012 GHG report, which outlined if targets from the 2004 AQCCMP had been met. Ecology Ottawa's, Charles Hodgson was the individual who submitted the Information Request in 2012 and according to his accounts on the blog, Climate Ottawa, the Environment Committee included the GHG report as an Information Previously Distributed (IPD) on its meeting agenda which as a result did not allow councilors to ask questions on the agenda item, nor could members of the public submit a delegation. In opposition to this, then Somerset ward councillor, Diane Holmes moved to have the report

brought back during the following Environment Committee meeting to be discussed as an agenda item. This would therefore require City staff to be present to answer questions from Councillors and the public on the updated GHG inventory report. Councillor Holmes' motion was carried six yeas to two nays, one of the nays being the Environment Committee Chair herself (Hodgson, C, 2012b).

The heated political discourse surrounding the Roundtable was addressed when Mayor Watson announced in December 2012 that the GHG Roundtable would be held “in the first quarter of 2013” (Hodgson, Charles, 2012c). Invitations were sent out to “relevant stakeholders” and even though no public notice was posted on the City’s website, the Roundtable reached “maximum capacity” just two weeks after the invitations were first sent out (Ecology Ottawa, 2013a). On March 23, 2013, city residents heard Mayor Watson and then Environment Committee Chair McRae confirm the city’s commitment to updating the expired AQCCMP. The daylong session also contained panel sessions from City Council staff and municipal sustainability experts. Residents were also teamed up with staff to have group conversations about how the AQCCMP should be updated (Beer, Mitchell, et al., 2013). While the event represented a significant move towards stakeholder engagement on the City’s behalf, there were questions from advocacy groups and participants alike about how the Roundtable’s discussions would be implemented. Reports surfaced that in the midst of and following the development of the roundtable, the City of Ottawa’s “budget scrubbed air-pollution testing, shut down a Sustainable Communities office, and saw environmental scientists fired” (CBC News, 2013).

While the GHG inventory and AQCCMP proved to be controversial and politically tumultuous, significant policy development came out of this process and in 2013, work began on updating the City’s strategy to tackle climate change through the 2014 Air Quality and Climate

Change Management Plan. As a departure from the controversy that had previously marred the file, this document generally presents a positive outlook on the City's progress on its target to decrease corporate and community greenhouse gases by 30 percent and 20 percent, respectively (2014a, 5). The City reports that even though Ottawa has grown by 86,00 people between 2004 and 2012, Hydro Ottawa sales remained constant at approximately 7,500 GWh per year and emissions per kWh of electricity produced decreased. In 2004, citywide emissions were 6,160 kt CO₂e which decreased to 5,420 kt CO₂e in 2012 (2014a, 6). The reason for this significant emissions reduction will be discussed below.

While the progress on corporate emissions is commendable, the City of Ottawa faced significant controversy in developing the plan, mainly related to the data and methods used in the report. Firstly, the AQCCMP is limited by a lack of reliable data. According to the AQCCMP, determining the 1990 emission levels that are the basis for targets comparison "has proven very difficult due to inadequate data sources" (City of Ottawa, 2014a, 6). Moreover, past and current data collection related to climate change indicators is not available for public knowledge. The data set is not accessible through the Open Ottawa database (City of Ottawa, 2015a). The data analysis and quality standards used by the City are not publicly available therefore it is difficult to fully understand the integrity and robustness of the data. Perhaps more seriously, the City makes a fundamental data reporting decision that skews all reported emissions levels. The AQCCMP reports emissions based on greenhouse gas emissions at the source of electricity generation, not end use emissions. This means that the decrease in emission reductions reported between 2004 and 2012 are largely attributable to the phase out of coal power generation during that same time period (City of Ottawa, 2014a, 5). While it is not incorrect to report that the City's electricity mix burns much cleaner as a result of the provincial coal power phase out,

solely relying on this measurement of emissions wrongfully implies that the City has made significant progress on emissions reductions even though the major cause of emissions reductions is done outside of city boundaries by the province. In fact, the plan cites provincial projections which caution that “such significant GHG reductions will cease in 2015 and that emissions will increase with growth in generating capacity and electricity use” (City of Ottawa, 2014a, 6). The AQCCMP reports emissions data in this high level format primarily due to data limitations as previously mentioned.

According to the IPCC’s Guidelines for National Greenhouse Gas Inventories, the recommended and most basic calculation involves multiplying activity data (i.e. Number of kWh’s used by the average household) by an emissions factor (defined as coefficients which quantify the emissions or removals per unit activity) (IPCC, 2006, 6). The IPCC’s measurement guidelines have been adapted for cities by Greenhouse Gas Protocol (GGP) and in 2014 over 100 cities worldwide (including Toronto and Vancouver) used the accounting and reporting standards outlined by the GGP. The GGP is a collaboration between the World Resources Institute, the C40 Cities Group and Local Governments for Sustainability (ICLEI) (Greenhouse Gas Protocol, 2014, 1). Should the city of Ottawa choose to align its GHG reporting format with the GGP’s standards, the city would have to take more precise energy consumption and use data that is currently incomplete in its existing plans. As the 2014 AQCCMP is only the second formal Climate Change Plan that the city has produced, it could be beneficial to align its standards with an internationally recognized program to increase the reliability of its reporting standards. The data requirements in the GGP’s program would produce much more accurate targets and further signal the strength of Ottawa’s commitments to climate change action.

3.3 Climate Change Drivers in Ottawa

Due to the AQCCMP's data assumptions, it appears that the city has significantly progressed on its emissions targets but the underlying figures and trends reveals potential areas for concern. Aside from the policy commitments, there are many persisting trends in trends in Ottawa that underscore the importance of climate change action. According to the National Capital Region's 2012 Emissions and Energy Plan, "if residents, businesses and institutions continued to live, work, travel and consume as they have over the last 20 years, our growing population would consume 60% more energy than we do today and energy spending would double by 2050...greenhouse gas emissions would likewise increase 30% by 2060." The document further states that if the suggested policies are implemented, residents could avoid the increase in energy spending and instead save \$2.5 billion annually and reduce emissions by 40% by 2060 relative to 2007 levels (HB Lanarc Consultants Ltd., 2012, 2). Patterns in the AQCCMP point to areas where further work is required:

1. Approximately 80% of citywide emissions are community based which relates to how Ottawa residents live, work and play in their communities. Buildings represent 49% of citywide emissions; transportation represents 40%, followed by 6% for solid waste, 4% for the agriculture sector, and 1% for wastewater (City of Ottawa, 2014a, 24). The buildings sector includes institutional, commercial and residential buildings. Emissions estimates show that Ottawa apartment households, on average have the lowest energy consumption and subsequently, have the lowest emissions levels (City of Ottawa, 2014a, 25).

Between 2005 and 2011, the population grew by 61,570 new residents and 34,794 new households (City of Ottawa, 2014a, 13). The majority of this population growth occurred outside the Greenbelt as seen in Table 4 below. Suburban areas outside the Greenbelt experienced both population and dwelling count growth at a much higher level than inside the Greenbelt or in rural

Ottawa. As will be discussed in more detail in Section 4, the emissions profile of households in suburban and rural areas is much more substantive than urban households, primarily as a result of increased vehicle reliance and larger housing sizes. The Official Plan projections expect neighbourhoods inside the Greenbelt to grow by approximately 61,000 new residents by 2031. In comparison, population growth outside the Greenbelt is anticipated to grow to 122,000 new residents by 2031 (City of Ottawa, 2012a). Therefore, current growth patterns need to be analyzed for their potential impacts on GHG emissions.

Table 4: City of Ottawa Population Patterns, 2006 vs. 2011

Area/Population	Population in 2006	Population in 2011
Inside the Greenbelt Population	487,360	498,510
Inside the Greenbelt Dwellings	211,635	221,065
Outside the Greenbelt Population	244,055	299,125
Outside the Greenbelt Dwellings	81,340	102,040
Rural Area Population	80,720	85,760
Rural Area Dwellings	27,915	30,155

Data from City of Ottawa (2012a).

2. Between 2005 and 2011, personal vehicle ownership increased by 14% and, in 2011, an estimated 57% of commutes were made by individuals alone in their vehicles (City of Ottawa, 2014a, 13). These combined factors have contributed to an increase in GHG emissions from surface transportation. In response to these trends, the city’s Confederation Line Light Rail Project is identified in the AQCCMP as a means of offering more sustainable transportation options. The \$2.1-billion-dollar project is expected to begin operating in 2017 and the City has set a target for LRT to “provide 67% of the population with service within 5km of their

doorstep.” LRT is also expected to reduce OC Transpo’s fleet emissions by 94,000 tonnes per year (City of Ottawa, 2014a, 25). This increased transit service is anticipated to provide Ottawa residents with a viable alternative to personal vehicles, although only time will tell if residents will choose public transit over their personal vehicles.

3. The AQCCMP characterizes the city’s main role as a leader to “educate, promote, incent, and facilitate changes in community behaviours” (City of Ottawa, 2014a, 8). The plan cites these areas as more controllable by the City as opposed to facilitating any energy system changes (i.e. developing renewable energy systems. That being said, there has been a record of progress on renewable energy in the city. Hydro Ottawa has approved 619 renewable energy projects since 2009 (City of Ottawa, 2014a, 19). Therefore, there is an increased interest and demand for renewable energy, which the city could work to further incent through policy mechanisms or financial subsidies. The cooperation of Hydro Ottawa on this policy area will certainly allow for increased policy uptake. Focusing on demand reduction and lifestyle changes is valuable, but to fully commit to the targets outlined in the AQCCMP, the city will need to take a more active role to incentive this type of energy production.

As these figures illustrate, the projected impacts of climate change in the City will be felt at environmental and socio-economic levels. This means that any policy initiative will have to address these three factors simultaneously. The AQCCMP establishes nine target areas to adapt to and mitigate climate change impacts. This includes: residential and commercial demand management initiatives, reducing fossil fuel dependence by supporting renewable energy, investigating carbon capture and storage, reducing agricultural and waste emissions, improving air quality, reducing public health risks, supporting municipal infrastructure resiliency and modifying at risk infrastructure, and finally, establishing emergency management protocols (City

of Ottawa, 2014a). Notably, the AQCCMP does not include a work plan or implementation schedule for any of these initiatives, instead an appendix item contains a list of each program area and whether or not work has been “completed” or is “ongoing.” Details are not provided and make it difficult to track the City’s progress on specific initiatives.

Overall, the history of climate change agreements in the city of Ottawa has developed in an environment of controversy and division. That being said, as one assesses this process, it is apparent that Ottawa civil society was readily involved in all stages and in some cases, served as a balance of power. While debate is characteristic, and in fact a healthy indicator of the policy process, it appears that in this case there were sometimes limits or discouragements of debate. It is not likely that any outcome would have resulted in complete satisfaction for all involved stakeholders but, the decision making process should at the very least acknowledge the interests of relevant stakeholders. Therefore, the interview research process will focus on identifying potential opportunities and barriers facing the serious and sustained implementation of urban sustainability initiatives such as the ones discussed in the AQCCMP.

3.4 Building a Liveable Ottawa Strategy

The origins for the AQCCMP can be traced back to the public consultation process that took place following Ottawa’s amalgamation process. In 2001, the newly formed city was tasked with consolidating the governing institutions of each municipal entity. The City therefore started consulting the public and key stakeholders on the Ottawa 20/20 Growth Management Strategy. This plan will be further discussed in the following Section but, for the purposes of understanding the AQCCMP, it is important to acknowledge that this initial stakeholder consultation stage heard support for developing the new Ottawa in an environmentally sustainable way (City of Ottawa, 2003). The Growth Management Strategy included the

development of the City's first Official Plan, a Human Services Plan, an Arts and Heritage Plan, an Economic Strategy and an Environmental Strategy. The 20/20 Plan was then followed with a similar exercise, Choosing our Future, a three year consultation and policy development process that completed in 2012 with the publication of four guiding documents. The Choosing our Future Plan, the Sustainability and Resilience Plan, the Energy and Emissions Plan, and the Risk Prevention and Mitigation Plan (HB Lanarc Consultants, 2012, p. 1). Choosing our Future was a shared vision developed by the City of Ottawa, the City of Gatineau and the National Capital Commission.

These guiding documents have influenced the current climate change policy arena. The AQCCMP is the guiding document for climate change policies but there are five other policy documents that directly impact climate change action. On February 26, 2013, Ottawa City Council ratified four other documents along with the Official Plan, all under the plan "to build a more liveable Ottawa by 2031" (City of Ottawa, 2013a). The Transportation Master Plan, the Infrastructure Master Plan, the Cycling Plan and the Pedestrian Plan are four separate policy documents, each containing more detailed implementation targets. Compared to the AQCCMP, these plans have more specific details and the AQCCMP often references these documents as complementary guides. While these documents are not solely climate change action plans, themes of sustainability and emissions reductions run through each of the documents and sustainability is identified as a key policy driver. The Cycling Plan and Pedestrian Plan will be discussed in more detail below since these Plans represent a concerted effort to transition to alternative modes of transportation.

Cycling Plan

The 2013 Cycling Plan is an update to the inaugural 2008 document. The plan addresses

the "ecosystem" of policy and program supports that are required to "make cycling an attractive everyday mobility option for a range of residents across Ottawa" (City of Ottawa, 2013b, p. ii). The plan introduces the three phase "cycling network implementation plan" for an increase of cycling infrastructure in urban and citywide neighbourhoods, transit links and employment centres. The combined plan is estimated to cost \$1.1billion (City of Ottawa, 2013, iii). The plan notes that 33% of city residents are "interested but concerned" cyclists and they identify this group as a target audience that could take up cycling if cycling infrastructure improves (i.e. separated bike lanes, bicycle parking) (2013b, p. 3).

According to the document, Ottawa has made significant progress since the first OCP. In 2013, Ottawa became the first and only city in Ontario to receive Share the Road Ontario's Gold Award for bicycle friendly communities. Furthermore, there has been a 41% growth in citywide cycling trips between 2005 and 2011. Finally, the report acknowledges that there is a noticeable decrease in cycling trips in the winter, but a survey of Ottawa cyclists revealed that in the winter; a majority (57%) use "other sustainable modes, such as public transit, carpooling and walking" (2013b, p. 2).

The plan identifies the construction of separated bike lanes should be increasingly considered going forward. As well, the development expansion around LRT should also involve cycling expansion. Overall, the OCP is well integrated with goals related to smart growth planning.

Pedestrian Plan

The 2013 Ottawa Pedestrian Plan (OPP) is an update from the city's first pedestrian plan created in 2009. The 2009 OPP was "one of Canada's first pedestrian master plans" (2013c, p.1). The updated plan was accompanied with the creation of a pedestrian charter, derived from Walk

21's International Charter for Walking which includes a walkability map interactive tool to assist with city wide planning (2013c, p.2). A three-phase infrastructure and implementation plan is accompanied with a series of targets including a citywide increase in morning pedestrian trips from 9.5% in 2011 to 10% in 2031. From an urban planning perspective, the plan identifies the need to promote complete, walkable communities in secondary and community design plans. Although, this is a high level directive and there are no concrete frameworks provided for the inclusion of walkability in the planning process. It strongly recommends that walkability should be considered and appropriately valued but the plan assigns responsibility for this to city staff. "Staff will develop a set of design guidelines for the development of pedestrian friendly infrastructure, which will be used by staff to help identify the key aspects of pedestrian-orientated design and incorporate these concepts into new construction and reconstruction projects" (2013c, p.17). The plan does provide a list of priority pedestrian projects and criteria for evaluation but there is no discussion about the associated costs or potential funding allocations for these plans. Overall, the plan falls short of specifying exactly how the city can achieve these goals. Lastly, setting a 0.5% increase over 30 years on city wide pedestrian trips fails to show any significant leadership or drive on the issue.

3.5 Climate Change Policy Implementation

The controversy surrounding the AQCCMP is one cause for concern but just as, if not more pertinent, is the concern about the City's real and perceived commitment and capacity to implement climate change policy. One of the most troubling examples was the closure of the city's community sustainability branch. Ottawa's 2012 budget included an operating resource requirement analysis for the community sustainability office and expenditure equivalents for four programs and 26 full time equivalents. The 2013 budget did not include an operating resource

requirement analysis and instead cited a "removal of the 2012 one-time item for Infrastructure Services and Community Sustainability - Transition and Renewal as approved in the 2012 budget" with an allocated expenditure of \$126,000 (City of Ottawa, 2013d, 214).

The 2012 budget did allocate funding to a sustainability program run out of the community sustainability services department. The program was intended to provide "tools to staff in order to encourage innovation and integration of sustainability practices in all decision-making; developing a neighbourhood sustainability initiative that leverages residents' participation..." (City of Ottawa, 2012b, 390). In 2013, this same program, was allocated to the Planning and Growth Management department but it had a reduced mandate to establish a neighbourhood connection office intended to "help residents and community groups connect with each other to collaborate and contribute to making their neighbourhoods more livable" (City of Ottawa, 2013d, 527). This program was to be completed in 2013 and the 2014 draft budget did not include the renewal of this or a similar program under the Planning and Growth Management department (2014, 223).

Moreover, this change in budget allocation was accompanied with structural changes within the city. The Planning and Infrastructure portfolio once had an Infrastructure Services and Community Sustainability department but the department is now referred to solely as the Infrastructure Services department (City of Ottawa, 2015). The city's current lack of formal capacity and coordination on community sustainability is a barrier to the meaningful implementation of sustainability initiatives. Albeit, it is possible that certain policy expertise has been reallocated to different departments but, as will be evidenced in the interview data, City Hall insiders question whether or not this expertise or commitment still exists within the government.

Another barrier facing the implementation of climate change and smart growth policy in Ottawa is the physical structure that determines lines of political power and the realities of development. As was discussed earlier in this Section, the urban, suburban and rural divides on city council affect the policies that councilors vote for, and create polarizations on council given the different priorities of each area. Ottawa is characterized by its unique ability to coalesce these three very different types of communities, however, the fact that the City must consider the needs of rural residents concurrently with those of downtown urbanites presents a challenge for policy development. Given the variation among local communities, a strong level of localized support and leadership is necessary. Smart growth priorities and capacities will differ depending on the area of the city.

Overall, the city has established important policy frameworks to move towards climate change action but as identified in the AQCCMP, further work is still needed. The interview section will discuss with key stakeholders what is required to ensure the success of urban sustainability initiatives.

The previous two sections have furthered the argument that greenhouse gas emissions and the subsequent impact of climate change are pressing concerns at all three levels of government. Furthermore, the built environment and its associated energy use and transportation patterns are significant contributors to greenhouse gas emissions at both national and municipal levels. The following section will describe smart growth urban planning policies and how their implementation has been shown to reduce city level emissions. This will be followed with a discussion of the policy implementation process that municipal governments must consider when implementing smart growth policies.

4. Smart Growth Policy

4.1 Defining Smart Growth

As discussed in the previous section, climate change is a municipal level policy issue because the structure of the built environment determines residents' lifestyles and subsequently, energy use patterns. This not only relates to how buildings use energy but also, the layout and municipal infrastructure in a city determines how residents move in a city.

In this report, the term smart growth will be used to describe urban planning methods and tools. The term will be used interchangeably with the term urban sustainability. Smart growth is a design-orientated approach that focuses on various, complementary urban planning initiatives to produce more environmentally, socially and economically successful cities. According to Downs (2005), there are six main principles that underlie smart growth planning. These include:

1. Limiting sprawl and encouraging compact living patterns.
2. Densification in central areas and/or transit hubs.
3. Pedestrian orientated development, primarily through mixed use, compact neighbourhoods.
4. Development of strong public transit networks.
5. Some form of development charges and/or a price structure that reflects the true costs of suburban vs. urban development.
6. The revitalization and development of existing neighbourhoods to take advantage of existing infrastructure.

These six combined initiatives will be used to define urban the suite of urban sustainability policies discussed during the stakeholder interviews. These six components will be put forward as a definition to guide the stakeholder discussions on urban sustainability.

Although, this list is by no means extensive. For example, inclusionary zoning (mandating a certain percentage of new build to include affordable or below market housing options) has been

promoted as a policy complement to other smart growth policies to ensure affordability and limit gentrification impacts. However, for the purposes of this research, the smart-growth definition will not include inclusionary zoning. According to Porter, Dunphy and Salvesen (2002) the fact that there is no one definition for smart growth can be beneficial because the nature of the policy requires that governments tailor the concept to meet their specific circumstances.

4.2 Smart Growth vs. Sprawl

One important concept that needs to be highlighted is that urban sustainability and smart growth policies do not necessarily advocate against growth, they simply require that growth be done in a strategic way to efficiently take advantage of the existing land and infrastructure and minimize negative environmental and social impacts. The growth pattern that works against smart growth principles is suburban sprawl. Ottawa based think tank, Sustainable Prosperity identifies sprawl as “low density of development per hectare; rigorously separated uses ... ‘leapfrogging’ past existing areas of build-up, leaving undeveloped gaps; and or dependency on the automobile” (2013, p. 2). Sustainable Prosperity argues that the driving factors behind this development are the government subsidies for suburban developers and hidden costs that homeowners don’t automatically associate with their suburban property. The authors argue that as a result of the development of extensive and heavily subsidized “free-to-use” road networks, municipalities undercharge suburban developers, and due to the hidden costs of suburban living, suburban areas have become a popular development and home location (2014). The report argues that compact development can result in significantly lower municipal infrastructure costs. The report cites the City of London, Ontario which determined that over a 50-year period the City would spend \$4.4 billion more if it continued to support sprawl orientated growth instead of compact development (2014, p. 6). Similarly, the New Climate Economy reported that sprawl

and its associated infrastructure and subsidies combined cost Americans approximately \$1 trillion per year (New Climate Economy, 2014). Pamela Blais elaborated on the costs of sprawl in her seminal account on the economics of land use policies in Canada. She argues that the existing municipal cost and revenue systems are done “in a manner that encourages the over consumption of land, building, and transportation and discourages the efficient use of these resources” (Blais, 2010, 8). Government support of development as a means to drive economic growth is therefore done at the cost of environmental health and urban taxpayers.

