

**Cultivating Green Space Together: Exploring the Collaborative Planning and
Public Engagement of Green Space in Edmonton, Alberta**

by

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Abstract

Edmonton, the fifth-largest municipality in Canada, is attracting more and more people to study, work, and live. Expected to nearly double in population by 2050, the City of Edmonton put forward a series of plans to enable a sustainable and climate-resilient city to accommodate new residents. Green spaces, including natural areas and urban open spaces (such as public parks and squares, corridors, linkages, and main streets), are increasingly regarded as dominant elements in promoting environmental sustainability and quality of life in cities. Therefore, how to plan and manage the green space while welcoming more people has become a key question for the City of Edmonton to consider.

This research aims to critically explore the formulation of green space strategy from different perspectives under the collaborative planning and public engagement context. The objectives are to 1) elucidate the engagement process between the government and various stakeholders/public; 2) explore the engagement experience from different perspectives; 3) make recommendations for the collaborative green space planning as the plan is rolled out and acted upon. A social constructivist worldview adopted, and mixed qualitative research methods, including semi-structured interview, case study, and document review are applied to explore the topic. Each interview is approximately 40 to 60 minutes, and the potential interview participants may come from the municipal government, stakeholder organizations, or the local community. A case of the public engagement system in Edmonton was formed during this study. The research concludes by offering some salient lessons for those interested in advancing socially robust green space planning methods which integrate community engagement within planning and municipal government. Key findings suggest a shared view amongst city officials and community members as to the benefit of engagement. These variously were seen to include, for example, benefits to

promoting public understandings of greenspace planning and municipal governance; values in connecting citizen experience of greenspace with ecological and sustainability planning; and supporting perceptions of belonging, ownership and responsibility for Edmonton's green spaces. The research also identifies two key challenges to be addressed. The significantly included the difficulty of maintaining long-term relationships between City officials and wider public networks; challenges in protecting, or upholding, public voices within the bureaucratic policy process once an engagement or plan is complete. The thesis concludes by proposing the potential of simplifying planning and policy hierarchies as a means of addressing the above challenges, puts forward the value of moving from consultative to collaborative models of engagement and the need for publics to be better integrated within actual decision-making.

Preface

This thesis received research ethics approval from the University of Alberta Research Ethics Board One, Project Name “Cultivating green space together: Exploring the collaborative planning and public engagement of green space in Edmonton, Alberta”, No. Pro00093098, Nov 6, 2019.

Dedication

In dedication to my beloved ones in the world:

Dad, for supporting much but saying less;

Mom, for devoting the whole life to us;

Sister's family, for bringing me warmth and energy in a foreign country;

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Chapter 1: Introduction

Green spaces, including, for example, urban parks, forests, and green belts, are increasingly regarded as dominant elements in the promotion of environmental sustainability and quality of life in cities (Madureira, Nunes, Oliveira & Madureira, 2018). The City of Edmonton has been updating plans and regulations for better management and usage of these spaces. Expected to nearly double in population from 1.2 million people to 2.1 million people by 2050 (City of Edmonton, 2019), the City of Edmonton has published a series of policies and plans to enable a sustainable city to accommodate new residents in the future. The City's extensive natural spaces and parks make Edmonton a unique city. One of the largest urban parks in Canada - the North Saskatchewan River Valley located in the heart of the city, and offers residents access to a rich ecological and cultural environment set against the hustle and bustle of a growing urban metropolis. The City is attempting to create and protect a well-connected, multi-functional and collaborative green network to connect and integrate the open spaces at the neighbourhood, regional, and city levels (City of Edmonton, 2017). "Breathe" - Edmonton's Green Network Strategy (City of Edmonton, 2017)" is the latest articulation of the City's green space vision and sets out the need to plan and protect the rich landscape of public open spaces, including natural areas and constructed open space. The strategy aims to create an integrated network of open spaces within Edmonton to support a healthy ecosystem and serve the communities that enable people to gather and celebrate (City of Edmonton, 2017). It includes three main layers and fifteen functions, which integrate sustainable development, social communication and wellness improvement into one network (City of Edmonton, 2017). The City is ambitiously connecting their planning to positive environmental outcomes, including the multi-layered planning of green spaces.