4.3 Smart Growth Applications

As Downs (2005) cautions, it is important for smart growth policies to be considered on a case-by-case basis as every municipality will present different types of barriers and opportunities. Further, he notes that there is not one jurisdiction in the world that has successfully implemented all of the principles of smart growth and it is more likely for a city to focus on a combination of the above mentioned six. Even more common is for cities and governments to discuss smart growth principles and lag on their actual implementation. He identifies one of the major implementation barriers as the long entrenched government and public support for lifestyles in sprawl orientated communities (Downs, 2005, 369). Any application of smart growth policies will have to address the lifestyle norms and desires that have been cultivated for decades. This demonstrates that the implementation process will require a shift not only in governance and economic norms, but social norms will have to be similarly changed. Portney described this challenge as “if this promise [of sustainable cities] has any hope of being fulfilled, our understanding of what works and what doesn’t work, of what people will accept and what they won’t accept, and what conditions contribute to more effective programs or initiatives, must advance significantly” (2013, xiii). The following section will discuss some of

the main social, economic and policy hurdles that smart growth policies must address in their implementation. This section will infer how the City of Ottawa can best implement the policies based on past experiences.

4.4 The Policy Implementation of Smart Growth

While the definition of smart growth varies based on the community it is being implemented in, the policy issue that unifies the majority of smart growth advocates is a belief that it is necessary to address the lifestyle and energy use patterns associated with suburban sprawl. As discussed in previous sections, suburban dwellers are more likely to have higher emissions profiles than urban residents, largely due to increased reliance on personal vehicle usage and larger homes. As a result, addressing this lifestyle can offer significant emissions reductions. One of the major barriers to implementing these neighbourhood level reforms is the significant subsidies and cost incentives associated with suburban development and home ownership. In many Ontario municipalities, homes on the periphery cost less than homes in the inner core. Moreover, municipalities bear the cost of new infrastructure required to serve new developments as opposed to the developers or residents of these new communities. Moreover, in Canadian municipalities, suburban homes do not pay the full price of this new infrastructure due to municipal subsidies and hidden, indirect costs associated with this type of development (Sustainable Prosperity, 2013). As a result of these issues, there have been identified attempts from various organizations and some municipalities to institute fairer pricing structures. The main issue that smart growth must address are the existing cost incentives for residents living in the suburbs and for developers building in these areas. This is because “prices are powerful motivators for both profit-maximizing firms and expense-minimizing individuals” (Thompson, 2010, 3).

1. Eliminating Sprawl Subsidies

The first tool that can be used to reorient pricing structures is development cost charges, the fees associated with new development to pay for the required city services (i.e. new roads, wastewater infrastructure and utility connections). Municipalities have the jurisdiction to set the rate of development charges. Some cities impose a flat tax rate based on square footage of a development or the number of new residents and, therefore do not account for location in these costs (Thompson, 2010). Following the ratification of the Government of Ontario's *Development Charges Act* in 1997, the City of Ottawa was delegated the authority to set fee levels for specific services only, compared to the previous 1989 legislation which gave municipalities the power to impose charges on a broader range of services. The Act allows municipalities to recover costs from developers for services related to new growth. In order for a municipality to institute these charges, a background study must be conducted to determine expected population growth and the eligible service costs that can be recovered (Ministry of Municipal Affairs and Housing, 2013, 3).

While Ottawa has certainly taken a proactive approach on addressing the true costs of sprawl, the City's population projections illustrate that the majority of population and housing development over the past twenty years, and projected development until 2031 have happened and will happen in areas outside the Greenbelt. This therefore illustrates one of two outcomes. Firstly, higher suburban development charges do not necessarily limit greenfield development (at least costs set by Ottawa), and that the market incentive and demand for this type of housing is the ultimate driver. Or, this significant development outside the Greenbelt means that Ottawa has not set high enough development charges to dis-incentivize this development. Should Ottawa continue to explicitly and implicitly support development outside the Greenbelt, the likely

compromise would be to build suburban communities as sustainably as possible, particularly by allowing for proximity to reliable transit.

The current pricing structure represents a negative environmental externality meaning that the price of a good (i.e. a suburban home) does not adequately reflect all of the associated environmental costs that are incurred as a result of the home's location (i.e. increased vehicle reliance). This means that suburban homeowners underestimate the economic (and by extension, environmental) costs associated with their lifestyles.

The 2014 increase in Ottawa development charges was done in line with the cost of serving new developments. The charges associated with single detached dwelling inside the Greenbelt are 34% lower than costs outside the Greenbelt. The average cost for all types of residential development inside the Greenbelt totals \$15,549 compared to \$20,295 outside the Greenbelt, per unit. Although, the increase in the 2014 charges saw a 30 percent increase for development charges within the Greenbelt compared to a 22% increase for fees outside the Greenbelt. The city estimates that at these rates, development charges will recuperate approximately 38% of the costs associated with planned municipal infrastructure construction over the next 17 years (City of Ottawa, 2014c).

Ottawa has certainly made progress on the development of this key urban sustainability policy by setting suburban charges at a higher rate than urban ones. But the true impact of it from a sustainable urban planning perspective is questionable given the continuing commitment to greenfield development. Development charges need to be higher in order for any significant impacts to be felt by suburban developers.

2. Urban Accessibility vs. Suburban Automobility

In terms of neighbourhood design, Litman (2014) describes sprawl as automobility

orientated for vehicles whereas smart growth neighbourhoods are accessibility orientated for people. Litman points to a historical focus on ensuring ease of movement between neighbourhoods for cars and designing as if all residents have vehicle access. Instead, ensuring that residents have mixed use, walkable neighbourhoods with transit and cycling connections can go a long way to reducing automobile dependency and promoting alternative means of mobility and accessibility. The concentration of residents in these mixed-use zones will subsequently produce economic and energy efficiencies. Litman (2014) acknowledges that a combination of smart growth policies (intensification, transit and complete streets), may only produce individual vehicle travel reductions of 3-5% but together a city can see vehicle travel reductions in the 20%-30% range. Indeed, these reductions have been seen in Canadian cities. As seen in Table 5, neighbourhoods in the Greater Toronto Area are compared on key smart growth indicators. Central areas were more likely than their suburban counterparts to be closer to schools, parks, employment centres and rapid transit. In fact, 0% of outer suburban residents lived within 1km of rapid transit compared to 56% in central areas. In the GTA, the proximity of central areas to transit and other amenities is positively correlated with a lower likelihood of owning a personal vehicle (VandeWeghe and Kennedy, 2007). Therefore, designing cities to promote alternative transportation models is a key element to reducing vehicle reliance.

Table 5: Neighbourhood Amenities in the Greater Toronto Area, 2007

Category	Central areas	Inner suburbs	Outer suburbs
Avg. # of schools within 1km	12.7	6.25	3.4
Avg. distance to parks (m)	295	355	650
# of Jobs within 1km from home	18500	3900	1810
# of Jobs within 5km from home	309000	101000	42500
% of homes within 1km of rapid transit	56%	10%	0%

(Data from VandeWeghe and Kennedy, 2007).

3. Consumer Preferences for Large Home Lots

Another important policy barrier for smart growth advocates to consider during the policy implementation process are historical consumer preferences for large home lots and perceived suburban amenities (i.e. large backyards, good public schools, neighbourhood safety and security) (Litman, 2009). Policy and political leaders should consider these historical preferences and trends in order to gauge public opinion and interest.

According to findings from a Harrison Research study on density perceptions, survey respondents reported building density and form as their primary concerns when discussing liveable communities. Respondents did not on the whole delve into more nuanced characteristics associated with density i.e. walkability and connectivity (Fischer, Ayturk, 2011). It was once a widely held belief that "Americans overwhelmingly prefer a single-family detached home on a large lot in the suburbs, and that's the type of housing they want their neighbors to live in as well" (Ahluwalia, 1999, 7). While this may have constituted the "American Dream" at one point in time, recent studies have shown a potential shift in attitudes. In 2014, Canadian think tank, the Pembina Institute partnered with the Royal Bank of Canada (RBC) to investigate housing preferences in the Greater Toronto Area. The research found that 81% of respondents would prefer to live in a neighborhood that was mixed-use and walkable with reliable public transit. A variety of age groups and family sizes reported this preference. These respondents reported that they were willing to downsize their home to live in this type of neighborhood. The reported barrier to living in these types of neighborhoods was price. Affordability was the main consideration for 80% of respondents (Pembina Institute, 2014, 3). As a follow up to this finding, respondents were subsequently informed that over a 25-year period, a household could save up

to \$200,000 if they gave up a vehicle and instead opted for alternative transportation methods. Based on this new information, 60% of respondents stated they'd be willing to live in a transit-orientated neighborhood even if this meant a smaller home (2014, 4).

This research suggests that support and interest for urban intensification as both a built form and a housing option could improve through increased public awareness of the associated individual, economic and environmental benefits. From a community acceptability perspective, Jenks (2000) studied other sociodemographic factors that impact perceptions of intensification. Using data from a 1994 United States Department of Environment Survey on Housing Attitudes, Jenks determined that level of issue knowledge and sociodemographic characteristics can determine a community's level of acceptability towards intensification. Young urban renters were more likely than older, affluent homeowners to support new development because these residents and neighbourhoods have "the ability to absorb change relatively easily" (248). Jenks' findings suggest that older homeowners must be convinced that intensification will not compromise their quality of life or the traditional character of established neighbourhoods.

Across all age groups, higher knowledge of intensification policies was correlated with an increase in support. Similarly, Ruming (2013) studied perceptions and support for urban densification using an online survey of Sydney residents (n=721). While he found there to be an almost equal level of support and opposition among residents, only 39% of respondents reported being knowledgeable of local government density policies. Despite the low knowledge levels overall, Ruming found that supporters of state and local level density policy were also most likely to score higher on policy knowledge. While the composition of consumer preferences is also complex, this research suggests that there has been an observed shift in housing preferences but that a lack of policy knowledge and awareness can represent a barrier for consumers. The

policy implementation process should consider this potential barrier and aim to address it as a means of building broader support networks.

Ultimately, the implementation of smart growth may impose costs on some residents in terms of financial costs and home availability for suburban homes as a result of growth controls. As well, a focus on TOD development and city prioritization of public transit could cause inconveniences for vehicle commuters.

5. The Land Use Planning System

One of the most significant policy areas that municipal governments have control over is the land use planning process. Urban planning allows municipalities to not only set regulations, but also as a result, influence the behaviour and lifestyle choices of its residents. As discussed in Section 4, reorienting municipal land use planning through a smart growth frame can result in significant emissions reductions and environmental quality improvements. This section will discuss the relevant policy documents that guide land use planning in Ottawa. This will be followed with a discussion of some of the key political players involved in land use policy and some of the existing relationships between these groups that impact land use policy. A discussion of the Ottawa urban planning environment is important because this is the platform where smart growth policy implementation will ultimately happen. As will be evidenced in the following section, the province of Ontario and the City of Ottawa have already taken significant steps to enshrine smart growth planning principles in policy and legislation.

The City of Ottawa's Planning and Growth Management Department defines land use planning as "managing change; managing land and resources; determining where land uses belong within a community; helping a community to set goals for growth while keeping important social, economic and environmental concerns in mind; balancing the interests of a

property owner with the wider interests and objectives of the whole community” (2014d, 6). It is evident from this definition that there are a variety of competing interests and stakeholders that encompass urban planning. In order to understand how these groups interact within the municipal decision-making sphere in relation to smart growth planning, it is important to understand the key legislation underpinning that either facilitates or blocks smart growth planning.

5.1 Planning Act and Provincial Policy Statement

To begin, the Government of Ontario produces the Planning Act to provide legislative direction to municipalities on urban planning matters. The Planning Act originates from the Ministry of Municipal Affairs and Housing (MMAH) it outlines, “how land uses may be controlled, and who may control them” (MMHA, 2014b). The Planning Act (hereafter referred to as “the Act”), strikes the necessary balance between high-level policy statements and specific implementation requirements. The Act delegates authority to municipalities to create an urban planning administration and the associated legislation and planning documents (i.e. zoning by-laws, development permit systems, and Official Plans). For the purposes of this research, it is pertinent to be aware of the four main sections that the Act establishes. These include specifications of the types of development applications that can be submitted (i.e. zoning by-law amendments and site plan control applications); it establishes timelines and the various stages of the development application process for different types of projects; it sets out the required components for public consultations and stipulates in what cases public consultation is required (i.e. notices of public meetings); and finally, it establishes approval and appeal authorities for planning decisions (including the Ontario Municipal Board, Committees, and Committee of Adjustments) (City of Ottawa, 2014d).

While the Planning Act covers all aspects related to municipal land use policy, Ontario municipal governments receive further policy direction from the Provincial Policy Statement (PPS). The PPS differs from the Planning Act because this document is intended to reflect provincial planning interests and guidelines and is more of a political document compared to the Act since it is reviewed every five years by the government and Ministry in office. Furthermore, as the PPS is updated, municipalities are required to update their land use planning documents to ensure that municipal plans are in line with the PPS. The PPS along with the Greenbelt designation was created in 2005 and underwent its first review process in 2010 which resulted in an updated PPS in 2014 (Ministry of Municipal Affairs and Housing, 2014c) According to the Ministry of Municipal Affairs and Housing, the PPS “provides clear policy direction on land use planning to promote strong communities, a strong economy, and a clean and healthy environment (Ministry of Municipal Affairs and Housing, 2014a). The PPS has three main sections: building strong communities; wise use and management of resources and protecting public health and safety; and implementation sections (Ministry of Municipal Affairs and Housing, 2014c). According to the MMAH, as a result of a two-year public and stakeholder consultation, five priority areas were developed for the 2014 PPS and updates were made in these areas. The updates include: “bolstering the economy and employment; promoting healthy active communities; responding to rural and northern communities; protecting the environment and managing resources; promoting coordination and integration” (Ministry of Municipal Affairs and Housing, 2014d). Examples of new policy areas that were included in the 2014 document are: providing connectivity among transit modes, a promotion of transit orientated development and the requirement for land use planning to consider the potential impacts for climate change (Ministry of Municipal Affairs and Housing, 2014e).

5.2 Ottawa's Official Plan

As mandated by the PPS, Ottawa's Official Plan details the City's growth plans given the framework set out by the provincial government. The City's latest Official Plan (OP) was adopted in 2014 and represents growth strategies up to the year 2021. The Act requires that municipal OP's be reviewed every five years. Compared to the previous two documents, a municipality's OP defines specific targets and policies to manage and direct municipal growth in the various Ottawa neighbourhoods. According to the MMAH, there are six areas in particular that municipal OP's must address: "land uses, transportation, environmental protection, urban design and renewal, sewer and water services and management of growth or change" (Ministry of Municipal Affairs and Housing, 2014b). The Official Plan is a significantly large policy document and it consists of multiple volumes. Volume 1 is the Official Plan itself and it specifies how it will meet provincial interests by using the tools provided under the Act and PPS (City of Ottawa Planning and Growth Management Department, 2014d). This is followed by Volume 2: Secondary Plans and Site Specific Policies. Permitted under the Planning Act, Secondary Plans outline specific policies, targets and codes that apply to a neighbourhood (City of Ottawa Planning and Growth Management Department, 2014d).

While land use policy direction and initiatives are outlined in the OP, the enforcement and implementation is done through zoning by-laws, which provide the legal basis for the planning process. Along with legislative force, the document specifies land use categories (i.e. residential or commercial) for every area and requirements and standards associated with each property type (Ministry of Municipal and Housing Affairs, 2013b, 13).

5.3 Ottawa City Council and the Planning Committee

As the developer and administrator of planning policies, City Council and the Planning Committee more specifically, are key players in the process. Ottawa City Council is led by

current Mayor Jim Watson and 23 city councillors. This is complemented by 11 standing committees (Agriculture and Rural Affairs, Audit, Built Heritage Sub-Committee, Community and Protective Services, Environment, Finance and Economic Development, Information Technology, Member Services, Planning, Transit and Transportation Committees (City of Ottawa, 2015b)). Furthermore, four citizen advisory committees exist to assist with policy and program development. These committees consist of citizen volunteers with relevant expertise. They are appointed by Council to serve the Term of Council. Advisory Committees for the 2015-2019 Council term includes: Accessibility, Arts, Culture, Heritage and Recreation, Environmental Stewardship and French Language Services (City of Ottawa, 2015b).

Ottawa City Council and the Planning Committee work in conjunction with the planning department to ensure that the Official Plan passed is consistent with the PPS. While the Planning Committee has the ultimate decision making power as it relates development, the City's Planning Department is the point of contact for residents and developers on technical and procedural planning questions (City of Ottawa, 2015 c).

Recognizing the need for stakeholder engagement on the Official Plan review process, Ottawa City Council, led by the Planning Committee held a Planning Summit on April 26, 2012. According to the final report, stakeholders in attendance identified four key priority areas for Official Plan review. These priorities included: intensification methods and targets (including compact and vibrant neighbourhoods); TOD at light rail stations in particular, suburban and rural development and the strategic development of Ottawa's current and emerging "employment lands" (City of Ottawa, 2012c). In particular, the report noted high levels of optimism around participants for transit-orientated development in Ottawa. According to the report "participants had a clear image of transit-orientated development, featuring green areas, a mix of jobs,

affordable housing, and convenient services which are well-designed for pedestrians and cyclists.” On the topic of intensification, participants argued that “tall buildings” were not required to meet intensification targets, and that four to six storey buildings could achieve the same targets and would more easily integrate into many existing areas. That being said, participants felt that well-designed tall buildings could potentially add character to the city and fill housing needs for young people, retirees or affordable housing tenants. The participants identified certain community and building characteristics that would ensure the viability of tall buildings but, noted that implementing tall buildings would be more difficult as a result of the protections surrounding the Parliament Hill views (City of Ottawa, 2012, 68). (As well, comments on the state of suburban neighbourhood development were mixed, as some participants believed “newer communities outside the Greenbelt are denser than communities inside the Greenbelt.” Whereas other participants cited the need to increase strategic community development through complete community principles and limit development to already built up areas (City of Ottawa, 2012, 63). Finally, the Planning Summit participants agreed that all communities “need to accept a share of intensification” but, it is ultimately the role of the City to guide this process and clarify what and how intensification will mean to each community (City of Ottawa, 2012, 64).

The Planning Summit is an example of Ottawa’s progressive approach to urban planning. Convening unlikely partners to solicit formal consultations bodes well for the city’s potential to involve key stakeholders in the decision making process. Furthermore, it is promising that the consultation outcomes featured smart growth policies so prominently. This points to a public interest and demand for the city to better implement policies like transit orientated development, complete communities and urban intensification. An interested and engaged citizenry will go a

long way to supporting the implementation of smart growth planning.

6. Theoretical Framework

6.1 Background

Based on the literature review, it is evident that the field of urban sustainability and land use planning is characterized by its complexity and the networks of policy issues and players involved. As a result, a theoretical framework was chosen based on its ability to reflect these layers of complexity and multitude of interconnected networks. This section will discuss the use of stakeholder analysis theory and how it can be used to understand the current policy, political and social environment that smart growth policies must operate in. This section will begin with a discussion of the theoretical history of stakeholder analysis and will be followed by a discussion of how these theories have been previously applied to the urban sustainability field.

The research will be analyzed with stakeholder analysis theory using tools and methods from the theory. Stakeholder analysis is the process of determining “who interested parties are, who has the power to influence what happens, how these parties interact, and based on this information, how they might be able to work more effectively together” (Reed, M et al, 2009, 1947). The definition of a stakeholder varies depending on the context but it can generally be defined as anyone who will be affected by a proposed development and therefore should have his or her views reflected in the project’s final outcome (Bourne, L et al. 2005). Although, defining the concept is inherently difficult due to the issues associated with determining to what degree and individual must be impacted in order to be considered a stakeholder. Wagner Mainardes, Avles and Rapso (2011) argue that the theory’s relative infancy and vague nature allows for it to either be applied restrictively or broadly. It is ultimately therefore, the responsibility of the researcher to establish limits and define the concept. Given that stakeholders can be defined differently according to the researcher’s perspective; a detailed methodology is vital.