Nowadays, public engagement has played, or is expected to play, an increasingly important role in addressing environmental issues and implementing sustainable development (Islam & Bonilla, 2004). Many Canadian cities have developed policies and guidelines which integrate engagement with municipal governance functions. In this regard, Edmonton is no exception. Coinciding with developments in green space and sustainability policies has been a renewed interest in public engagement as a means of supporting policy development and urban change in the City. The City's Council Initiative on Engagement, developed between 2014 and 2017, defined engagement as:

“create[ing] opportunities for people to contribute to decision making by City Council and administration about the City's policies, programs, projects, and services, and communicat[ing] how public input is collected and used (City of Edmonton, 2017).”

In the past few years, we have witnessed the implementation of public participation in various plans and projects. For instance, current planning activities generally include: a communication and engagement calendar which serves to share information about City of Edmonton engagement events; opportunities to provide feedback on planning activities, for instance through the City's Insight Community¹ or direct engagement with planners and policymakers; and the result of these engagements might be communicated back through 'What We Heard' reports offering a summary of a specific project after analyzing the collected data from public engagement activities. These engagement activities are held both online and offline, offering citizens multiple choices to participate in the projects they are interested in. Here, the City reflects a broader trend where public engagement is recognized to play an increasingly important role in addressing

¹ The Edmonton Insight Community provides citizens with the ability to provide feedback on City plans and initiatives through accessible online surveys. Details of the panel can be found here: https://www.edmonton.ca/programs_services/public_engagement/edmonton-insight-community.aspx

environmental issues and implementing sustainable development (Islam & Bonilla, 2004). Reflecting this general uptake of engagement, the Breathe Strategy project team held 47 engagement activities in total to hear from the public and wrote several What We Heard Reports about the engagement phase. The team also identified community stakeholders and indigenous groups to join the conversations throughout the whole process. In this way, the delineation of positive environmental outcomes in the plan are informed by the values and experiences of various groups of people, for example, architects, urban planners, ecologists, economists, engineers, and other specialists from the public (Lehmann, 2010), while the multi-layered values of the green space plan reflect the essential role played by the City in responding to environmental crises. Often, however, the written surface of such an idealized engagement policy does not tell the whole story, and engagements are best characterized as inevitably partial, incomplete and uncertain (Irwin et al., 2013). For instance, power imbalances inevitably exist with any deliberative exercise. Within the urban context, corporate development actors have been largely unchecked in shaping cities, and there are concerns about the ability of such actors to exploit the openness of engagement to further strengthen their interests (Lord et al., 2017). Environmental groups and lobbies have also emerged in recent years to oppose projects based on environmental protection and influence policy and planning approaches. Conversely, despite being motivated by democratic values of inclusion, engagements can define the public in very narrow turns and potentially be exclusionary or unable to attend to conflicting visions of the City (Pløger, 2004). In Edmonton, a city with a diverse cultural makeup and a history tied to the colonial subjugation of indigenous communities, there are also uncertainties in how to engage with different groups of people, the diversity of interests, and worldviews they represent. For instance, for the general public, the word “land” refers to the place where people carry out

production activities, while for the indigenous, it stands for the respectful and spiritual connection with the land. Simply, public engagement despite recent advances remains an evolving and at times underdeveloped part of municipal planning and government. Many of the concerns raised in both practice and the literature around engagement relate back to governments' ability to move beyond surface engagements to generate more productive conversations (Arnstein, 1969) with the public and stakeholders on Edmonton's environmental protection. Thus, it is worth exploring whether Breathe was able to capture cultural diversity characteristics and provide a flexible plan that could both shape development and be open enough to accommodate differences and changing perceptions of the urban environment.