Another aspect of stakeholder theory that can be considered either positively or negatively are the various iterations and competing definitions that have been developed since the publication of Edward Freeman's (1984) book *Strategic Management: A Stakeholder Approach*. The various definitions can again be attributed to the inherent flexibility and interpretive nature associated with the theory. Freeman introduced the concept of stakeholder relations as a central requirement for business firms' success and profitability. This theory was in opposition to the importance that was previously placed on shareholders and business profits. Freeman argued "we need to understand the complex interconnections between economic and social forces. Isolating "social issues" as separate from the economic impact which they have, and conversely isolating economic issues as if they had no social effect, misses the mark both managerially and intellectually" (1984, 40). This paradigm shift made the case for the economic and business benefits of improved stakeholder relations. As the early literature was rooted in business and management fields, the moral or social value of stakeholder engagement was not as deeply explored as the economic interests. Although, the theory was noted for its shift away from stockholder centric business models and, instead considers the social value of stockholder and stakeholder relations (Laplume et al., 2008, 1152). Again, one of the major arguments at the time against this paradigm shift (and is still being discussed to this day), was the expanded number of individuals and organizations that would need to be considered by firms in their decision making processes (Friedman and Miles, 2002). Freeman addressed this criticism in his 1994 follow up publication by clarifying how to define organizational stakeholders. Freeman describes this as "The Principle of Who and What Really Count." Freeman concedes that the open-ended nature of this principle is both beneficial in the sense that a variety of potential stakeholders must be considered. Although, it can be detrimental in the sense that it can be

difficult for academics and practitioners to know where to draw the line. To avoid inconsistency and ambiguity, Freeman suggests that each potential stakeholder should be analyzed to determine the relationship between the principal and agent stakeholder to understand the strength and relevance of their connection (1994, 412). As stated earlier, this will require a detailed methodology so that other researchers can follow the line of logic associated with the stakeholder analysis.

In an attempt to define the specific concepts associated with the theory, Jones and Wicks (1999) outline four main components of stakeholder theory.

- 1) Firm has socio-economic relationships with stakeholders, not just economic relationships with stockholders (stakeholders as defined by Freeman 1984).
- 2) The nature of these relationships is subject to analysis to determine their strength, relevance, influence and decision-making impacts.
- 3) Legitimate stakeholder interests have “intrinsic value” meaning that one set of interests is not considered more valuable than another set. Although, there can be layers of stakeholder interests i.e. Group A is assigned a higher level of stakeholder value versus Group B based on the characteristics outlined in point 2.
- 4) Stakeholder interests are used to guide firm’s decision-making process with the ultimate goal of improving the firms socio-economic performance and value.

Jones and Wicks argue that these four components are meant to illustrate convergent stakeholder theory, which combines instrumental theoretical methods and normative, everyday expectations. This serves as an illustration of the theory’s application to practical situations.

Early and ongoing debates about competing stakeholder and business interests highlight the difficulty and flexibility required when defining the concept. Arguments against the value

and/or use of stakeholder theory focus on how the fluidity of the definition can undermine the analysis and ultimate firm outcomes. Jensen (2002) argued that stakeholder theory aims to increase the involvement of all firm stakeholders but, firms should be instead concerned with the long term value maximization of their decisions. The author questions the value of stakeholder theory since the various and competing priorities held by stakeholders prevent a company's true value maximization potential if their ability to define or achieve specific targets is limited as a result of competing stakeholder interests. Or as the author refers to it, "multiple objectives are no objective." Jensen ultimately concludes that if firms prioritize value maximization, the resulting benefits will trickle down to all stakeholders and ensure social welfare without having to focus on particular groups or networks. Similarly, Margolis and Walsh (2003) argue that firms are increasingly required to present a socially conscious exterior but, firms and their stakeholders often have different operating values and norms which undermine true cooperation. Therefore, Margolis and Walsh question the true value coordination of stakeholders and firms. While these two authors question the role of stakeholders in non-business interests, separating financial and business interests from societal impacts is not always realistic.

This also reveals the question about to what degree stakeholder theory should consider ethical debates. This is also a defining argument in the literature. While the business ethics literature is closely tied to the early management research, the question of moral relevance is certainly pertinent in cases where government and decision-making institutions are involved. As these organizations interact and serve individuals as a part of their mandate, public feedback and engagement would be in line with their operations. Therefore, stakeholder theory and practice is particularly important for these industries that are publicly accountable.

In an attempt to categorize the various theory streams and underlying research values,

researchers (Reed, M et al. 2009; Jepsen, A. et al. 2009; Hörisch, A, et al. 2014) have advanced a “typology” of stakeholder theories. Stakeholder theories can be categorized as either normative or instrumental. The former is grounded in the rights and responsibilities that citizens’ hold to democratic participation and is often associated with academic and policy research (Reed, 2008, 2418). Alternatively, instrumental theories reflect the business management roots of stakeholder theory, which identifies the concept as a means to an end. These theorists are concerned with the methods and outcomes used to conduct stakeholder analysis (Reed, 2008, 2419). Frooman (1999) defined the difference between the two types as strategic and moral stakeholder theory with the latter concerned with the balance of interests and equity among stakeholders. The former describes stakeholders as interests that must be managed or “dealt with.” At the time, Frooman called for more emphasis in the literature to be placed on analyzing relationship through the stakeholders’ point of view as well as focusing on the relationships between different interests instead of analyzing stakeholder interests in silos. Although, Freeman (1994) argued that there is little value in attempting to categorize various iterations of stakeholder theory based on whether they are normative or instrumental. He cautions against this separation because the two areas are inextricably linked in practice and it is only in academia where it is possible to separate and categorize these two areas (1994, 413).

This attempt to categorize the literature illustrates not only the multiplicity of situations that stakeholder theory applies to but, also the increasing awareness by all sectors of the power that stakeholder hold over decision-making structures. In regards to the use of stakeholder theory to analyze networks, Laplume et al., (2008) argues that stakeholder theory resonates among academics and practitioners alike due to its emotional connections. The principles of open dialogue and cooperation are deeply rooted in individuals and groups and individuals are

personally interested in these principles.

Stakeholder theory was chosen as the theoretical framework for two reasons. Firstly, the research process is meant to illustrate how stakeholders define policy problems differently and frame the issue differently according to their vested interests. Using specific methods and tools from stakeholder theory can guide this process. The qualitative data collection and analysis process will demonstrate where and why gaps, concerns and barriers exist among stakeholders that will ultimately prevent the necessary stakeholder support. Secondly, stakeholder theory similarly prioritizes both the theoretical identification of stakeholder connections, concerns and values as well as the development of practical solutions. As this research topic involves normative policy questions coupled with practical implementation concerns, it is expected that the literature review will draw from both types of stakeholder theories. Furthermore, methods from instruments stakeholder theory will be utilized in the data analysis process.

Since stakeholder analysis theory emerged out of business and commerce fields, there have been alternatives frameworks identified by other disciplines to better suit their needs. One particular stream relevant to this research is theories emerging out of stakeholder management and specifically collaborative stakeholder dialogue. Baumann and White (2015) define traditional stakeholder management as adversarial where stakeholders are seen as competitors that are involved in a zero sum game. The authors suggest collaborative stakeholder dialogue (CSD) as an alternative. The theory is characterized by its focus on consensus-based outcomes and collaborative processes as opposed to the evaluation of specific outcomes. The authors define collaborative stakeholder dialogue as a theory, which essentially calls for closer communication between all stakeholders as a means of undertaking a “joint learning process where they develop a shared understanding of each others’ values, interests and knowledge”

(30). This process uses shared learning experiences to build networks between stakeholders as opposed the usual confrontation style taken to consultation. Although, this is a specific method and would still be considered as a part of broader stakeholder theory, it advocates for a focus on collaborative decision-making, not just the ultimate process outcomes.

6.2 Limitations

It is important to take note of a few pertinent research gaps in the stakeholder theory literature. Primarily, the topic has not been extensively developed within urban planning literature. As the theory originated in business management, there is a strong basis developed in this research area but this depth has yet to extend to other research areas. Stakeholder theory is applicable to the decision-making processes and structures within urban planning theory but comparative research is still emerging. Regardless, the broader theory has strongly developed. Laplume, Sonpar and Litz (2008) conducted a review of 179 academic articles on stakeholder theory between 1984 and 2007. Based on the frequency and salience of the articles, the authors conclude that both theoretical and empirically streams of stakeholder theory have reached academic maturity since the early 2000's.

Stakeholder theory will be used as a normative framework that will be the basis for the data collection analysis.

6.3 Stakeholder Analysis in the Ottawa Urban Sustainability Process

George (1990) stated, “there are no ecological problems, only the social and political problems that invariably underlie and cause ecological damage” (225). This suggests that at the root of sustainability policy issues are social and communicative issues that need to be collaboratively addressed. This stakeholder analysis will further this argument by focusing on the relationships and objectives among stakeholders as a policy driver. This departs from the notion

that a well-crafted policy is the ultimate determinant of policy success but, that instead the balance of power is held by key players in the policy process. In addition, it is important to consider the power asymmetries that exist among any network of stakeholders. While this stakeholder analysis treated each stakeholder group as having equal importance and relevance to the decision-making process, in reality, some groups have more agency and power over final decisions. Power asymmetries are inherent to group dynamics as it is not possible for each group to have the highest degree of power possible. However, it is possible that given the many layers, situations and contexts that the stakeholders operate in, power can be fluid and even though a particular stakeholder may be the most powerful in a specific context, they could lose their power in an entirely different context. Examining power dynamics among this network is pivotal to understanding how decisions related to urban sustainability policies are made, who can influence them and where further support is required. Therefore, the stakeholder analysis will include a power dynamics analysis.

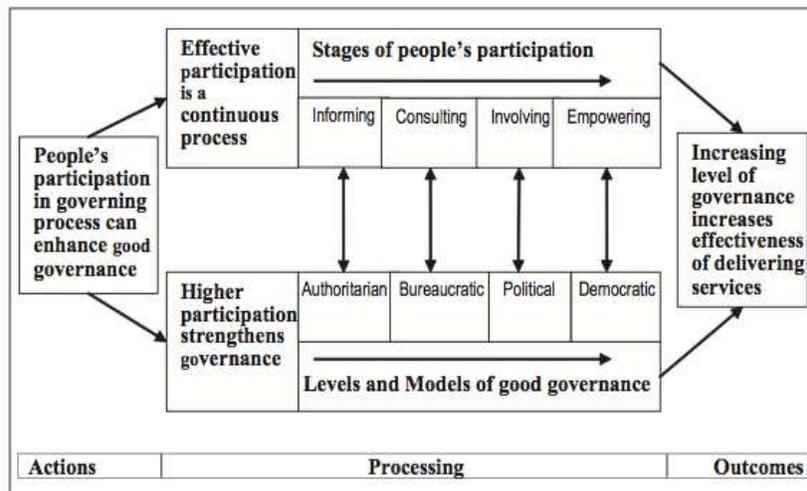
Based on the literature review, the stakeholder analysis will take an instrumental approach and focus on applying stakeholder tools to the data analysis process. The analysis will use two main theoretical procedures. Notably, this analysis will avoid making normative assertions based on the theory and will instead aim to describe the nature of the relationships and their impacts on the decision-making process.

Firstly, Waheduzzaman & Mphande (2014) researched how theories of participation and engagement could be understood and adapted to support effective implementation of development programs through the Government of Bangladesh. Their research advocated for participatory or “good governance” as the ideal model for policy development. “Research has shown that people’s participation in local government affairs increases the accountability of the

authority and the transparency of the works, which are, in turn, conducive to local good governance and sustainable development” (2014, 38). The researchers argue that in order to support increased, genuine public involvement, the political and policy systems would need to become more accessible to citizens – citizens need to be able to give feedback and see how their feedback travels through the decision-making process.

In light of the changes described by Waheduzzaman & Mphande, it is evident that governance and decision-making models are no longer linear; mayors and councillors are not necessarily at the top of hierarchical decision-making ladders since citizens are increasingly demanding more cooperation, transparency and involvement in the process. As seen in Figure 1, the researchers labeled four stages of participation ranging from the least involved in the governance model, informing, up to the most involved, powering. This coincides with four governance models that directly correlated with each four stages of participation. These models (in order of increasing public participation) are: authoritarian, bureaucratic, political and a democratic model. This diagram ultimately illustrates that good governance cannot be done by one individual, organization or party in particular. The researchers describe this shift as “the public administrator’s role undergoes a transition from expert to enabler. The citizen’s role undergoes a transition as well, from “passive observer to active participant” (39). The importance of public participation and its positive impact on the legitimacy and sustainability of the decision making process will certainly be considered throughout the data analysis. Particularly, in the context of how stakeholder analysis should focus on developing urban sustainability policies through this good governance lens.

Figure 1: Stages of Public Participation



Waheduzzaman & Mphande (2014). P.44

Bryson (2004) conducted a literature review of stakeholder identification and analysis techniques and compiled four main analysis categories involved in the stakeholder analysis process beginning with the initial problem identification up to the policy implementation stage. Although this article was written from a business management perspective, there are nonetheless significant parallels to the political and policy realm. Bryson identifies these research tools as a response to “the need for stakeholder support to create and sustain winning coalitions” (2004, 23).

The four steps are described below. The methods outlined below will be used in the Discussion section to assist with the data analysis.

1. Choosing Stakeholder Analysis Participants

This section includes identifying the purpose for the stakeholder analysis and the subsequent players that need to be involved. Bryson (2004) describes this as a series of choices that require consistent trade-offs to manage the scale of participants involved (28). For this step, two methods will be used, the “basic stakeholder analysis technique” which requires that a list of potential stakeholders be devised and each group is described based on its relation to the organization,

expectations, opinions, desired outcomes, and long term issues/concerns (29-30). This will be accompanied with a Power vs. Interest grid as piloted by Eden and Ackermann (1998). The four squared grid rates power and interest in an issue. Based on this rating, individuals are sorted into four categories: players who hold high interest and power; subjects are those with interest but not power; context setters have low interest but high power; and the crowd which holds both low interest and power (2003, 31). These two methods will be combined to describe the current status of the stakeholder groups interviewed.

2. Creating Ideas for Strategic Interventions

Bryson (2004) identified three main components of this stage: problem formulation, solution search, and political feasibility (32). This stage requires an organization to determine how stakeholder should and/or can be involved based on the identified problem and the potential solutions. Therefore, this section focuses on aligning both power and interests (34). According to Bryson (2004), “a set of diagrams is needed that shows how each individual’s bases of power-directions of interest diagram links to the supra-interests (36). For this step, a Bases of Power-Directions of Interest diagram will be constructed for each stakeholder. This diagram includes an analysis of the following indicators: directions of interest, bases of power, perspectives, available sections and support mechanisms. This will be followed by a Stakeholder-Issue Interrelationship diagram. The latter being an arrow diagram that depicts the major problem or issue frames and how each stakeholder connects to the issue (37).

3. Proposal Development Review and Adaptation

While the previous steps were concerned with defining the stakeholders and the problem, the third step takes the proposed method or strategy of stakeholder engagement and reviews it against existing interests and concerns. This determines the likelihood of support and/or origins

of opposition (Bryson, 2004, 41). For this step, the previously identified barriers will be listed along with previously identified opportunities to overcome these issues. This subsequently analyzes the attractiveness of a particular policy.

4. Policy Implementation Techniques

This last step relates to the strategic planning and requires the development of a Policy Implementation strategy. The following steps and indicators involved in this analysis: Interest, resources, available action channels, probability and type of participation, influence level, implications for policy implementation.

These four steps will be used to analyze the interview data results. According to Bryson, this step ultimately culminates in the development of an action plan for policy implementation.

Finally, to further clarify how a stakeholder is defined, Kennedy (2011) used stakeholder analysis methods to identify those who had a stake in the implementation of sustainable urban drainage systems. This analysis will use the method identified by Kennedy to define who relevant stakeholders are in the Ottawa urban sustainability policy field. The four filters for identifying and defining relevant stakeholders are:

1. Substantially versus potentially affected individuals: in a policy field with multiple layers of issues and actors, actors can be grouped by the degree to which they will be affected by a decision or program. To narrow the scope, this stakeholder analysis will focus only on those individuals or groups who will be substantially affected.
2. Stakeholder roles: A description of the organization or individual and their relation to the issue or program.
3. Benefits, costs and risks: These three considerations can be developed either from the point of view of the stakeholder or the organization that is handling the process.

4. Level of involvement in the process: This describes the degree to which stakeholders are involved in the decision-making process. Given that urban planning decisions have multiple stages of decision-making; these levels of involvement can vary. A combination of the stakeholder analysis tools will be used in the research analysis below.

7. Research Methodology

The purpose of this research is to determine land use planning stakeholders' perceptions, attitudes and knowledge regarding land use planning and how this impacts the potential implementation of smart growth policies in Ottawa. The research aims to uncover what opportunities and barriers face the implementation of smart growth planning policies in Ottawa based on an analysis of key stakeholder interviews. A stakeholder analysis according to the methods outlined in the theoretical framework will be conducted in the discussion section.

7.1 Participation Criteria and Description

Criteria were developed in order to identify relevant and experienced individuals while consequently narrowing down the potential participants for accessibility and time reasons. Based on the research goal, participants recruited for this study were required to have interacted with the Ottawa land use planning and/or Air Quality and Climate Change Management processes at some point in the previous two years (2013-2015). Interactions included attending a public consultation or planning committee meeting, volunteering on a planning committee board or their local community association, writing a letter to a city politician on a planning or climate change related matter. These were the basic determinants for whether or not a citizen was involved in the land use planning process. Other participants had more significant experience including leading and implementing the development of land use planning documents in Ottawa and leading community based organizations. Initially, the research process solely planned to

recruit residents from the downtown Ottawa neighborhoods defined as Ward 14, Somerset Ward and Ward 12, Rideau-Vanier. This location specification was initially chosen to narrow down the potential participant. But, as a result of the initial response from individuals who were invited to participate, a few commented that they were aware of other individuals outside of the ward who would be interested in participating. The response rate to the initial email invitation was not as high as initially anticipated therefore by removing the demographic qualifier; more participants were able to participate.

Despite the removal of the demographic qualifier, all the participants resided inside the Greenbelt and therefore brought a downtown perspective. The lack of suburban representation among the research participants was done to manage the research scope but it certainly presents a research limitation since this perspective was not included. As a result, these research findings do not aim to describe or understand the implementation of smart growth from a suburban perspective.

The study focused on recruiting 12-15 interview participants involved in Ottawa’s land use planning process. Based on the invitation responses, six stakeholder groups were created to categorize research participants. A description of each stakeholder group will be provided below. Table 6 lists the groups involved and the number of research participants from each group.

Table 6: Research Participants and Stakeholder Groups

Stakeholder Group	Number of Participants
Community Association Leaders	3
Local Climate Change and Planning Experts	3
Urban Residents	2
City of Ottawa Planners	2
City Councilor and Political Staff	3
Real Estate Developers and Consultants	3
Total Participants	16

In total, there were six stakeholder groups who participated in the process for a total of 16 participants. The stakeholder groups are described as follows:

Community Association Leaders

The individuals recruited for this category are either currently or were recently executives on their community association board. These participants had all lead community association involvement with various development projects in their respective wards. Two of the three respondents in this category had led their community association's planning sub-committee and therefore expressed a high degree of interest and knowledge on this topic. This group offered perspectives on how community associations and citizen leaders interact with the land-use planning process as well as with the other stakeholder groups listed.

Local Citizen Experts (Climate Change and Urban Planning)

This group consisted of residents who were experts in fields related to land use planning and urban sustainability principles in Ottawa. While each of the stakeholder groups are experts in their respective fields, this group is distinguished by its role as expert and official interlocutors between different stakeholders. For example, the participants in this category have either been formally asked to or, have voluntarily offered to provide expert testimony to City Hall. This group is considered to be opinion leaders throughout the process either by writing blogs, news articles, or leading consulting firms that work on these issues in Ottawa. Unlike the other groups, they are often regarded as objective expert advisors. All of these respondents were experts in urban sustainability issues; in particular climate change and two of the three respondents were considered experts in land use planning processes and citizen engagement.

Urban Residents

This group was composed of local residents who were otherwise not involved in or

knowledgeable of the land use planning or urban sustainability principles until there was a condominium project developed adjacent to their property. The residents were both from Rideau-Vanier ward and reported not having any previous expertise or understanding of this issue area until the adjacent development project began to structurally impact their properties. These individuals provide the perspective of ordinary citizens who are attempting to navigate the land use planning process while juggling competing priorities and lacking formal expertise in these topic areas.

City of Ottawa Planners

The two city planners included were senior city planners who had significant experience with the development review process. Both planners had experience working on projects in the urban area and one of the planners was currently working on the implementation of the city's LRT project. Particularly relevant for this research was that both planners also reported having significant experience working on community consultations as well as providing advice to the Planning Committee. These planners will therefore offer a perspective not only on their own work related to land use planning and sustainability but, they also provide a perspective on how their work interacts with the other stakeholder groups in this research.

City Political Staff

This group is comprised of three individuals who held senior positions within the office of a previous City Mayor and a former city councillor for an urban ward. Two of the individuals had previously led the development of major land use planning documents and had worked on the strategic implementation of these policies. As well, the former city councillor had significant experience working with the community on major development projects in the ward. Due to their leadership and experience with planning strategy and development, this group provides a unique

political perspective on these processes.

Real Estate Developers and Consultants

The final group contains three individuals who work on land use planning from the perspective of the development industry. One of the respondents represented a large real estate developer currently working on development projects in Ottawa's urban area. The two other individuals worked at a local consulting firm that commonly works with development firms to assist in the managing and implementation of development projects. The individuals in this group are all senior level planning and development officials at their firms. These individuals have experience in steering development projects from the initial conception phase up to the actual implementation and post evaluation of a project.

7.2 Recruitment

As a result of the experience needed in order to participate, potential participants were recruited through local community organizations and relevant civic engagement and urban sustainability organizations based in the Centertown and Rideau-Vanier neighborhoods. This multi-stage, random sampling method therefore initially required the consent and participation of these local community organizations. Initially, focus groups, not interviews were the data collection method therefore invitations for three separate focus groups were sent out. Due to a low response rate and feedback from participants, this method was changed to one-on-one interviews. Further information about the method change will be provided in the following section.

The initial recruitment email was sent to 5 Centertown community organizations (see appendix). As mentioned above, the organizations selected reflected a range of community interests in an attempt to draw a variety of participants in the field of land use planning and

sustainability. The President, Executive Director or those in a similar leadership position of each organization were contacted. The initial recruitment email (see Appendix) asked these leaders to pass along the invitation to the interview to individuals who are members/employees of their organization. The initial email sent to the community organization leaders included the individual invitation letter for potential participants. Organization leaders were asked to forward this attached invitation letter to potential participants. Organization leaders themselves were also welcomed to participate. In order for the primary researcher to maintain a count of the number of invitations sent out, the initial email requested that the researcher be copied on any invitation emails sent out to organization members.

Based on this initial round of recruitment, 8 participants agreed to participate in a focus group. These participants were then asked during through a follow up email if they knew of anyone else whom they felt would be a relevant contact for this research. The remaining participants were contacted through this snowball sampling method. This method allowed for the inclusion of participants who may have otherwise not received the invitation or who would have been difficult to reach through the first invitation round. Approximately two weeks after the initial focus group invitation was sent out, it was determined based on feedback and the low response rate that the data collection method would be changed from focus groups to individual interviews. Further detail of this change will be provided below.

7.3 Interview Design

The interview design process underwent a major change during the participant recruitment process. As mentioned in Section 7.2, focus groups were the original data collection method chosen because it was anticipated that a sufficient number of individuals (18-30), would express interest in participating and discussing urban sustainability issues. Response to the first

email invitation did not produce the minimum number of participants sought and multiple individuals responded to the invitation email inquiring as to whether there were alternative methods to submit feedback on the topic (i.e. email or phone call). As a result of this feedback, the decision was made to use one-on-one interviews as the primary data collection method instead of focus group sessions. This decision was made to include as many different participants as possible. As well, by changing the research method, there was also an expanded reach to initially unanticipated participants and stakeholder groups. Using one-on-one interviews allowed for the participation of a variety of respondents who might not otherwise feel comfortable speaking on the topic in a focus group setting (i.e. city planners, city political staff). The one-on-one interviews produced a different dynamic compared to that of focus groups and respondents who held more sensitive information may have been more willing to speak candidly on their experiences. Overall, this change in method allowed for an increased number of stakeholder groups to be involved and improved the scope of the stakeholder analysis.

This decision required an amendment to the Carleton University Research Board Ethics application in order to reflect the expanded research population and new data collection method. This amendment was approved.

Each interview used a semi-structured method meaning that there were certain research themes that were covered in each interview but every interview was slightly tailored according to the experience and interests of each individual. See the Appendix for a copy of the interview design guide. Three major themes were explored in the research. They included: perceptions, knowledge and experience of urban intensification and the land use planning process; perceptions, knowledge and experience with the policy implementation process associated with smart growth planning policies; and personal interest and support for urban sustainability

initiatives. Specific interview questions were tailored according to the individual participant.

8. Results

8.1 Findings by Stakeholder Group

In assessing these findings, there are two methodological considerations to keep in mind. First and foremost, this group of research participants does not represent the average Ottawa resident. These individuals are leaders in their respective fields and are for the most part, heavily involved and engaged in community development and urban sustainability. Whether it is their day job or a time consuming side project, it was clear that these individuals engaged with the issues of urban development and sustainability at a level that most City residents may not be able to. For this reason, these results are not generalizable to the Ottawa population. The trends and patterns established in this research represent a fraction of the City and further research with an increased number of respondents would be necessary in order to solidify these findings. This relates to the second research consideration, given the time and scoping limitations of this research project, it was not possible to expand the size of the research population. These 16 residents have been identified to represent their stakeholder groups but given the contentious nature of this topic, it is likely that these residents do not represent a consensus view of their respective stakeholder groups. There are likely factions and differing opinions among each stakeholder group therefore these results are not intended to be generalizable, even within stakeholder groups. Again, further research would be required to test and validate these study conclusions. Nonetheless, as some of Ottawa's most active, engaged and knowledgeable residents on this topic, these people serve as opinion leaders in their corresponding communities and their perspectives and experiences on the issue are valuable in assessing the potential for urban sustainability policy implementation.

As a result of different priorities and considerations among stakeholders, unique findings

emerged from each group. There were however a few common barriers and opportunities that were identified by the research population as a whole.

Firstly, every single interviewee agreed that urban sustainability was important to the current and future development of Ottawa. There are two caveats to this finding. One being that the potential for social desirability bias in answering this question is high. That is to say, individuals likely feel some degree of social pressure to say that urban sustainability and environmental well-being are important in an abstract sense. Whether or not individuals are willing to act on this is a different question. As a result of this question bias, it is important to analyze how each group discusses potential courses of action such as policy commitments or on the ground action related to sustainability.

Secondly, individuals defined urban sustainability in a slightly different way. Some had extensive knowledge of the theoretical principles and typical components of smart growth development, while others were only able to articulate their support for the concept through a series of probing questions. Common trends that emerged included a preference to discuss this issue area as a “sustainability” challenge, and the term “smart-growth” was only used by a select group of very knowledgeable individuals. This suggests that discussing these principles through an urban sustainability frame would be more accessible and better understood than “smart growth.”

In terms of how “urban sustainability” was defined, every single individual characterized it as involving pedestrian orientated neighbourhoods and ample green space. Again, respondents with more knowledge identified a broader range of urban sustainability characteristics but all participants identified at the very least these two concepts. Similarly, every participant stated that they were aware that increased development was “inevitable” or even “desirable” in their

neighbourhood in order to achieve walkable neighbourhoods. Albeit, there were varying levels of support and certain qualifiers that respondents attached to “acceptable” development. These will be further discussed below. In any case, all participants could articulate at the very minimum, an understanding of well managed intensification as a precursor to liveable neighbourhoods. No single respondent came out in opposition to intensification as a policy goal.

The last common theme among each stakeholder group was that the overwhelming majority of participants stated an explicit desire for Ottawa to live up to its potential or to own its status as a capital city. Many participants linked urban sustainability as an avenue to develop and grow Ottawa to be a leading, world-class city. Participants believed that much of Ottawa’s draw and uniqueness was connected to its proximity to nature and participants expressed a desire to protect this image. A majority of the participants stated that the city could be working more on the type of visioning needed to develop Ottawa in this manner.

The following sections will discuss findings specific to each stakeholder group. Three findings for each group were identified as they relate to potential barriers and opportunities to urban sustainability policy implementation.

8.2 Findings: City Political Staff

1. Skepticism about Citizens’ Willingness to Accept Sustainability Policies

All three participants stated their personal support for urban intensification and explained that that they were vocal about their support for policies like urban intensification and urban growth boundaries within their own neighbourhoods. All three had significant experience in the policy development process and in development project review. Unlike the other stakeholder groups though, these respondents directly questioned the ability of Ottawa residents to accept, support and vote on urban sustainability policies. Participant 6 argued, “it’s terrible to say but,

you don't win elections on climate change. People vote on a mix of different policies like taxes, healthcare and schools... Everyone likes the notions of sustainability, density and height until it affects them." Respondent 9 expanded on why residents seem to support sustainability abstractly but are not willing to follow up and act on it. "The barrier is that a good majority of our city residents live these suburban lifestyles. They don't want to hear the argument because they're the beneficiaries. The alternative is that they have to pay more." As discussed in the literature review, the majority of Ottawa residents do not live urban lifestyles therefore, the short term costs of urban sustainability policies could financially impact these non-urban residents. Given the associated political and financial costs, all three respondents reported that elected officials were not willing to seriously address the issue because they felt that the majority of respondents did not actually support these policies. Participant 16, a previous city councillor who closely aligned herself with smart growth policy confirmed this and she argued "City Council was very divisive on this file. In fact, many flat out rejected my efforts to introduce progressive sustainability policies. It was always a really hard, uphill battle that I almost always lost." Participant 16 reported a sense of issue fatigue and reported feeling "at times discouraged and I often questioned whether or not I should keep fighting against all these councillors, even if it's what my community wanted." Participant 16 stated that there was interest in her urban ward for good intensification, bicycle lanes and greening initiatives but she agreed with the other two participants that issues like climate change and smart growth as a whole were too abstract to receive broad public support, particularly outside the urban core.

If elected officials and political strategists don't believe that climate change and the environment are winning policies, this presents a cyclical issue. Meaning that if residents do not advocate or express their support for this issue, politicians also won't advocate for the issue or

put it on the public agenda. If neither group takes the initiative to lead this issue, it is possible that it will remain marred in political gridlock. As the three individuals interviewed represented senior political staff to a Mayor and a city councillor, there is the potential that this perception exists among other political staff. The interviewees acknowledged that there was a high degree of capacity to understand the issue among Ottawa's well-educated residents but, ultimately, the group argued that once residents heard about the increased, immediate costs associated with policies like limiting suburban sprawl or changing the development charge structure, they would likely change their minds. Participant 9 summarized this as "I don't think the city can do it because I don't think enough people care. They're not prepared to make the sacrifices in lifestyle that are required. If they don't compost or recycle then how can they do this?"

2. Bureaucratic Inertia as a Political and Policy Barrier

All three respondents believed that there was rigidity and sense of risk aversion within various City departments that constrained innovative political decision-making and that complicated the development process. Interestingly, all the respondents each had negative experiences when trying to push through projects. Participant 9 stated that city bureaucrats "believe they know best. That's the mindset they have. They have their plans and that's the end of the story." Participant 16 recalled an instance where senior city bureaucrats refused to assist in the development of a pilot sustainability initiative in her ward, which Participant 16 attributed to a lack of willingness to go against the status quo and significant risk aversion within the department.

The respondents identified this real and/or perceived lack of flexibility as a barrier to successful project development. Participant 6 stated "The city will reject projects and programs since it doesn't fit into their cookie cutter policies, even if it's going to really add something to

the neighbourhood.” Participant 6 gave the example of a development project in suburban Ottawa where the developer wanted to provide homebuyers with a one-year OC Transpo bus pass as a means of enticing them to purchase the home, but to also use public transit instead of only their vehicles. The idea was rejected on the basis that OCTranspo did not have the family pass in place and “they were unfamiliar with how that would work and how to implement it, even though we could have easily learned from the City of Toronto who already did something similar” (Participant 6). All three respondents stated that the City of Ottawa does not currently have the internal capacity or expertise to implement serious sustainability policies.

The respondents conceded that the bureaucratic structure and rigidity is not necessarily unique to Ottawa and they acknowledged that governments are by nature risk averse. However, the interviewees stated that if the City ever wanted to embrace urban sustainability initiatives, city bureaucrats would need to be more flexible in the review and development process since a lot of the incoming programs will be things that Ottawa does not yet have significant expertise on (i.e. district energy and green roofs). All three respondents stated that significant internal capacity would have to be acquired in order to implement these policies and that the City would have to invest time and resources equipping staff with the knowledge and tools necessary to understand these policies. This second finding is inconsistent with the first finding. The political group initially reported that sustainability policies are not politically viable on a large scale, which means that political leadership from the issue is largely absent. This lack of direction from political leaders, may in fact be tricking down to bureaucratic decision makers as well.

3. Urban Versus Suburban Council Politics

The third most significant barrier that this group identified was the dominance of suburban councillors (in this sense “suburban” includes rural councillors as well), on City

Council. Respondents pointed to the uneven composition of city council that ultimately entrenched support for costly suburban development. Participant 9 argued, “the majority of councillors are outside the urban core. They don’t want to allocate money for bicycle lanes because their residents don’t use them...there are rural/urban divides but we just had to look for sympathetic people. Not all suburban councillors are retrograde. You just have to build political coalitions.” All of the respondents discussed coalition building on issues as a political strategy to make suburban councillors aware of how certain urban sustainability projects could benefit their wards. Respondent 9 pointed to the development of the urban growth boundary as an example of Council’s ability to build policy coalitions and negotiate with suburban councillors. In this case, Respondent 9 stated that a key influence was suburban and rural councillors’ involvement in the consultation process from the onset, which allowed them to feel just as much ownership and power over the issue as their urban counterparts. According to the respondent, this allowed council to work together instead of pitting suburban versus urban councillors. Although, the respondents again echoed the earlier sentiment that if ward residents are not driving public opinion on this issue, it would be unlikely for a councillor to vote differently. Participants also cited Ottawa’s car-orientated lifestyle as a barrier to public support. “No politician has been successful at this. People aren’t taking the priority off of cars and that’s because of the way council is structured. There is no interest or benefit in doing this, you will lose” (Respondent 6). Respondent 16 also made a similar statement as she called for more public pressure on this issue “residents should know how much power they can hold over their councillor. They need to express that power.” When asked about how this council division could overcome, the respondents did not have a concrete solution, and instead reiterated how entrenched these suburban-urban divisions are not just on council but also, in Ottawa as a whole.

8.3 Findings: City Planners

1. Low Level of Coordination with Ottawa's AQCCMP

As discussed in the literature review, the AQCCMP is highly connected to Ottawa's Official Plan and by extension – the planning department. Significant components of the emissions reductions are dependent upon land use planning tools therefore it would be anticipated that a level of coordination with the Planning Department would be required. Interviews with the two planners revealed that they had not read the AQCCMP and that they were unfamiliar with the specific contents of the plan. In a follow up email, Participant 3 stated “I honestly have no clue if my colleagues have read it. I didn't even know it was completed.” He stated that the plan may not have been highlighted to city employees and that it “is a little embarrassing for a capital city.”

When asked about who was now leading the City's climate change plan (given the closure of the community sustainability office discussed in **Section 3.5**), Participant 3's response was “that's a good question... It must come under the policy branch division.”

Participant 4 countered the lack of AQCCMP knowledge by stating that there were other policy documents with similar, overarching objectives that planners focused on. “I think in the big picture we get it. We have an Official Plan that puts it right about how the city should grow. Basically it says we should stop spreading out, we should intensify.”

It is important to note that these planners certainly have a strong understanding of smart growth and urban sustainability principles and are aware of the general issues identified in the AQCCMP. Therefore, this conclusion isn't suggesting that the planners are unaware of sustainability in the Ottawa context. Instead, the question arises as to why there is not better and more substantive policy coordination between the AQCCMP and the city staff who are intended to implement it. This may be attributed to a lack of internal capacity related to the closure of the

city's community sustainability office. This finding will be further discussed in the experts' section but it is worth briefly noting here that if there are no designated resource personnel working on advancing the AQCCMP, it may result in a lack of promotion or coordination and policy implementation of initiatives in the Plan.

2. No Formal Frameworks for City Planners to Incorporate Sustainability Indicators in Planning.

The two interviewees stated that they were unaware of any formal decision-making frameworks in the project review process related to urban sustainability indicators (mainly related to green building features, cycling amenities and complete community principles). That is to say, the project review process did not provide any "assessment or checklist similar to LEED or other rating systems. If developers want to include that, they do it on their own accord" (Participant 3).

This lack of formal accountability was also picked up on by a few of the community association leaders. Two of the community leaders reported that from their experience working on development projects with the city, there was no "sustainability checklist" (Participant 2) that City planners included when assessing a project. Participant 10 felt that city planners had a lack of sustainability expertise and policy tools to implement these policies. As well, developers also acknowledged this lack of formal frameworks. This will be further expanded on in the community leader and developer findings section but it is important to note that this lack of sustainability assessments has been noticed by other stakeholders in the development process.

Participant 4 described an informal process that can be used to assess sustainability considerations "It should be more than just a mathematical framework, you need to look around at what's going on and depending on the scale and the nature of what you're dealing with apply sustainability principles. You may not be able to achieve every goal so what makes sense from a

priority standpoint?” Based on this, it appears that it is the responsibility of individual planners to take sustainability into consideration when assessing projects.

Furthermore, the lack of formal frameworks is accompanied by a departmental culture that doesn't necessarily focus on the sustainability factors of development. When comparing himself to other colleagues in the planning department Participant 3 stated that “I'm a bit different in the sense that I'm very much someone who pushes the envelope for better design and more environmentally friendly type of development. I don't see that in my colleagues in the work that they do, but if you talk to them outside of the office, they do have that perspective, they just don't push for it anymore.” To illustrate this, Participant 3 gave the example of a green building checklist that he and some of his colleagues tried to establish but that the pushback and ultimate termination of the project was from internal management, not from the development industry. “There must have been some discussions among senior management behind closed doors. We kept hitting roadblocks and we didn't know why we weren't getting anywhere” (Participant 3). Based on Participant 3's statement, it is possible that there are internal priorities (or a lack of) that might be acting as a barrier to new sustainability policies or programs. “The planning department has trust issues internally, among senior members and the staff, among councillors and the staff. So there's not enough transparency for everyone” (Participant 3).

As city planners, council and staff serve different interests, it is to be expected that there would be friction during the decision-making process but, if there is a culture of mistrust or a misalignment of priorities within the institution, this could negate or undermine the work being done on urban sustainability.

3. Building Design and Transit as a Sociocultural Motivator

The respondents were both very familiar with controversy associated with urban

intensification. As a potential opportunity to induce public support for intensification, the planners stated that more emphasis should be placed on well-designed buildings. Participant 3 stated, “we now have design standards and a design review panel looking at how a building goes up instead of just the performance measures. Good design and beautiful buildings help build culture and help build interest and desire to be in an area.” Participant 4 emphasized the attractiveness and liveability aspects that should be tied to new development. They suggested that this was one area the planning department could effect change to drive support.

Ultimately though, the group echoed similar concerns as the political stakeholders in terms of engrained suburban-urban council divides and strong cultural attachments to suburban homes and lifestyles. The planners noted that the main solution that their department could provide to these lifestyle values would be to focus on transit accessibility. Participant 4 stated that “The only thing that the city can do is to make transit a good option and make it viable for as many people as possible.” Both planners expressed a level of skepticism at the ability to shift public attachment to suburban lifestyles so they spoke of working within the confines of suburban neighbourhoods and increasing the sustainability and transit ridership in these areas. They cited emerging policy tools that the city is exploring that can assist with this goal including, minimum neighbourhood density requirements and the limitation or complete elimination of parking requirements for new developments. These policies are significant steps towards the types of policy innovations that all the stakeholder groups spoke of. Participant 4 argued “This is very forward thinking planning. It’s different from what the city has done before and it’s a positive development over what we’ve been doing.”

8.4 Findings: Community Association Leaders

1. Significant Resident Expertise and a Willingness to Engage

This first finding was framed as a benefit from the perspective of community leaders but it is possible that other stakeholder groups could label this as a drawback. Each community association leader spoke of the benefits of strong community associations driven by expert community residents. Participant 7 described the highly structured approach of her community association and its planning subcommittee “Both of those bodies held a significant amount of expertise, there were former city planners as well as engaged citizens. And they followed every issue very closely. When it came time for the board to intervene on city council issues, there was a strong subcommittee that could respond.” Given the high level of experience that these associations have cultivated, respondents felt that they could contribute to the City’s decision-making processes but reported significant barriers to doing so.

Participant 2 gave the example of the development process of his community design plan where both the community association and developers had significant concerns with the plan. According to Respondent 2, a few members of the community association partnered with representatives from the development community and created an alternative document with mutually agreed upon suggestions and compromises. In the end, the city planning staff only accepted two of the recommendations and according to Respondent 2 “we didn’t get what we wanted, the developers didn’t get what they wanted, hence why there have been OMB hearings on the CDP. The City had a document that nobody liked.” This example was similar to responses from the two other participants who recalled instances where they tried to participate or provide feedback during the development review process but did not feel as if they were being adequately heard. According to Respondent 10, there was a pattern of “insincere consultation” by the city “The city comes and gives us a proposal and we hate it so then they tell us that we have to go through the committee of adjustment. We don’t want to do that; it’s a long, time

consuming expensive process. The city should have just asked us for our opinion at the outset.”

All the participants expressed a desire to be consulted in the early stages of proposal development in order to have the best chance of effecting change. They also expressed a desire to be better informed about how their feedback was or was not incorporated into the final decision making process.

2. Lack of trust among community associations and City Hall

Respondents described incidents of miscommunication or a lack of trust between themselves and city staff (including councillors). Although, all three respondents stated that city planners and council staff were generally friendly and helpful. Two participants speculated that there was a lack of internal capacity within the planning department that affected their ability to adequately work with communities. Respondent 10 stated “the development planners are always very nice but I don’t think they have enough training or tools at their disposal to make valid decisions about how development will affect us.” Respondent 10 later implied that the planners she had encountered were more concerned with technical details and numbers as opposed to the bigger community picture.

This lack of capacity in the planning department was identified as a potential barrier to good development and positive relations between the community and City Hall. The most commonly cited example of negative relations between community associations and City Hall were community design plans. All three participants provided instances where they believed that existing community design plans in their neighbourhood would dictate the pace of growth but their community instead saw development proposals against what had been initially agreed upon in the CDPs. All three participants cited that previous development decisions against the CDP had caused them to lose trust in the planning department and planning committee. Respondent 2

stated that he and other community association members were willing to become better involved in the CDP process but that it was ultimately up to the City to facilitate this.