The research presented in this thesis critically explores the development of collaborative planning and engagement strategies alongside the formulation of green space planning. How do organizations with different backgrounds view green space planning from their perspectives during the engagement process? How do the City and community stakeholders evaluate the quality of cooperation? What are the prospects for public participation? Since the public participation policy is still in its infancy in Edmonton, in-depth research on these issues will not only benefit the improvement and long-term development of the engagement system but also promote the establishment of good relationships between the municipal government and social communities to collaborate on addressing sustainable development issues.

In order to help delineate the focus of the study, definitions of the main terms relevant to the study are provided in Table One.

Table 1: Main terms and definitions regarding the topic

Terms	Definitions
Green space	Vegetated land in and around urban areas, including nature areas, corridors and linkages, national parks, outdoor sports fields, school playgrounds, rural or semi-rural areas near urban areas (Chong et al., 2013).
Public engagement	Involvement of public communication, consultation, and participation in decision-making and policy-forming activities responsible for policy development (Rowe & Frewer, 2005).
Collaborative planning	Inclusive dialogic with various stakeholders and continuous interaction in the form of a partnership throughout plan and policy development in urban and spatial planning literature (Healey, 1997).

I address my research questions by adopting a broadly social constructivist worldview and applying mixed qualitative research methods to explore this topic. I mainly conduct semi-structured interviews to discuss the current public engagement policy implemented in green space planning projects with policymakers from the City and various community stakeholder participants who had experience in attending engagement activities related to green space design and development. From different experiences, I am able to learn the advantages and disadvantages during the operation of the public engagement system in a comprehensive approach and attempt to form Edmonton as a unique case in establishing a better engagement system within the current social context.

Summary of research aims and objectives

The purpose of this research is to understand the development of collaboration and citizen engagement in Edmonton's green space planning from different perspectives and experiences of policymakers and community stakeholders. Additionally, the research will address experiences of inclusion, exclusion, participation, and representation within the green space planning process. Related to these broad ambitions, the specific objectives are to 1) elucidate the formulation of green space policies within the context of collaborative planning; 2) explore engagement among government and various stakeholders in green space planning, and the ways in which they define and value green space planning; 3) and make recommendations for collaborative green space planning as the plan is rolled out and acted upon. Stated as a series of research questions, my research asks:

1. How do different organizations (the City and stakeholders) understand and value green spaces and green space planning in Edmonton?
2. How are Edmonton's green space plans formulated and planned in the context of engagement?
 - How did the City of Edmonton identify and engage with stakeholders in the green space planning process?
 - How do different organizations evaluate the engagement process and results?
 - What contribution has this engagement made in terms of policy development and practice?

- What are the challenges towards public engagement?
3. How would all the organizations keep the engagement going in the future?

Thesis organization

This research is organized and presented as follows: Chapter One introduces the research context and clearly states the goal and objectives of this research. Chapter Two provides a review of the academic literature related to the historical development of green space planning in Edmonton and planning theories that will be used to analyze the context and express the viewpoints. Here, key concepts, including collaborative planning and public engagement, will be explored and provide important frames for subsequent analysis. Chapter Three describes the methodology used in the research and explains how the study was designed, its rationale, and how the data was collected in detail. Chapter Four presents an overview of the research data and presents selected responses from participants organized in relation to key themes in the data. Chapter Five further builds on this analysis to provide a more in-depth discussion of the data in response to this project's aims and objectives. Key discussion points include the value of green space, governance of green space planning, municipal-citizen engagement, and suggestions for public engagement during green space planning. Chapter Six summarizes the conclusions noting the contribution of this research, identifying limitations and areas for further work, and concludes by offering a series of key issues for consideration by planning professionals and municipal leaders in carrying forward engaged green space planning into the future.

Chapter 2: Literature Review

In order to set the social context of green space planning, introduce the elements of public engagement in the planning process, and form Edmonton's green space planning as a case, the following literature will be included in this chapter: **i. evolutions in green space planning theories; ii. public engagement theories including a contemporary interest in active forms of collaborative planning; and iii. urbanization, sustainability and engagement in the development of current green space policies in Edmonton.** These works of literature are closely linked to the collected data and discussions in Chapters Four and Five, and serve as tools to answer the research questions.