Some of this mistrust held by respondents may be rooted in competing visions or understanding about the city's vision for growth management. Participant 2 stated, "The community doesn't believe that what the city thinks is progress, the community does not believe the same thing. It's always trying to push back or understand where the city is coming from on their idea of progress or development." This alludes to alleged miscommunication between the City and community associations. Participant 10 similarly believed that the City could better communicate the rationale behind their development decisions to community associations and residents. Otherwise, this miscommunication can contribute to another potential source of mistrust: an alleged lack of transparency in the decision making process. Participant 7 argued "we want to see the money that is coming from developers, to the city being invested into the communities themselves. We're just seeing the developers getting rich, the City profiting from it and we're last in line for new city resources." This relates to a both a need for increased process transparency and better information channels established between community associations and the City.

This lack of trust among for the City extended to a lack of confidence in the city's ability and willingness to implement sustainability programs. Two of the three participants stated that they did not believe the planning department had enough expertise on issues like climate change or sustainability. Participant 7 recalled, "in conversations with City Staff, I never felt that climate change was a priority or taken seriously." Participant 2 echoed this statement, as did Participant 10 who speculated that the lack of climate change prioritization was connected to a broader lack of long-term planning, "there's a lack of vision and they go item by item as opposed to looking

at the actual plan.” The strained relationship between these community associations and City Hall can be characterized by channels of inadequate communication and concerns over transparency and long term planning.

3. Low community awareness and understanding of urban sustainability

The majority of community association leaders rated themselves as having above average understanding of urban and community sustainability principles. Although, they stated that they would like to be more aware of the city’s ongoing efforts. Moreover, they stated that some of their members and other residents in the ward are less likely to have high levels of awareness or understanding. Respondents cited this low level of awareness and issue visibility as a result of unsuccessful or a lack of communication attempts from the City. All three respondents reported that their wards have not been won over by arguments in support of intensification because they are either “too abstract, too high level” (Participant 2) or “the City doesn’t inform us about this issue” (Participant 10).

Two of the respondents argued that NIMBYism was a potential outcome of these low awareness levels among the general public. Participant 7 described this trend “Even while they may identify themselves as an urban neighbourhood which would logically align them with urban intensification, there is also a real conservation spirit among these groups.” Participant 7 stated that she had witnessed an increasing NIMBY spirit within her neighbourhood and reported witnessing new condo neighbours be “visibly rejected” by existing residents. Each of the three participants argued stated that they would not describe themselves as NIMBY and as Participant 2 explained, NIMBY was a counterproductive label to addressing the issues at hand. Participant 7 explained the rationale that she believed to be prevalent among alleged NIMBY communities “we’re not saying that things shouldn’t change, it’s when you see the future and it doesn’t

include us, that's what we worry about. It includes some broad, abstract ideas about what a city should look like, but what does this mean to us?"

Finally, this group argued that if awareness levels and understanding were to increase among the general public, the City would have to resolve issues of transparency and communication (as described earlier). Participant 7 for example argued that these issues could be barriers to everyday citizens who may not have the time or expertise to engage the City at to the degree that community associations do. She further stated, "if we ever have a problem and I have to call the city, I'll have to spend 16 hours talking to them and then nothing gets done. They don't care because they know that if it's that much work for me to get anything done, then I'll eventually stop caring too."

8.5 Findings: Citizen Experts

1. No Substantive City Leadership on Climate Change

The main concern for this group was the lack of prominent leadership and official support for climate change and urban sustainability. Similar to other stakeholder groups, citizen experts were concerned about the viability of urban sustainability if the City did not cultivate an organizational culture that valued and prioritized it. Participant 5 stated "We have people who care about it. But it's not woven through the culture at city hall. The city has other things taking their attention... It's encouraging to see that they're no longer afraid to say the words anymore, but that's not leadership." None of the three respondents in this category felt that City Council's current approach to urban sustainability was serious or substantive. According to Participant 1, the prioritization of other initiatives over sustainability was not conducive to "good city building." He stated, "the whole vision of the current administration has been a sixties, seventies approach to city building, focusing on sports, entertainment and tourism. Which is crucial for

every city but if you're building a modern economy on this, you're destined for mediocre results." Participant 5 cited the lack of political will as the biggest barrier given the politicized nature of climate change and sustainability. He stated that, "the climate change plan has the Mayor's face on the second page because it's a political document. You do what your boss tells you so if you have bosses that tell you to do something, you do it. Maybe their bosses aren't telling them anything, or worse, their bosses are telling them not to do anything." Participant 1 echoed a similar sentiment and expressed concern that the lack of meaningful leadership was causing barriers at the bureaucratic level. Nonetheless, all three of the citizen experts expressed optimism with the Mayor's new choice for Environment Committee chair. They believed that the new Chair brought a high level of expertise and commitment to the file therefore they hoped that this signalled city council and the Mayor's increased political interest in climate change.

2. No Internal Capacity for Urban Sustainability

This second finding is also associated with a lack of expertise and capacity at city hall to implement smart growth orientated policies. Respondents pointed to the closure or re-assignment of the city staff working in the community sustainability office.

Participant 5 "There was an announcement that it [the community sustainability office] had been disbanded. It was right around the time that the Choosing our Future document was accepted. But it was ridiculous language. It said that we've done what we needed for sustainability so we no longer needed this department." Two of the respondents stated that this closure was a step back for city leadership on climate change. All three respondents stated that there appears to be a lack of human and resource capacity at City Hall in terms of sustainability initiatives. Participant 1 said that as a result of this, "it's easier for things to fall through the cracks" and Participant 5 argued that the AQCCMP could use formal staff direction and

coordination because “It doesn’t have a lot of details on how we get there. There’s supposed to be a status update out right now but we’ve yet to see anything.”

Participant 3, a city planner, confirmed that the community sustainability office “no longer existed” and that the work had been reassigned to planners and policy staff. He stated that there had been a noticeable difference in the quality and output of this sustainability policy. In particular, he noted that the office used to have a brownfields coordinator but once the individual in that position retired, it was never refilled and now “each individual planner and engineer has to do a brownfields review...but there was no additional retraining to ensure everyone was current on this topic” (Participant 3). Participants 1 and 5 argued that this lack of resource capacity is not well understood by city residents and that more public attention should be drawn to the City’s “dismal” (Participant 1) approach to sustainability.

Participant 15 furthered this argument by stating that it was not just a problem of resource capacity, but that it ultimately came down to a lack of city interest in going against the status quo in relation to sustainability initiatives. “We might do a completely legitimate and sound consultation process but then city staffers will steamroll over our findings and do what they wanted to do in the first place. The city doesn’t always believe in the outcomes of consultation and that gets reflected in their work.” Given the policy environment described by these individuals, it is likely that more work needs to be done among the city in order to develop internal capacity on climate change and smart growth policy.

3. The lack of Citizen Engagement on this Issue is a Constraint

This group did not have the same negative opinions as political leaders did on the topic of citizen engagement in climate change issues. Although, they noted that the current lack of engagement on the topic was a significant barrier to the implementation process. Similar to

community association respondents, this group argued that the lack of citizen engagement was primarily a result of the institutional barriers and lack of interest from the City and developers to engage residents.

Participant 15 described the adversarial nature that characterized the Ottawa development process and he argued that based on his experience, most developers, do little to facilitate true public engagement. “When our firm has been approached by developers, they haven’t been interested in getting proper input. They’re just concerned with consultation as a checklist. They just want to get it over with.” Participant 15 described the narrative underlying the development process as a “villain and victim construct” where the City and developers are portrayed as villains the communities as victims. He argued that the only way to improve the process would be to work past these negative perceptions but he conceded that it would require significant time and effort from all sides.

Participant 1 discussed the repercussions of this policy-making environment, “constraints on citizen engagement will impact the implementation of smart growth policies negatively because citizens will never be able to compete with private sector interests...It’s not a conspiracy about the big, bad developers. It’s just that the developers happen to be hanging out at city hall more than the community associations and therefore they build relationships.” Similar to Participant 15, Participant 2 believed that developers had better access and more power in the decision making process compared to citizens. But, as Participant 5 discussed, the information asymmetry and power imbalances in this policy area caused some of the most important climate change stakeholders to feel shut out of the process. He stated, “It’s not just their responsibility. They play a role in setting the rules but we’re the end users and producers of emissions.” This underscores the importance of citizen buy-in not only given the potential ramifications that

climate change impacts can have on residents but also because citizens are ultimately the ones that must shift some of their lifestyle patterns to ensure the success of urban sustainability policies.

On the topic of community engagement, two of the participants spoke about the City's 2012 GHG roundtable consultation, which was a daylong summit that was intended to bring together stakeholders to discuss city action on GHG emissions. Participant 5 recalled that there was a stalling period where they heard nothing from the City about the roundtable. A group of residents subsequently called councillors and launched media and a social media campaign to exert pressure on the mayor and city council to organize the GHG roundtable. According to Participant 5 "after all this happened, the mayor's office called with a truce and agreed to go forward with the Roundtable as promised." Participant 1 stated that this level of commitment and pressure from citizens was the driving force for the establishment of the Roundtable. This experience is concerning from a citizen engagement perspective because it signifies the level of public pressure that was required to simply organize a summit related to this issue. Participant 5 argued that there is a "typical crowd that turns out for these things" and that there is a level of mistrust among these individuals based on previous consultations, which he summarized as "why are you calling us in again to consult if you're not going to do anything with it." All three participants echoed the sentiment that they didn't just want more citizen consultations on the issue, but a better process to ensure that residents could be genuinely involved.

8.6 Findings: Real Estate Developers

1. City Legislation as a Barrier

Respondents identified three main legislative barriers to sustainable urban development: inflexible legislative requirements, a lack of sustainable development expertise, and mismatched

zoning by-laws and planning documents. The latter was explained by Participant 12 as, “you have a policy framework that is disconnected from the zoning by-laws. You see these areas where these massive projects come in under intensification where the zoning wasn’t ever brought close to the policy vision. So it’s creating a lot of friction in communities because their expectations are based on zoning not on policy.” To clarify, Participant 12 used the example of areas targeted for intensification through secondary or community design plans but specific targets may not be updated in the zoning by-laws so residents in the area may not be aware that these areas are eligible to be built up beyond the zoning by-law in place through amendments to the existing zoning. This lack of legislative coordination can make it more difficult to gain community support for intensification given the false expectations that the community may unsuspectingly hold.

The second legislative barrier was a lack of expertise (and potentially interest), among the planning department on the topic of sustainable development. Participant 11, a leading green developer stated that “anytime we propose any kind of sustainable, innovative project like purple pipe systems or district energy, the burden falls on us to prove code compliance in terms of additional studies and engineering which is additional cost and time for us.” Participant 12 also agreed that it could be more time consuming and costly for developers to add features like heat pump systems or green roofs because “the city is still not there yet when it comes to understanding the value and impacts of these things.” Participant 12 further argued that the development industry needed “streamlined, efficient processes and an expectation for sustainability so that it’s not hidden in some policy document.” Participant 13 noted that attention and interest in green building had improved, but was still not a significant interest of the City. Similar to what the city planners stated, Participant 12 noted that the lack of formal

guidelines or regulations for sustainable development gave developers few instructions or incentives regarding the value of green developments. “The closest thing we have is the urban design guidelines and in Official Plan policies, certain things are encouraged but its all words like encouraged or support, there’s no real enforcement” (Participant 12).

Participant 11 mentioned that the introduction of an “express permitting lane” could serve as an incentive for developers to build greener. “We’ve long advocated that if you’re bringing forward a LEED platinum project on a site where the city wants it then that should have express permitting.”

Lastly, the developers also identified strict CDPs and secondary plans as a potential barrier to innovative, green development. Participant 11 gave an example of a downtown development that they were proposing include a community health centre on the main floor. The respondent alleges that there was interest and support for this proposal among the community but it was rejected because it was not in line with the CDP and the developer was not able to allocate the “extensive resources that would have been required” to submit a CDP appeal. Participant 12 reported similar concerns and stated that the lack of flexibility in the process prevented “innovative development.” Although, both Participant 11 and 12 acknowledged that there was a fine balance between providing the community with certainty about how development will happen and allowing the industry a certain level of flexibility in order to develop innovative sustainability and complete community neighbourhoods.

Finally, this group advocated that the city should review its development cost charge structure, not just as a way to incentivize urban living, but more importantly, in order to reflect the true costs of living in suburban neighbourhoods. This is similar to concerns brought up by other groups but these respondents identified a new barrier to pricing reforms: the Ottawa

Homebuilders Association. Respondents identified this lobby group as primarily serving the interests of greenfield development as there are more developers that have greenfield and urban projects as opposed to just urban projects. Participant 12 noted that a significant number of Ottawa developers had both suburban and urban developments; therefore it would be against their interest to advocate for development cost increases if it impacted a part of their business.

When discussing the City's potential for urban sustainability, two out of three respondents in this group believed that the City wasn't progressing as actively or significantly as it could be towards this goal. Participant 11 stated, "I just don't think we've tested residents with the concept. When I think of some of the missed opportunities like Landsdowne for example, that could and should have been a real sustainability show piece." Participant 13 on the other hand believed that the city was making adequate progress on attempts to implement policies like complete streets and transit orientated development.

2. Relationships within Communities

In response to the question about whether or not developers and the city have too close of a relationship, most participants stated that their influence was no more significant than that of community associations. Participants discussed the City's interest and necessity to serve all stakeholders. Participant 11 stated, "I think it cuts both ways, the community associations can really get the ear of the council and the Mayor too." All three participants reported experiencing an increase in the value or quality of the public consultation process, particularly when it came to adherence to community design plans. Participant 11 argued, "I think we've come a far way. Eight years ago there would be community design plans put in place that weren't always followed and developers probably got more flexibility than the communities would have liked. My sense is that this has changed." The participant attributed the change to an increasing desire

from the City to provide development certainty for communities. Participant 13 also reported an increasingly positive relationship with community associations and described them as being “for the most part, they are extremely sophisticated and have great networks and knowledge. A lot of their leaders can distinguish between problematic aspects of development and simple, healthy debate.” It is worth noting that all participants held generally high opinions of community associations and acknowledged their role as key power brokers in the decision making process.

Two of the participants argued that the current Mayor had campaigned on increased certainty in the development process for both residents and developers and the participants believed that there has been an increase in the stringency through which CDP’s are adhered to.

Respondents stated that given this level of stringency, they prioritize adhering to the CDP and the OP. But, Participant 12 stated that even if they propose a building that is in line with a CDP, controversy can still arise. “They don’t realize what the permitted building level is until someone comes in and builds an alleged monster building and then they get angry. But we’re working within permitted uses.” All the participants stated that they will usually try to maximize their land value and therefore will usually ask for the most height permitted in the area.

Participant 12 stated that “the same is true of planners; they can’t reject something that is within the zoning regulations.” Participant 13 stated “in some cases, community associations just aren’t aware what a property is zoned for and they only become aware when something is proposed against what they think should be there. They blame developers but we didn’t set the zoning.”

This belief that communities are not always aware about zoning targets in their area falls in line with the finding among community association leaders that there was generally low awareness and understanding among communities about how planning documents and regulations would affect their neighbourhood. Participant 12 summarized the impact of low awareness levels as

“communities often think that there’s something else going on but we’re all operating from the same songbook, the problem is that not everybody agrees with what the songbook should say.”

That being said, participants expressed that they had seen a noticeable improvement of the working relationships between developers and community associations. Participant 12 stated, “in Westboro for example they’re trying to get a new secondary plan approved that I think will satisfy both interests. It’ll bring more height and density but it will be done in the right, agreed upon areas.” According to Participant 12, an important component of this secondary plan was the consultation of the development community, which he stated was not always done. Similarly to community associations, developers were interested in finding better and more meaningful way to cooperate with other stakeholders.

3. Generational Market Shifts

While participants described the Ottawa real estate and development market as generally more risk averse and conservative compared to other Canadian markets, they identified millennials as a population segment that are exhibiting very different values and interests. All of the participants expressed a hopeful optimism that as this market segment matured and gained more purchasing power, values like urban sustainability would become more financially and politically lucrative.

Participant 11 described the current real estate market as “approximately 30% say the sustainability narrative is extremely important. A slightly higher percentage would say that the health narrative, including air quality and chemical free finishes, is more important. The majority of our purchasers think green is a nice thing to have but they’re still looking for other things like views and functional floor plans.” Participant 11 identified sustainable, green buildings and communities as one component in a broader mix of considerations that purchasers take into

consideration but, as Participant 15 noted, her generation is increasingly demanding different lifestyles. “Myself and the other young people in this office are more likely to walk to work, live downtown and not own a vehicle. We’re looking for vibrant, complete communities to live in and I think this trend is only increasing among young people.” Participant 11 described the rationale behind shifting market values as, “the suburban, big house, two car garage is great if you want a lot of stuff but you’re compromising in some ways your experiences since you need to commute back in forth in your car. The younger generation wants experiences, not stuff.” Given this trend, all three developers agreed that the market had begun to respond and they believed millennials would be one of the biggest proponents of smart growth communities and green buildings. Participant 12 stated that one of the biggest shifts that would happen is a reduction in automobile dependence. He stated that his firm was increasingly working with developers on urban projects with reduced numbers of parking spaces. “If I would have proposed that to an infill client five years ago they would have thought that I was crazy. A third of my projects are now don’t provide parking for every resident” (Participant 12). All three of the participants confirmed that there was interest in the development community to propose projects that had reduced parking spaces, and were located within mixed-use communities to attract these younger buyers.

8.7 Findings: Local Residents

This group was composed of two downtown residents who were impacted by the development of a mid-rise condo building on their neighbourhood block. The residents’ homes were structurally impacted and suffered documented damage from the construction of the adjacent condominium building. Both residents reported not being planning or municipal governance experts and through this process, they were forced to quickly acclimatize themselves

to this policy area.

1. Accept the Inevitability of Neighbourhood Development

Both residents stated that when they were exploring real estate options, they were aware that the properties they were interested in were adjacent to a proposed condominium development. Respondent 14 stated “we were fine with a development happening next door, we weren’t and still are not against development but, we never expected it to have as much of an impact on us as it did.” He later stated, “I expected that there would be oversight from some government body over this project.” Participant 8 also stated that despite their experiences, he still believed in the value of urban intensification. “I understand that living in a big city means tall buildings...I’m excited for the prospect of more people and services in my community.” In fact, both residents say that they were not opposed to the adjacent condo development in particular, but they are against the way it was completed and the final outcome. “They could have put in nicer town homes to improve the aesthetic and really take advantage of the prime space. The current project was only concerned with height” (Participant 14). As well, both participants stated that living in a sustainably orientated community was important to them and that they would both be more likely to support a development project that advertised environmental and sustainability benefits. Although, both participants expressed that “green buildings are important, but I don’t think that’s my biggest priority right now” (Participant 14). That being said both reported a high value on walkable, mixed-use communities and understood the environmental benefits of living in such communities.

Both stated that the biggest perception change that they experienced in terms of development was their surprise at an alleged lack of city oversight and involvement in the process once a project had been approved. Both residents expressed frustrations over the need to

“lawyer up” (Participant 8) and work with technical experts in order to negotiate with developers. They noted that at the time of the interview, they had yet to hire lawyers but they both strongly felt that it would improve their accessibility and negotiations with the City and the developer.

2. Legislative Roadblocks

Both respondents had generally favorable opinions of the city planning staff and the engineers that they contacted. “They were all friendly, they all answered our emails. They did their job” (Participant 8). But, respondents reported issues when staff, councilors and developers used “legislative permissibility” (Participant 14) as a reason for not being able to further follow-up or address their concerns. Respondent 8 explains how developers made this argument, “Claridge was friendly to deal with and were responsive to communication. But there was an attitude that everything that was happening; both positive and negative, was within the law.” He also described a similar sentiment among city staff. “There was a sense that they couldn’t really do anything because everything was done within the law and it had already been approved by the city.”

Participant 14 reported feeling unsatisfied with the city and developers’ approach to blame each other for the issues happening. “We kept hearing over and over that the developer hadn’t broken any city legislation or by-laws. And that the city couldn’t penalize them because everything they were doing was completely legal. And then the developer would say that everything they were doing was okay with the city.” Participant 8 noted that throughout their discussions, they dealt with developers and city officials separately and that there was not much coordination between the two groups.

Both residents ultimately expressed concern for the lack of options or avenues for

recourse that they had during this process. “It seemed like there was a lack of protections for residents” (Participant 14). This goes back to the feeling that residents would need to hire lawyers and technical experts but, they both expressed the sentiment that “we shouldn’t have to spend thousands of dollars just to have the city listen to us” (Participant 14).

3. Communication Failures

While there was a generally positive review of city staff, respondents reported serious concern about how decision makers approached the public consultation phase of project applications. While neither resident participated in the consultation process (they both moved into the neighborhood after the public consultation phase was completed), they worked with their community association and were made aware that the community association had initially objected to the development based partly on structural and construction concerns. Participant 8 recalled that the community’s concerns were “dismissed” and “the city said they would address construction and soil integrity issues at the site plan control stage but it was never made clear to us if or what exactly happened. I guess they didn’t address it because that’s why we’re having these problems.” Participant 14 stated that “I asked and I still want to know how the City approved this project, knowing all the risks that were involved...the community association warned them.” Participant 14 recalled a meeting he attended with other neighbors, senior planning staff and the then Chair of the Planning Committee. According to the him, during the meeting, the Planning Committee Chair told the residents “we failed you on this” and that the approval process should have been completed differently.

Participant 14 speculated that these communications issues happen between the city and residents because “they [the city] operate in a black box and developers take advantage of this.” The respondents believed that if the city would have seriously considered the community

association's concerns at the outset and incorporated the feedback into the decision making process, the residents could have avoided much of the structural damage to their homes.

The experience of these residents may not be the norm for development, but as they argued, it can be difficult for residents to understand what to expect when living near an urban development project. Participant 14 stated that he tried to research the impacts of building construction on existing homes but found it difficult to find information specific to Ottawa. Participant 8 also reported having difficulty educating himself on the issues that he was experiencing and felt like he needed to hire expensive experts to “be on some sort of even playing field with the developers.” This suggests that if other residents have similar issues to these two in the future, there may not be significant or adequate information on the potential impacts of development from a structural and/or community perspective. Both residents argued that the city should have more information available on this topic and should better prepare residents who live next door to new developments.

While this is the least experienced or educated group in regards to planning and sustainability, their perspective is just as valuable as they most closely represent the views and opinions of ordinary residents who can be thrust into the planning process without prior expertise or adequate resources.

9. Discussion

This section will discuss how the findings from the previous section relate to the research questions and hypothesis. Afterwards, the interview data along with findings from the literature review will be assessed using stakeholder analysis frameworks.

9.1 Research Question 1

With climate change as the main driver, how can smart growth planning be used in Ottawa to

reduce greenhouse gas emissions and energy use?

There is no question that research participants supported urban sustainability across the board. Even the political staff that stated that they were unwilling to risk political capital on this issue stated that they personally supported these types of policies. However, it appears that this personal support of smart growth policies is difficult to follow through on and actually implement. Based on the feedback provided by most stakeholder groups, (with the exception of the local residents), the groups believed that the city did not currently have sufficient expertise, interest or resource capacity to use smart growth policies and programs to promote more environmentally sustainable development in Ottawa. As was discussed by the city planners and experts, the lack of dedicated personnel resources impacted the program delivery and implementation of sustainability measures, particularly as it relates to the AQCCMP. Community association leaders and developers also noticed the impacts of this lack of expertise and dedicated resources therefore, the implementation of smart growth policies will require more direction, leadership and human and financial resources in order to effectively reduce GHG emissions. Moreover, should Ottawa want to induce serious GHG reductions, these research findings suggest that the AQCCMP is not sufficient for GHG reductions to occur. As discussed in the literature review, the AQCCMP does commit to the implementation of smart growth policies to induce GHG reductions. But, according to interview respondents, this commitment is questionable and not fully accountable. Therefore, political will needs to be established to support these policies and public opinion in support of these policies needs to be vocalized and reinforced. The transition to a smart growth city requires a societal mindset shift as much as it does a policy and technical one. Therefore, the meaningful involvement and buy-in of these stakeholders groups is key. Contrary to the initial wording of the question, climate change

impacts or risks are not the essential driver in this current policy environment, but it is instead public opinion that will ultimately drive action on this file.

While the political staff cited that sustainability and climate change were not salient voting issues, this study of Ottawa community leaders found the opposite. While the findings from this research are not generalizable to the broader Ottawa population, the findings nonetheless illustrate that among this group of engaged and informed residents, there was in fact a demand to see more leadership and action on this issue. Aside from this expressed stakeholder support, the potential for smart growth planning was also identified in the literature review. According to the AQCCMP, the planning process can contribute to the improvement of climate change indicators through the following means:

- 1) Intensification targets.
- 2) Transit-orientated development.
- 3) Mixed-use, pedestrian and cycling development.

As discussed in Section 4, these three indicators are the basic components of smart-growth development but, it is necessary to develop specific targets and programs to support these three objectives. The City of Toronto in particular has developed specific policies and targets to support the broader goal of reducing emissions and environmental impacts. Toronto could provide Ottawa with strong legislative examples should the City move to implement stronger sustainability policies. Further areas of exploration that were not covered in the AQCCMP but that were mentioned throughout the interviews and that can assist with the GHG reduction targets include:

- 1) Green Roofs. As a means of both reducing the urban heat island effect and adding urban green space. The City of Toronto has Green Roof By-Law that incentivizes developers and building

owners to include these roofs in development projects through financial incentives and policy support (City of Toronto, 2015a).

2) Renewable Energy Targets. In 2008, the City of Toronto passed its Renewable Energy By-Law, which allows and promotes the use of renewable energy, cogeneration and energy distribution by rezoning appropriate properties if necessary. This by-law provides detailed direction for developers interested in developing renewable energy targets and provides tangible incentives for doing so (City of Toronto, 2008).

3) Increase energy efficiency standards. One of the developers (Participant 12) noted that provincial building codes dictated how development was done (i.e. to what level of energy efficiency) but, other Canadian municipalities have developed their own building standards that go above provincial ones. The City of Toronto offers an established example. The Toronto Green Standard is a two tier building standard for new construction in the city. The first tier is mandatory for all new construction in the city and the second is voluntary. Although, by reaching Tier 2, new projects are eligible for partial refunds of their development charges. Tier 1 requires a building design that achieves at least 25% energy efficiency improvements over the Model National Energy Code for Buildings and Tier 2 requires 35% efficiency over the code. The TGS identifies potential strategies for achieving this reduction through wall and window glazing ratios, HVAC systems, district energy appliances and passive solar orientation (City of Toronto, 2015b). It is worth noting that since Tier 1 compliance was enforced in 2010, Toronto's number of new constructions has generally increased across the City. Therefore, enforcing stricter building standards does not need to be done at the expense of development (City of Toronto, 2015b).

These three programs are examples of how smart growth planning can be better used in

the City of Ottawa to produce environmental benefits and induce GHG reductions through a city's built form. These three policies are also examples of the innovative policies and programs that stakeholders felt were not being adequately used in Ottawa. Considering the low level of coordination of the AQCCMP and the land use planning department in Ottawa, it is not clear to what extent initiatives or directives outlined in the AQCCMP have been implemented through planning policies. Therefore, to determine the extent of possible emissions reductions, the City would need to develop specific program objectives and track and report on these initiatives instead of the current high levels goals outlined in the AQCCMP. Based on the research findings, public opinion will (in the short term at least), drive smart growth policies, not climate change impacts.

9.2 Hypothesis 1

How do local resident stakeholders perceive the notion/process of urban intensification?

The null hypothesis estimated that residents perceived the notion and process of urban intensification negatively therefore the null hypothesis is rejected. All participants reported moderate to strong support for the concept of urban intensification and intensification in their own neighborhoods. As mentioned earlier, it is possible that there is a social desirability bias in answering this question (i.e. that individuals feel some degree of social pressure to say that they agree with the concepts or principles of urban intensification). However, all respondents (including the local residents), were able to connect the principle of urban intensification as a precursor or driver of liveable neighborhoods (more residents meant more services and business in their urban neighborhood). Therefore, they acknowledged the positive benefits and even those who had been negatively affected by urban intensification (the local residents), acknowledged that they were willing to make reasonable concessions in order to live in a better, more lively and

diverse community. The majority of research participants were able to understand the nuances of the urban intensification debate and could acknowledge that making these investments now would reap long term rewards. However, support for urban intensification was tied to the development done right – within acceptable and mutually agreeable conditions for communities, developers and the city. This research suggests that support for urban intensification exists amongst these urban residents so long as the city and developers can manage the process in a transparent, communicative and accountable manner.

As mentioned in the research methods section, given the small, unrepresentative sample size of this research group these findings are not generalizable to the broader Ottawa community. Meaning that despite the positive trends identified by research participants, one cannot infer that this degree or support for smart growth planning is universal across the City of Ottawa. Furthermore, as a means of managing research and writing scope, much of this research referred to the research participants as representatives of their respective stakeholder groups. However, even within each stakeholder group, significant variability in perspectives likely exists, consensus and consistency among or between the stakeholder groups cannot be proven. Therefore, it is imperative to acknowledge that given the variety of perspectives and backgrounds, these stakeholder groups and the Ottawa public in general cannot be treated as uniform. Understanding the different backgrounds, beliefs, needs and expectations of Ottawa's diverse community can go a long way to helping political, business and community leaders present smart growth policies in a compelling manner that gains public support. More research is needed to achieve this level of micro-targeting and to establish exactly what Ottawa residents require in order to support smart growth policies. If the City of Ottawa were to make this research investment, it would not only improve the chances of crafting a successful policy, but it

would also demonstrate the city's leadership on this file.

9.3 Hypothesis 2

Do stakeholders make the connection between sustainability and smart growth density? (Is this a priority?)

The null hypothesis stated that stakeholders were generally aware of the linkages between sustainability and intensification but that the two are regarded as separate, not complementary objectives. This null hypothesis is rejected as respondents for the most part, could describe the connections between sustainability and intensification. According to the findings, each stakeholder group expressed support for intensification as a means of reducing car dependence, increasing infrastructure efficiencies and minimizing sprawl, and creating pedestrian and transit orientated neighborhoods. All participants discussed neighborhood intensification, but most of them referred to it as “development” which took a broader meaning and was not just about residential intensification, but the development of neighborhoods as a whole by bringing in more residents and services. Whether participants were cognizant of it or not, the majority situated residential and commercial intensification as a component of smart growth communities and lifestyles. All participants acknowledged that intensification had positive benefits in terms of environmental sustainability. But, as most participants admitted, the connections between sustainability and intensification may not be top of mind for residents who did not have the experience or level of knowledge that they did about the issues. As community association leaders, developers, local residents and citizen experts argued, further information and better communicated policies from City Hall could work to better inform and build support among residents on the importance of developing sustainable communities through reasonable and strategic neighborhood development.

9.4 Hypothesis 3

Are land use planning stakeholders aware of existing smart growth plans/policies, particularly in the AQCCMP? Do they support these policies?

The null hypothesis estimated that stakeholders generally have a low level of awareness about specific smart growth policies in their neighborhoods (i.e. intensification targets) and those stakeholders are more likely to support these targets in principle as opposed to specific plans in their neighborhood. Across the board, there was low familiarity with the AQCCMP, aside from the political staff and experts. This was particularly concerning in the case of city planners who were critical implementers of smart growth policy as set out in the AQCCMP. In terms of awareness among other groups, community association leaders, local residents, developers and experts all agreed that community level awareness and knowledge of urban planning and sustainability could be stronger. Developers noted that the lack of knowledge could result in unfounded expectations. Local residents and community leaders felt that low knowledge levels prevented residents from meaningfully advocating on their behalf and experts believed that the lack of public knowledge contributed to a lack of public pressure on the issue. All these outcomes of low public awareness are detrimental to the implementation of sustainability policies by politicians who do not believe that there is enough public interest on this topic. All the stakeholders had, at the very minimum, basic awareness and all supported the topic but, it evident that this basic knowledge was not sufficient to be meaningfully engaged and involved in the process. Support must be much more visible and vocalized according to political stakeholders.

9.5 Research Question 2

What are the barriers and opportunities for the implementation of smart growth in Ottawa?

The majority of these barriers and opportunities have already been discussed in the

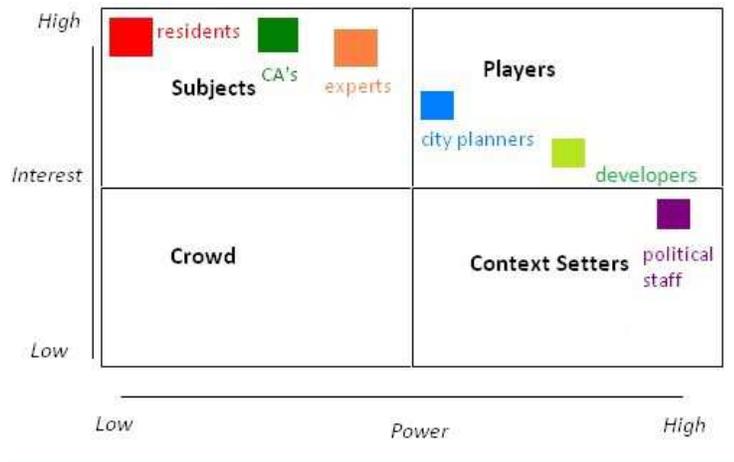
results section. This section will summarize the findings discussed in the previous section and situate them in the context of Ottawa's sustainability policies potential. The barriers and opportunities will be identified through a stakeholder analysis

10. Stakeholder Analysis

Step 1 and 2: Description of Participants and Basis of Power Diagrams

This first section combines Steps 1 and 2 in and Eden and Ackermann's (1998) stakeholder analysis method. A power versus interest grid will be constructed to define the status of each stakeholder group which will be followed by a more detailed basis of power diagram which describes each group's power and interest levels and ability to contribute to the process. Both techniques are described in the theoretical framework. The power versus interest grid was completed for the purpose of describing and visualizing each group's real or perceived roles in the implementation of urban sustainability policies in Ottawa. It is important to note that this categorization was completed solely using the perceptions and experiences provided from interview respondents. This means that power and interest levels were rated according to respondents' explicitly stated perceptions and experiences. Since notion of power and interest can be subjective, it is possible that this chart might vary if different participants were consulted. As well, this power-interest analysis is conducted as it relates to the development process, not urban sustainability policies. Since the data collection focused on a) identifying experiences, perceptions and knowledge of urban sustainability principles and b) determining how these indicators can predict the policy implementation of urban sustainability, this power analysis grid is intended to be applied to urban sustainability, not describe it.

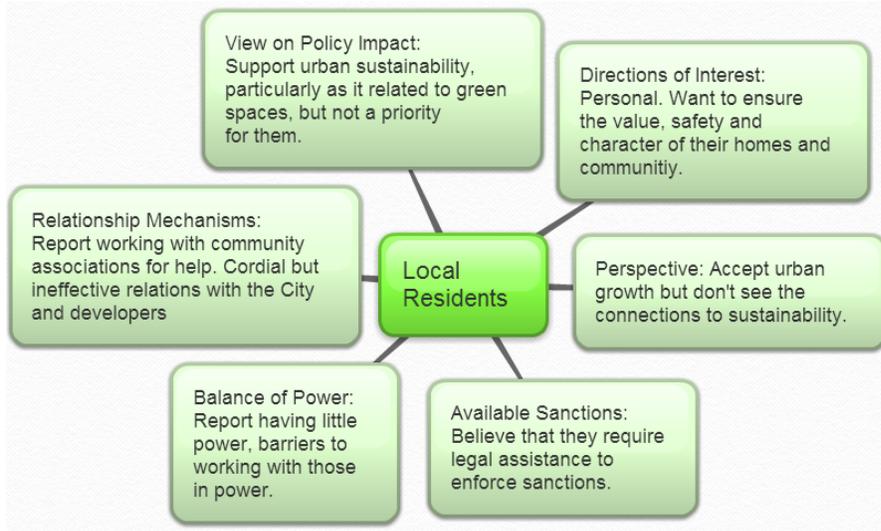
Figure 2: Power vs. Interest Grid: Urban Sustainability Implementation



What was most noticeable in the power-interest analysis was the fact that the stakeholders who were most concerned with this issue were least likely to hold any power to effect change and vice versa, those with the most power to dictate the progress of urban sustainability were the least likely to show interest in implementing it. This could mean either one of two things: residents, community leaders, experts and planners are overstating their interest in implementing these policies and/or they only support these policies abstractly but may change their perspective once it tangibly impacts them. Or, this could mean that political staff and developers do not understand the magnitude to which urban sustainability is supported by the public or their own staff. In either case, it is apparent that a lack of communication among groups and a misalignment of priorities are barriers to the policy implementation. The following section will discuss the intersection of power and interest for each stakeholder group and determine how it contributes (or detracts from) Ottawa urban sustainability policies.

In order to expand on the dynamics in the power-interest grid, a description of each stakeholder group will be provided below. The intention of this deeper dive is to identify shared interest or priority areas and to track which group holds power and where.

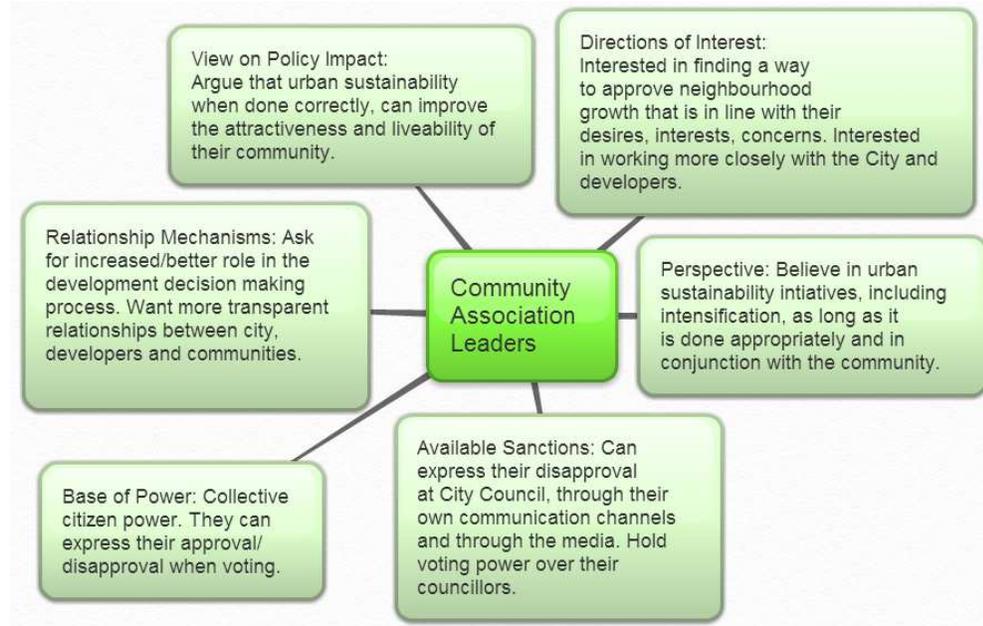
Figure 3: Local Residents Stakeholder Description



Local Residents

Based on the interview data, this group reported itself as having low power in the development decision-making process. Albeit, they reported that they had enough opposition power to schedule meetings with, and discuss issues with senior planning staff, Planning Committee members and city councilors but, their ability to produce results from these meetings was reported as being minimal. Their low power rating is countered by one of the highest interest ratings among all six groups as the development process significantly impacted their homes and personal well-being. It is worth noting that this interest level among the general public would likely be lower. This balance of power diagram highlighted the lack of power that this group holds in relation to the significant level of impacts that they are experiencing as a result of development. Residents reported an increase in power when they connected with community associations. On the other hand, despite their negative experiences with development, this group reported supporting urban sustainability policies, including intensification but had minimal formal knowledge on the topic so their discussions and active support were limited.

Figure 4: Community Associations Stakeholder Description



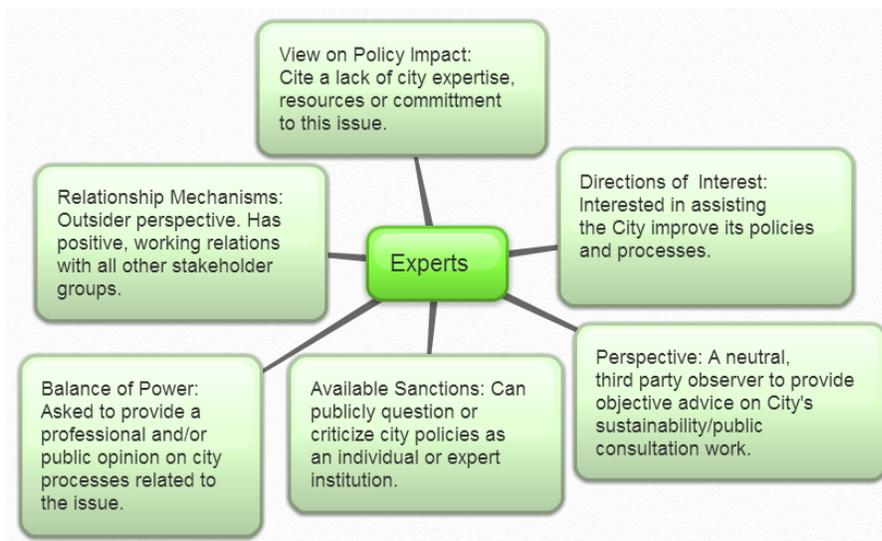
Community Associations Leaders

This group was placed as having the same level of interest as the residents group with a slightly higher power rating. The community association leaders all reported spending significant amounts of their free time organizing and working in their communities, with urban development being cited as one of their most important and time consuming issues. Therefore, they are highly interested in the process but, even as formal organizations recognized by the City, they reported having difficulty obtaining and exercising power throughout the development process.

Community organizations did report having organizational power and the ability and expertise to contribute to the decision making process but, they reported significant institutional barriers and low odds of effecting change. As a result of their previous experiences, community association leaders were rated in the subject category. This balance of power diagram further illustrates the collective citizen power that was reported as the strongest potential mediator for the political staff stakeholders. In terms of urban sustainability policies, there was strong support for better

incorporating these types of development indicators into the process to improve the livability of their communities.

Figure 5: Experts Stakeholder Description



Experts

This group also fell into the subject category, but compared to the previous two groups, experts were identified as having higher power levels and slightly lower interest levels (but still comparatively high). The high interest level was set according to their stated personal and professional work experiences and interests in improving the city's development, public consultation and sustainability policies and processes. They were also rated as having a medium level of power because these individuals had all been previously called upon by City Hall or the Planning Committee or have been a part of formal advisory bodies or advisory organizations on the topics of urban development and sustainability. Therefore, the recommendations provided by

this group are directly solicited and internalized by decision-makers. This balance of power diagram shows that despite their expertise, their recommendations were not always followed and the decision making power is ultimately held by the City. But, this group nonetheless plays a role in the policy development process. Should the City move forward on the further implementation of urban sustainability policies, these experts can play important roles in facilitating policy development.

Figure 6: City Planners Stakeholder Description

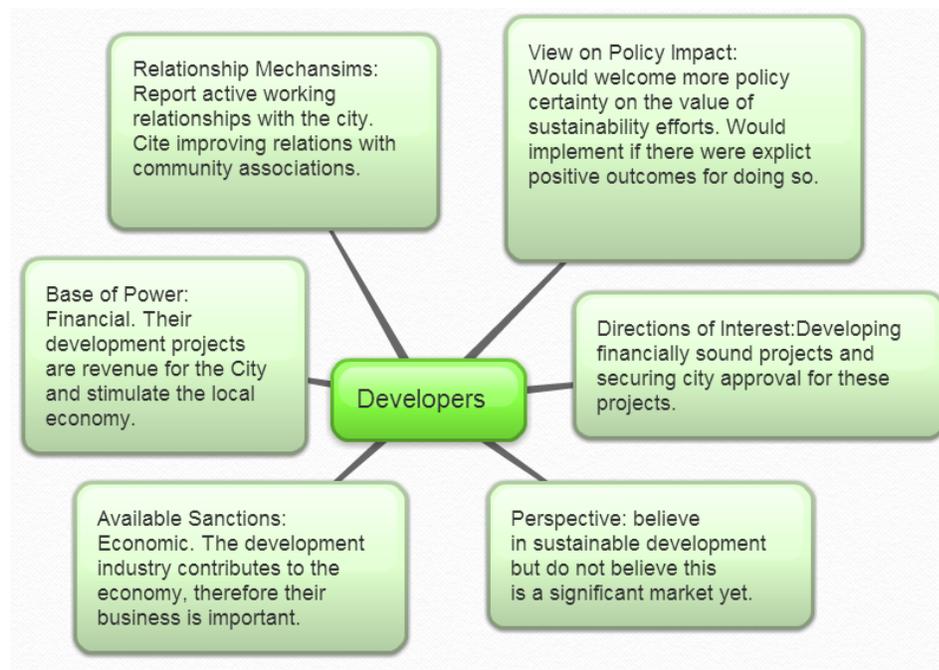


City Planners

This stakeholder group was rated as having both relatively high levels of interest and power which placed it in the player category. Although, planners reported not having as significant power as the context setters but they reported high levels of interest, specifically in relation to ensuring the success of the development plans and targets of the city and in facilitating the Official Plan’s sustainability goals. This group did report that their decision-making power on the approval or rejection of development or transit projects did not supersede the decision-making power of elected officials. But, in terms of guiding change and neighbourhood growth, this group had significant power in advising and providing expert recommendations to the

decision-makers on technical planning and city visioning matters. The balance of power diagram shows that given this group’s relatively high interest in sustainability, they would need to work with political staff in order to effectively implement new policies and programs. Otherwise, their decisions and interest can be rendered obsolete without political power.

Figure 7: Developers Stakeholder Description

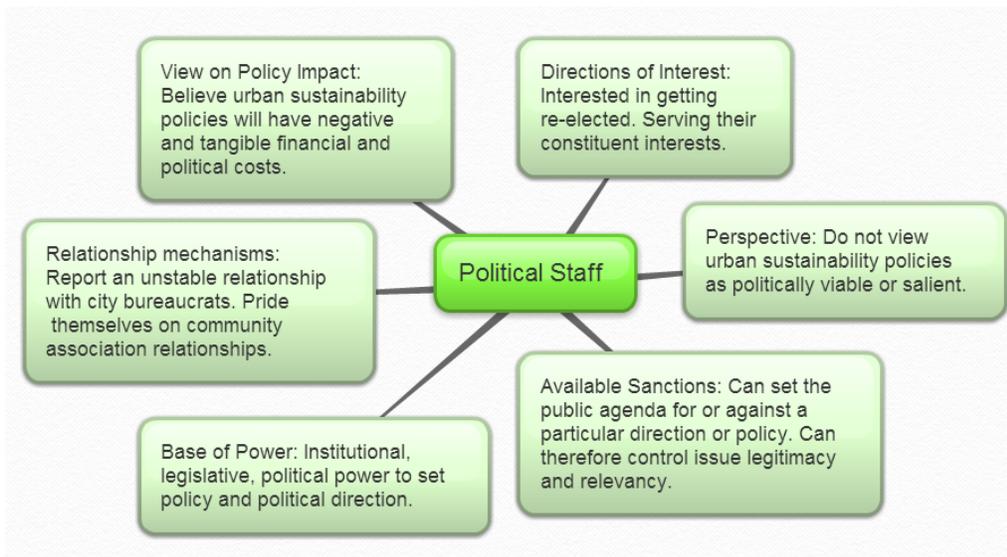


Developers

This group was also in the player category. The group was reported to have significant power in the development decision-making process and high interest levels. Developers guide where and how development happens in a city according to the City’s guidelines therefore they hold significant economic power in this role. This balance of power diagram shows that as an economic contributor and stimulator for Ottawa, their power, interests and available sanctions are as a result strongly considered and noted by the City and this group reported generally strong relations with municipal officials. From an interest perspective, this group reported a desire to address legislative, political and social barriers in the development process and reported an

interest in working with other stakeholders in order to do this. From a sustainability perspective, this group reported that they would be interested in smart growth, so long as there is a market to support it (i.e. the emerging millennial market). If developers see the economic or political benefits of developing smart growth communities and green buildings, they reported that they would be more willing to propose these types of projects.

Figure 8: Political Staff Stakeholder Description



Political Staff

This was the only stakeholder group identified as a context setter which means that they had significant levels of power (the highest among all the groups) yet had the lowest levels of interest. This was due to their reported belief that significant urban sustainability policies (constraining suburban development growth and taking an emphasis off vehicles) would not be a politically viable in Ottawa and they were therefore reluctant to make any significant policies on this file. This group was ultimately reported as having the most power because as elected officials, they are delegated the authority to make legislation and programs on behalf of their communities. The bases of power diagram illustrates that the group is currently using their

available sanctions to minimize the policy agenda on urban sustainability as a direct result of their beliefs that the policy is not politically viable. Ultimately, the biggest power check that this group faces is the electoral vote every four years. There was an emphasis on their relationship with community associations therefore they want and need to gain that community validation in order to sustain their power.

Step 2: Ideas for Strategic Intervention

This section focused on the implementation of the power and interest models in the development of a strategic intervention plan.

Based on the individual balance of power diagrams, the stakeholder-issue interrelationship diagram pools together issues identified among all groups. Issues were categorized in one of two categories: process or policy. Process issues relate to the Ottawa development process as a whole whereas policy issues specifically focused on the implementation of urban sustainability policies.

Figure 9: Policy Barriers to Urban Sustainability Policies in Ottawa



Policy Issues

There were five main issues identified in this section, with all the issues interconnecting at some point. Firstly, the (alleged) lack of public issue prioritization is one of the most significant barriers facing the implementation of urban sustainability policies because political staff believed that the public did not prioritize this issue over other day-to-day considerations like low taxes and homeownership in the suburbs (see more in Section 8.2). Politicians were unwilling to risk political capital to introduce these types of policies given the entrenched support of the suburban lifestyles and the financial costs associated with dismantling established policies and infrastructure. Of particular interest was that politicians were the only group to cite a lack of public support as a barrier to policy implementation. Even the group of developers acknowledged that while the market for green buildings or sustainable communities is not currently significant in Ottawa, that they expected this to shift and had already seen evidence of increasing support among millennials.

Similarly, the second barrier to policy implementation was the lack of city leadership on

the issue. Experts, community leaders and planners were attuned to the city's lack of policy support and all three groups called for more active leadership on this file. This issue contradicts the city's beliefs that there is a lack of public interest or willingness to engage on the issue. Despite respondents' strong support for greater action on smart growth initiatives, these individual leaders are likely considered a niche voting group and their support for a policy does not necessarily convince politicians that there is broad support for this issue. As alluded to by the political staff, broader public interest needs to be visibly demonstrated in order to convince politicians to take action on this file. In contrast, planners, experts and community association leaders believed that the city should lead by example and facilitate greater public awareness, knowledge and (potentially) support through more substantive sustainability policies. Thirdly, community association leaders, local residents and experts highlighted the lack of public awareness on this issue. These groups similarly argued that better public knowledge could facilitate better public involvement in the development process. The experts in particular noted that better public engagement and knowledge on urban sustainability could lead to increased public support as residents better understood the benefits of smart growth. It would be speculative to assess the current state of public knowledge on urban sustainability but the anecdotal evidence from these groups suggests that it is something that it could be improved. While the alleged lack of public awareness cannot be completely solved, from a policy implementation perspective, this lack of tangible, public support and knowledge is a barrier to the policy implementation. Improving public knowledge could create support for intensification projects in urban areas or increased expenditure allocations to transit as residents better understand the long term, citywide benefits. All of the six stakeholder groups could collectively address the issue and ensure greater promotion and awareness building initiatives across their

respective groups.

Finally, any public awareness initiatives need to be micro targeted to a variety of groups, not just the hyper-engaged, issue insiders. The success of smart growth relies on inclusivity and diversity. Urban residents and their suburban counterparts, retired residents and new immigrants and residents with varying education, literacy, and income levels need to feel equal levels of ownership over the issue. Each of these groups will have different capacity levels for engagement and different experiences and abilities to contribute and if the city develops a variety of meaningful engagement avenues, a sense of community, trust and mutual understanding could be built through this process. This suggests that public engagement is not just a bureaucratic step to check off, but that the process can represent an opportunity to repair damaged relations between different key stakeholders.

The last two issues are a direct outcome of the city's lack of issue prioritization. Firstly, issue 4 speaks to the lack of formal frameworks or interconnections between urban sustainability and the development and urban planning process. City planners, experts, developers and community associations cited a lack of program connections (i.e. between the AQCCMP and the planning department), the lack of dedicated resources (i.e. defunding of the community sustainability office) and, the lack of formal urban sustainability frameworks (i.e. no explicit sustainability checklist in the development review process). This lack of policy coordination is an outcome of low political interest and subsequently reinforces the final policy-related issue, a lack of city expertise on this file. This was a barrier identified by all groups except local residents and political staff. For those groups that were heavily engaged in the development process, they cited a lack of internal capacity and expertise to consider and include urban sustainability as a serious policy area (see Section 8.6 in particular for the developer's perspective). Therefore,

capacity and expertise issues are rooted in a lack of political will and interest from the stakeholders with the most power to implement more and better sustainability policies.

Figure 10: Process Barriers to Urban Sustainability Policy in Ottawa



Process Issues

This section identified five different but interconnected issues. These issues are not unique to urban sustainability policy implementation in particular, but they were identified as general barriers facing the development process that could impact urban sustainability policies. The first issue identified was the lack of transparency in the decision making process. This was flagged as an issue by community associations, experts and local residents. The lack of transparency was identified as a barrier to meaningful process participation as inadequate communication lines and unequal access and power relations, impact the ability for these stakeholders to be involved. This relates to the third issue, which was identified by community associations as a lack of certainty or adherence to planning documents. Community associations

(and developers and political staff acknowledged), the issue of development projects deviating from established targets or guidelines in the OP or CDPs. This subsequently undermined established agreements and caused mistrust and a lack of confidence in the process among community association leaders. The conflicts that arise out of these instances were reported to subsequently negatively impact the working relationships of key stakeholders. On the other hand, the lack of process transparency or certainty was not identified as an issue for political staff and developers, who instead identified a lack of flexibility or innovative culture within the city bureaucracy as a process barrier. These two groups instead felt that one of the biggest barriers to urban sustainability policy implementation was the inability of bureaucratic processes and administrators to adapt to new or untested ideas (more info in section 8.2 and 8.5). This complicated working relationship speaks to the broader decision-making culture in the Ottawa development process and if not properly addressed, could constitute a barrier for policy uptake. This also relates to the alleged lack of internal urban sustainability policy expertise discussed in the previous paragraph.

Although, it is worth highlighting that even though the political staff are asking for more flexibility from city bureaucrats, they themselves are not exhibiting any initiative or leadership on this file at a senior management level. Therefore, building flexibility into the process will require increased levels of stakeholder trust and communication that are currently absent. Finally, city planners, community associations and local residents discussed a perceived lack of influence in the decision making process. This real or perceived barrier impacts the attitudes and power balance among all stakeholder groups. The nature of the development process requires the involvement of communities and impacted stakeholders and it is in the best interest of decision makers to ensure that residents are supporters, and not opponents of their plans and projects.

Better public involvement in the process produces locally sourced, publicly legitimized decisions which can reverse the current adversarial culture noted by some residents. This connects to the final process issue identified by community associations, experts and local residents; a lack of citizens' protections or avenues for recourse throughout the development process. These groups all reported instances where they felt constrained or unable to critique or challenge the development process on an equal playing field as developers and political staff. Local resident stakeholders emphasized these barriers when they argued that they felt it was necessary to bring in lawyers and technical experts in order to be heard in the development process. For example, legislation can at times work against residents and instead can require expensive appeals process at the OMB.

Ultimately, this discussion about whether the bureaucrats or the city politicians should increase their capacity on urban sustainability policies illustrates the lack of responsibility that this group willing to take. Instead, it appears that there is an explicit or implicit disagreement between stakeholders about whether it should be the public or political leaders that lead on this policy. Furthermore, there are some fundamental process barriers and conflicts that exist among stakeholder groups that would prevent the meaningful implementation of urban sustainability policies. Therefore, any policy proposal needs to address how stakeholder relations will be improved on this issue to rebuild trust and create a new community dynamic.

Step 3: Proposal Development Review and Adaptation

This section will summarize the tangible elements that a policy proposal would be required to increase the potential for policy uptake. Based on the previous two steps, the following barriers need to be addressed. For each barrier identified, a series of high-level opportunities are also included.

Table 7: Barriers and Opportunities for Urban Sustainability Policy in Ottawa

Barriers	Opportunities
Political Barriers	
<p>No senior level city leadership on this file.</p>	<p>Formal and public reporting on whether or not the city’s climate change targets are being met. Transparent discussion of how targets are being addressed.</p> <p>Community associations, residents and experts can coordinate climate change and sustainability committees within their wards to demonstrate community interest on this file (i.e. Ottawa South Community Association has an Environment Committee).</p> <p>The City should make the AQCCMP data available on its Open Data website (similar to the City of Toronto) so that residents can keep the city accountable and monitor its progress.</p>
<p>Community associations and local residents do not feel they have meaningful influence on development review process.</p>	<p>Active and knowledgeable community associations and residents who are ready to engage and lead on these conversations.</p> <p>Increased and mandatory city planner and community association consultation for potentially controversial projects (as advocated by community association leaders and planners).</p> <p>Engage these groups at the onset of a project and keep them involved throughout the process. Produce a guidelines document for city staff so that the engagement steps are well defined. (The Public Engagement Strategy can be a starting point).</p> <p>Establish a citizen advisory committee for planning and growth management to solidify a working relationship between the City, community associations and residents.</p>
<p>Suburban vs. urban city divides.</p>	<p>Encourage cross-neighborhood working groups on council to bridge the gap and encourage mutual understanding of city wide issues. Allocate funding to cross-ward initiatives to minimize conflicts for resource allocation.</p> <p>Investigate the opportunity for decentralized ward councils with limited powers and budgets to implement ward specific initiatives and collaborate with other ward councils. This could allow residents to feel decision making ownership and involvement.</p> <p>Conduct awareness-building initiatives among all councilors to explain ward specific benefits and opportunities associated with</p>

	urban sustainability. Minimize the us versus them mentality.
Lack of transparency and accessibility throughout the planning process.	<p>Local residents should not require expensive lawyers and technical experts to have their concerns heard. Guidelines to navigate and understand the development process and how to appeal decisions should be published online in plain language. There is information online on “how to develop a property” but not how to launch an appeal or investigation into a development.</p> <p>The city or MMAH should investigate whether the existing legislation provides sufficient protections to citizens affected by neighbouring development projects i.e. who is liable for home damage from new constructions. Better legislative oversight for residents should be lobbied for.</p> <p>The city should make neighbouring residents aware of potential structural impacts to their homes. Increased public awareness and knowledge could work to combat this barrier.</p>
Policy Process Barriers	
Risk aversion among city bureaucrats. Do not allow for policy innovation or flexibility needed to establish new sustainability initiatives.	<p>Domtar Lands Development as a cornerstone example of how urban sustainable development can be done. Study lessons learned and how innovative features (i.e. site remediation, green buildings, district energy) can be scaled citywide.</p> <p>Study existing municipal legislation (Toronto) and develop guidelines for how urban sustainability policies can be included in developments (i.e. provide guidelines for the inclusion of solar PV or green roofs on new buildings).</p> <p>Use research being done by local organizations like the Ottawa Centre EcoDistrict on urban sustainable development to guide research and policy development.</p>
No formal mechanism to incorporate sustainability indicators during the planning development review process.	<p>The AQCCMP has already developed high level targets to improve environmental performance through urban planning. These high level targets can be better quantified to formally develop sustainability guidelines for new development projects.</p> <p>Improve policy coordination of the AQCCMP and the planning department. Create a climate change working group within the planning department to lead on the AQCCMP.</p> <p>Reinstate the community sustainability office to provide city bureaucrats with leadership and direction on this file and to ensure that progress is being made on the Plan.</p>
No hard incentives for	Developers cite increased costs associated with green buildings

<p>developers to build sustainably orientated buildings or communities.</p>	<p>due to the need for increased studies and technical reports since the city has yet to develop enough expertise to approve or encourage these methods (i.e. green roofs). City needs to establish its own capacity to reduce the burden of proof from developers.</p> <p>Use examples from other cities on the implementation of “green guidelines” for new development i.e. Toronto Green Standards. This would identify incentives for developers to build above code requirements (i.e. the TGS offers development charge reductions in lieu of meeting its greenest design code).</p>
<p>Lack of public awareness and/or knowledge of urban sustainability policies.</p>	<p>Opportunity to incorporate sustainability as an image of a National Capital Region (Post-amalgamation consultations determined that there was significant public support for this).</p> <p>Opportunity and public demand to expand the Planning and Growth Management’s Planning Primer course. Provides an avenue for residents to be better informed about the process. More informed residents can lead to an uptake in policy support.</p> <p>Significant expertise, interest and capacity among community associations. These groups offer a potential partner or channel to disseminate public information on sustainability initiatives.</p>

In identifying the potential opportunities to remove process and political barriers, it is evident that a number require increased financial resource capacity from the city. This research is not intended to conduct a financial analysis of these recommendations therefore it is not included. Nonetheless, it is worth noting that numerous stakeholders in this research believed that the planning department and community sustainability initiatives were experiencing resource capacity deficiencies.

Step 4: Policy Implementation Techniques

This section will combine results from the previous three steps to create a policy implementation action plan. This section will organize stakeholder groups according to whether they identified themselves as supportive or opposing. This chart is completed from the perspective of

implementing a suite of urban sustainability indicators into the urban planning review process. Step 1 and 2 identified that there are no formal sustainability indicators in the development process and this lack of process formality is connected to a lack of political will on the issue and further contributes to a lack of policy awareness, understanding and priority among all the stakeholder groups at large. Therefore, the formal inclusion of sustainability principles and/or development guidelines in the decision making process would work to address these barriers while making use of existing research, particularly the AQCCMP. Section 10, Recommendations will use this table to outline a series of recommendations based on barriers and opportunities identified by stakeholders.

Table 8: Action Plan Chart for Urban Sustainability Policy Implementation

Stakeholder	Interest	Resources	Available Action Channels	Probability and Type of Participation	Influence Level
Supportive Stakeholders					
Community Associations	High	Personnel expertise and willingness to engage.	Significant connections to the community. Leverage existing relations to communicate and inform.	High probability of participation given their interest level. Has the capacity and interest to take on a leadership position.	High within their community. Can inform, but not direct the policy and decision making process.
Experts	High	Personnel expertise and process legitimacy as advisors to city hall.	Can make/ have made recommendations to the city related to urban sustainability.	High probability of participation given their interest level. Their participation would be in	High within city hall. Can assist with and influence policy direction.

				an advisory role.	
City planners	High	Personnel expertise and process legitimacy as advisors to planning committee .	Can exert influence and include sustainability indicators in the development review process. But, currently this falls on the individual planner and is not formally mandated.	High probability of participation given their proximity to the policy implementation. Would be front line implementers and responsible for ensuring that urban sustainability is formally considered.	Medium. They advise planning committee on the approval or rejection of projects and therefore can include sustainability as an assessment lens. But, ultimately the decision is made by the committee.
Developers	Medium	Financial power. Facilitators of new development.	Significant power to guide the how and where development is done in Ottawa.	High probability of participation among urban/infill builders but, low participation and support from developers with greenfield projects.	High influence level. Can influence the decision making process through formal and informal relations with City planning staff and councillors.
Local Residents	Medium	Few formal or organized resources. Resource capacity increases when partnering with CA's.	Few available action channels on their own and they require partnerships with expert groups and community associations given their low level of existing knowledge and experience.	Low probability of participation until they are tangibly impacted by development in their area.	Low influence level unless they partner with expert groups and community associations.
Opposing					

Stakeholders					
Political Staff	Low	Political power and formal decision making resources.	Have the most powerful action channels at their disposal. Through legislation and public agenda power, this group ultimately holds the decision making power on sustainability policies.	Low probability of meaningful participation given their belief that urban sustainability and climate change are not politically salient issues.	High influence levels. Ultimately hold the decision making power.

Overall, perhaps what was most striking about these conversations was the lack of agency and influence these stakeholders (aside from political staff), felt over the process. This was exhibited through the stakeholder analysis which determined that the group that had to most agency to affect change was the least interested in doing so. Some of Ottawa’s most engaged and experienced citizens reported that they essentially felt powerless over the planning process and as such, they all reported to be growing increasingly cynical about whether their involvement was encouraged or valued by the City. This finding is striking not only because of the consensus response but, also because if the City’s most involved and passionate residents feel unwelcome in the process, how can the City reasonably expect to attract busy, everyday citizens into the decision-making process? Participants often made mention of “a usual crowd” that participates in consultations and sometimes lamented at the lack of broader citizen engagement in the process but given the barriers described in this research, it is no surprise that more residents do not feel welcome or valued in the process. This view was summarized by Participant 1 who stated: “...the best of Ottawa cannot participate in any substantive fashion in the decision making process. The opportunities for such formal participation are much more limited today than in

previous years, particularly when compared to previous administrations.” Furthermore, as shown by this research, if citizens are not willing or able to take up this cause, demonstrate public support, and ultimately drive political will, then it will become much more difficult to gain the political support necessary to establish urban sustainability policies.

This stakeholder analysis methodologically identified the nature of the current policy environment and subsequent barriers for the implementation of sustainable urban development policies. Subsequently, the action plan will be used to inform the recommendations below which will outline the various opportunities identified to address the policy and political barriers described in Step 3. These recommendations are intended to implement formal sustainability indicators into the planning and development review process and improve overall public awareness of the issue. As was stated earlier, the recommended action plan and identified opportunities are not assessed for their financial viability from a city budget perspective therefore this costing analysis would be further required.

11. Recommendations

1. City Council Leadership on Climate Change

Almost every interview respondent stated that Ottawa city council and staff do not have the necessary resources, expertise or political will to make climate change a policy priority. There were various barriers identified including political, public opinion financial and personnel resource limitations and a lack of policy direction. While each of these barriers can be addressed individually, the most significant barrier is the lack of senior level leadership on climate change. Without a sense of direction and priority, policies and projects will lack the visioning and long-term commitments required.

Some participants pointed out that the City was going in the right direction regarding

sustainability. They pointed to initiatives like the newly formed Ottawa Centre EcoDistrict, the development of Domtar lands into a sustainable community and the potential for transit orientated development at the new LRT stations. These individual stories represent an opportunity for the city to build a public narrative around urban sustainability. Championing the work that is being done and the immense potential for sustainability in Ottawa could serve as a draw for tourists, new residents and new commercial activity.

If the city wanted to make a serious commitment to sustainability and demonstrate its leadership on the issue, it could start by reinstating the community sustainability office. As the participants noted, this office contained a significant amount of policy expertise and it provided climate change leadership at both an institutional and city level. The City of Ottawa's AQCCMP is listed as a file under the Environmental Services Department but according to this research, further investigation is necessary to determine whether or not there is proper coordination and program implementation with the Plan's identified stakeholders (i.e. city planners).

From a comparative perspective, other major Canadian cities have departments or divisions specifically working on sustainability and climate change. The City of Toronto has an Environment and Energy Department that is working to make it the "most sustainable city in North America." Toronto city council also has a subcommittee on climate change adaptation and mitigation (City of Toronto, 2015). The City of Vancouver has its Greenest City 20/20 initiative that spans all city operations with the ultimate goal to "put the city on the path to sustainability, and make us the greenest city in the world by 2020" (City of Vancouver, 2014). Calgary, St. Johns and Halifax are signatories to the World Energy Cities Partnership Climate Change Agreement to reduce GHG emissions by 20% in 2020 (World Energy Cities Partnership, n.d.). While Ottawa's AQCCMP is certainly a step in the right direction, it is evident from this

research that the document alone is not enough to effect real and sustained change. The city can use these examples from other Canadian cities as examples of how to go forward.

2. Increase Public Knowledge and Awareness as a Means of Inducing Policy Support

A common concern expressed by community leaders, experts, city staff and politicians was that it was difficult for everyday residents to educate themselves about planning issues and urban sustainability. Community association leaders and even some of the citizen experts reported that it required a significant personal time commitment to learn about the land use planning and/or urban sustainability processes. They conceded that not every resident had the time that they did and that it might be difficult for residents to learn about the issues. Low levels of policy awareness and knowledge can contribute to, and reinforce levels of civic apathy. As Participant 4 mentioned, “I didn’t know anything about planning and development until there was a development proposal across the street from me. I had to learn everything on my own and very quickly and it was hard.”

Moreover, as was discussed in the literature review, increased knowledge of densification targets and plans can produce an increase in support for the policy. It would be beneficial from a policy making and democratic engagement perspective if city residents were at the very least familiar with major policy areas like urban planning, particularly given the fact that urban intensification is only projected to increase, therefore an increasing number of residents will be impacted. In this context, the planning primer course hosted by the city’s Planning and Growth Management Department could be an avenue for increasing public knowledge and aptitude about land use planning. The course is comprised of four modules: primer one and two and two elective courses. Each session is four hours in length and covers the basics of land use planning policies and principles and, once participants complete the second primer, they are able to take

elective courses, which are intended to focus on a particular planning topic area (i.e. heritage conservation and community design plans). Residents who complete the four course requirements receive a certificate. According to the primer website, seating is limited to 45 residents per session and “session registrations fill up quickly” (City of Ottawa, 2015).

The second recommendation therefore is to expand the planning primer course offered by the city’s planning department. There appears to be a demand for the primer courses and there is not enough capacity to include all interested participants (K. Liberman, personal communication, 2014). The city should expand on this innovative program by increasing resources allocated to the program. This is not only beneficial from a civic engagement perspective, but as was shown through this research, participants who had knowledge of urban sustainability in the planning process were likely to support the further implementation of these policies. To reiterate Ruming’s (2013) research findings on public support of densification in Sydney, Australia, there was a positive correlation between high levels of policy knowledge of densification and higher levels of policy support. If residents are informed of the benefits of urban sustainability policies like intensification, and TOD and ways to mitigate the potential costs, it is possible to garner more support as opposed to if residents only view development as “the builders and the city making money at the expense of the residents” (Participant 13).

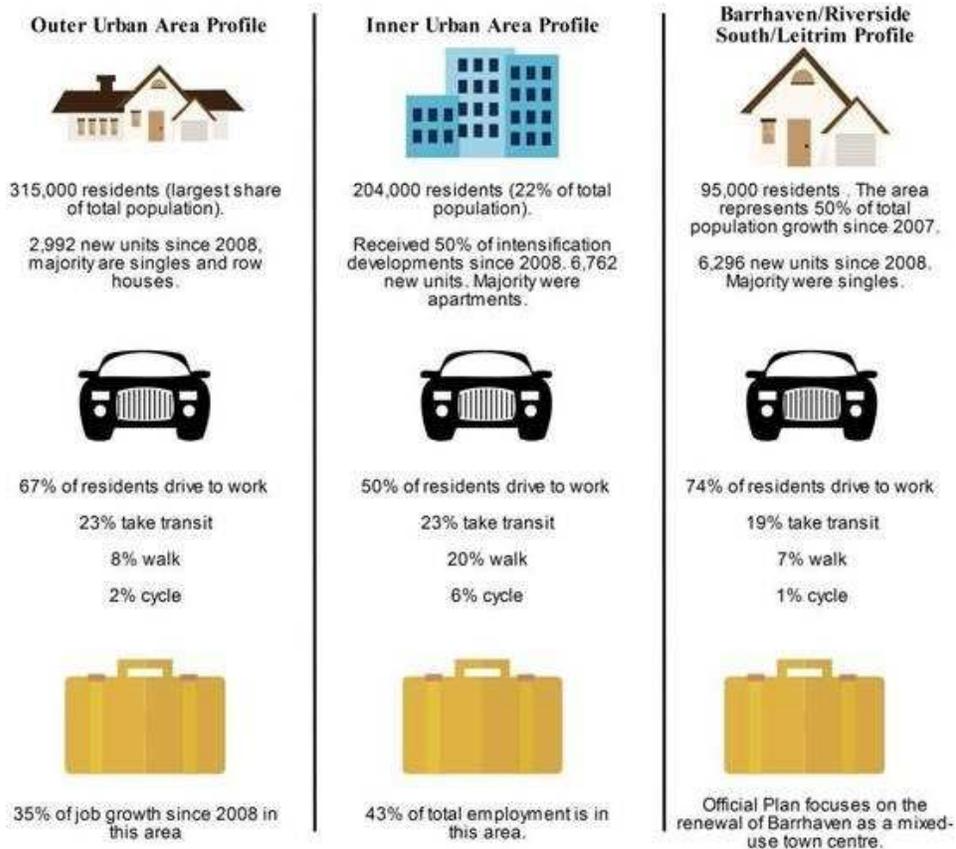
3. Assessing Effective Representation

According to long-standing councillor for Somerset Ward, Diane Holmes, there are only five wards in the city that can be considered truly urban (CBC Ottawa News, 2014). Technically, as a result of the 2005 Ward Boundary Review process, there are 12 urban wards, seven suburban wards and four rural wards (City of Ottawa, 2005). According to the report, urban wards are the area inside and including the Greenbelt (City of Ottawa, 2005). For the purposes of

this report, the five central wards of the report will be used in the discussion of urban and suburban councilors. Figure 11 illustrates the growth that each ward has undergone in recent years and how suburban and urban wards differ in their housing mix, populations, employment and commuting habits. Figure 11 below illustrates that even though the transit friendly, downtown has received 50% of intensification growth since 2008, suburban and outer urban areas where residents are most likely to commute by vehicle are still have more significant growth rates.

The tensions between urban vs. suburban vs. rural have been documented since the city's 2001 amalgamation. During the 2005 Boundary Review process, city staff received public feedback on this issue. "Suburban voters felt under-represented vis-a-vis urban voters. Rural voters felt dominated by the suburban communities in their wards and under-represented on City Council. And urban voters felt that the balance of power was skewed against the central wards by rural over-representation. They also felt a lack of respect from their suburban neighbours" (City of Ottawa, 2005).

Figure 11: City of Ottawa Ward Profiles



Similar concerns of council divide were raised by stakeholders. While the council division has been purported to impact the decision-making powers, it is also important to acknowledge and address reports of underrepresentation and/or a lack of priorities for these separate areas. In terms of the suburban and rural areas, there has been a decrease in physical proximity to their cities since pre-amalgamation; each municipality had their own local governments which received coordination from a regional government (but did not necessarily supersede local powers) (Participant 15). Residents of Cumberland Ward 19 now live approximately 28 kilometers away from Ottawa City Hall as opposed to their previous village government system used before amalgamation.

Given the variety of interests and concerns associated with the three different city areas, Ottawa should look to other amalgamated cities for best practices. For example, in the wake of

amalgamations, Montreal and New York City both strengthened local associations to maintain and encourage local community capacity that fed into decision-making systems at the regional level (Meslin, 2010). Providing decentralized power among different regions could assist in leveraging regional capacities while providing ownership to each area over the issues specific to them. The impact of these regional divides on the policy process was discussed in the interviews therefore the City should investigate how other amalgamated cities have developed their governance structure to accommodate the different regions. Albeit, the suburban-urban divides that can characterize amalgamated cities are not entirely under the control of the city, but it is in the city's best interest to resolve ongoing tensions and take a leadership role in developing cross-ward networks and solutions.

4. Better Contact between Planners and Communities and Ensuring Community Certainty

All of the stakeholder groups discussed feelings of mistrust, confusion and misunderstanding when certain planning decisions were made. While there is a legal mandate for developers to consult with communities, there is not a similar requirement for the city to consult with communities. When public notices are posted, city planners are identified as contacts for the public to submit comments but this puts the onus on residents to contact the city instead of the other way around. If the City were to take a proactive approach to early consultation, this could encourage and make it easier for more residents to meaningfully participate. Two of the community association leaders pointed to examples where city planners attended their community association meetings to discuss projects from the outset and as a result, the leaders believed the outcomes of the projects were a lot better received compared to other projects that had less city coordination (Participant 2 and Participant 10). This would also address concerns from the community association that they are not consulted early enough in the process. Many

community association leaders felt that they were informed rather than consulted when projects were presented to them therefore by connecting planners and citizens early on in the process, it would be possible to improve the nature of the decision making process. As well, this would signify a level of priority and cooperation between the different stakeholder groups that appears to be currently missing. The lack of trust among key stakeholders is certainly a concern as this can undermine real attempts to coordinate therefore, by formally connecting planners and community associations the City could send a message about the value they place on community feedback.

Participant 4, a senior planner described how the community relationship process could be improved. “There are cases where neighbourhoods can’t understand why the planning department would do something and in those cases we need to do a lot more work at explaining. We only have one outlet; we have a five minute presentation to planning committee. Maybe people would like to hear more from us, what are your reasons, why are you doing this to us?” The city planner stated that they were ultimately interested in hearing from citizens about why a development is not acceptable as proposed and what kind of changes would be needed to make it acceptable. This type of dialogue may assist in re-establishing community trust for city planners and in turn, potentially minimize negative public reaction in the approvals process.

5. Establish formal policy coordination between the AQCCMP and the Planning Department

As was discussed by participants, the lack of city leadership and expertise resulted in an alleged lack of policy direction between the AQCCMP and the Planning Department. The City has completed significant work on establishing a climate change plan and this work can be used as a starting point for more serious policy discussions (as was initially intended). For example, the section in the AQCCMP that discusses how land use planning policies can be used to reduce

GHG emissions (see literature review) should be quantified in specific targets with strategic deadlines as opposed to the current schedule which is an item in an appendix that solely states whether or not a general action area has been completed or is ongoing (City of Ottawa, 2014a). These ambiguous targets and program areas do not provide the information necessary for stakeholders to understand and/or support the policies. Specific program details are necessary for stakeholder understanding and so that the individuals in charge of the policy implementation (i.e. city planners), understand the process and purpose. The model that is currently used for the transportation and infrastructure master plan could be used in developing a more detailed policy document, which includes regional assessments of program needs, and implementation plans for specific Ottawa areas along with a costing analysis and a list of priority projects (City of Ottawa, 2014a). Again, the AQCCMP as is contains important and useful background research related to the Ottawa's contributions to climate change but, there is a lack of useful or well-defined plans for implementation.

6. Revitalize the City of Ottawa's website to become a valuable information source

The lack of public awareness and information was identified as an issue for nearly all stakeholders. As the City's primary information outlet, the City's website should be considered as a valuable tool to both post information and receive feedback. This means that the site should be as accessible and helpful for residents as possible. For instance, reading the full AQCCMP requires that users download 13 separate PDF documents; there is no option for users to download the document in its entirety, which puts the onus on residents to download the entire document piece by piece. This fragmented approach is the case with the City's other large reports and while it is certainly, not the worst issue, it feeds into a narrative of the City putting the responsibility on citizens to engage and inform themselves against barriers instead of taking a

proactive approach to create an inviting and comprehensive information platform for residents.

If the city were to transition to a website more in line with Web 2.0 standards, this could also offer an opportunity to use online forums to solicit community feedback and consultation. Other Canadian cities already allow residents to engage with the policy development process online. Both the City of Toronto and the City of Calgary use the online consultation platform, Mindmixer to host IdeospaceTO and Calgary Engage (City of Toronto, 2015c; City of Calgary, 2015). These tools use similar methods: residents are asked to register online to access and participate in an online discussion forum. Topics are posted by city staff and are open for debate among residents. Calgary and Toronto's Mindmixer platform is more advanced as it allows for online residents to vote for each other's ideas and "upvote" ideas so that they become more popular and are top ranked. Most importantly, all four platforms describe how these crowd sourced ideas will be included in the decision making process and who will be monitoring these discussions. Based on this brief overview, the City of Ottawa has a proven list of examples to follow should it choose to implement these types of initiatives. These online platforms allow for another opportunity for residents to engage and it allows people for an alternative to in-person consultations. This would serve as a counter to some residents' beliefs that their feedback is not heard or valued by City officials.

12. Conclusion

The best hope for urban sustainability hinges on the ability of stakeholders to hold the

government accountable and responsive. The worst thing that stakeholders can do is become complacent and disenchanted with the policy-making process. Despite the trials and barriers reported by pro-urban sustainability stakeholders, it appears that their resolve and spirit to continue working for better policy and better cities is ever growing. This research intended to uncover the current state of urban sustainability policies in Ottawa and the result of this was the identification of high level political and policy barriers preventing the full implementation of these policies. The stakeholder analysis completed in Section 9 subsequently outlined opportunities to address and improve on the barriers identified by stakeholders. Six specific recommendations were then outlined to describe specific policies or programs that the city could implement.

This research set out to investigate how principles of urban sustainability or smart growth can be implemented in the City of Ottawa to reduce greenhouse gas emissions and energy use. The policy groundwork has begun on this in the form of the Air Quality and Climate Change Management Plan, and the stakeholder analysis uncovered that there is significant stakeholder support for to increased development of these policies. The research demonstrated that despite political and policy barriers, engaged Ottawa residents understand the importance and relevance of better urban sustainability measures. Therefore, this research clears a pathway for policymakers and civic leaders to take action in this crucial policy area.

13. Appendix

13.1 Interview Plan

Introduction (5 minutes)

Moderator introduction

Length of session

Audio recording of session

Discussion and results are confidential, participation is voluntary

Participant Introduction and Involvement in Community (5 minutes)

To begin, we'll go around and have everyone give their name and a brief description of your involvement in the community.

PROBES:

How long have you been members?

Why do you support this organization?

How active are you?

Why did you originally join?

Perceptions of Intensification (25 minutes)

I want you each to take a few minutes to jot down on the paper in front of you what urban intensification means to you. I'll ask you to use examples and experiences from your community.

Follow up questions: What are the benefits and costs associated with this types of intensification?

PROBES:

Based on the way you just defined density, is this something you'd want to happen in your community?

Depending on answers given, [read aloud the definition of urban intensification provided by the City of Ottawa] and discuss how it differs from the definitions just given.

Perceptions of the Policy Implementation Process Associated with Intensification (20 mins)

Based on your previous experience with the Ottawa planning process, how do you feel the City of Ottawa is guiding and implementing its urban intensification targets?

Follow up questions: Are you aware of the specific development and intensification targets set for your neighbourhood?

PROBES:

What is the City of Ottawa planning department doing well when it comes to intensification implementation? What could it be doing better?

Are you satisfied with the public consultation process based on your previous involvement?

Perceptions and Knowledge of Urban Sustainability Connections (20 mins)

This is a two-part question. The City of Ottawa's Air Quality and Climate Change Management Plan cites urban intensification as a means of reducing environmental impacts and climate change effects. First off, were you aware of the mention of urban intensification in the city's climate change plan? Secondly, do you feel that urban intensification is the appropriate policy to use in response to climate change concerns?

PROBES:

Do the environmental benefits of urban intensification make you think differently about the policy?

Would you support a mid to high-rise development application in your neighbourhood if the building incorporated significant sustainability features such as LEED certification and geothermal systems?

Conclusion (5 minutes)

Summarize discussion

Anything you would like to add?

Thanks and dismissal

13.2 Interview Transcripts Coding Schedule

Themes for Analysis

Research Hypothesis/Theme	Keywords	Argument Tone	Researcher Perceptions
Local Citizens Perceptions of Urban Intensification	Development Role of Developers Community building Cost/Benefit Positive/Negative Impacts Community/ neighbourhood character Community/ neighbourhood character Role of politicians/planning department	Positive Negative Neutral	Body language Understanding of the issues /topic Level of participant's interest/enthusiasm in topic Any noticeable opinion leaders How is the question received by the group?
Localized intensification impacts vs. Broader climate change objectives	Public consultation process City of Ottawa land use planning legislation Community design plans and zoning Knowledge of the tradeoffs between local impacts and city wide goals	Positive Negative Neutral	Body language Understanding of the issues /topic Level of participant's interest/enthusiasm in topic Any noticeable opinion leaders How is the question received by the group?
Relationship between climate change and urban intensification	Urban sustainability Knowledge of the connection between climate change and intensification Environmental	Positive Negative Neutral	Body language Understanding of the issues /topic Level of participant's interest/enthusiasm

	<p>concerns</p> <p>Urgency of action</p> <p>Level of importance placed on physical environment, value statements</p> <p>Present and future value of the environment</p>		<p>in topic</p> <p>Any noticeable opinion leaders</p> <p>How is the question received by the group?</p>
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