Evolutions in green space planning theories

Green space planning has drawn increasing attention in the process of urbanization evolution in the past few decades. In the context of climate change, urban green space has become an essential element in achieving sustainable development due to its ecological function. As one of the literature foundations of this thesis, the evolution history of green space planning allows us to understand the social context and trend of planning better.

The exploration of landscape development can be traced back to several centuries all around the world. Gohar (2016) has concluded a table of the most significant events in the process of urbanizations based on various scholars' research.

Table 2: Different eras in the evolution of urbanization

ERA	Time	Main themes
Pre-industrial revolution	18 th Century	<ul style="list-style-type: none"> - Extravagant landscape focusing on aesthetic values - Landscape was a symbol of status - Landscape architects were also philosophers, artists and writers - Deterioration of cities and demand for public parks
Industrial revolution	19 th Century	<ul style="list-style-type: none"> - Moving from a single park to park systems - Adding “Parkways” to park systems - The railway’s influence on American cities - Preservation and conservation movements - Incorporating ecology in planning
Beginning of ecological planning	1920-1970	<ul style="list-style-type: none"> - Introducing typology for parks - Introducing the initial basis for GIS - Visual Image & Form of the City - National Environmental Policy Act (Government)
Environmental cleanup and pollution mitigation	1971-1980	<ul style="list-style-type: none"> - Government adopting environmental reform - Professionals getting involved - Refining GIS concepts - Sustainable development
Sustainability & global environmental issues	1981-1998	<ul style="list-style-type: none"> - Environmental Global Issues - Landscape urbanism - GIS became an essential planning tool - Sustainability is insufficient
Post sustainability	1998-Onward	<ul style="list-style-type: none"> - Planning as a wicked problem - MDGs will not be achieved by 2015

Source: Gohar, A. (2016). Urbanization & sustainable development: evolution and contemporary challenges. *Journal of civil engineering and architecture research*, 3(12).

From the table, we can see the milestones in each century during the urbanization process. It’s worth mentioning that in the late 19th century, Frederick Law Olmsted was one of the most influential landscape architects through American cities because of his architectural concept of “*parkways*”, which means to connect different urban parks by boulevards, roads with tree lines, sidewalks, heroic sculptures, and magnificent architecture (Beverage & Rocheleau, 1995; Rybczynski, 1999). As one of the leading landscape designers for the worldwide-known Central Park in New York, he made public parks a vital part of modern cities and people’s lives (Blodgett, 1991). He left a profound influence in the flexible use of the natural features in a given place, creating equal access to recreational space, and improving the quality of life for residents (Newton, 1971). At the same time, the “Garden City Movements” put forward by Ebenezer Howard, which advocated that communities should be surrounded by vast undeveloped or agricultural land called “*greenbelts*” was highly recognized in North America. (Ignatieva &

Golosova, 2009). The greenbelts systems have played a vital role in the development of multiple cities in Canada since the 1950s (Taylor, Paine & FitzGibbon, 1995). For example, as the oldest greenbelt in Canada, Ottawa Greenbelt is a 200 km² protected natural green zone surrounding the capital, protecting potential agricultural lands and preventing further urban sprawl since 1956 (Walby, 2009). Most Canadian cities also adopted the greenbelts systems, such as British Columbia, Calgary, Saskatoon, Toronto, Quebec, as well as Edmonton. These concepts have been taken down to the grounds, creating the urban green space pattern in Canada today.

Later in the 20th century, people began to realize the importance of environmental protection, and urban planning began to pay attention to ecological planning. Emerged in the late 1980s, “*new urbanism*” became popular in North American and European urban planning. It laid the foundation of suburban forms and even replaced conventional zoning in some cities (Grant, 2005). Its proponents, drawing on the foundational work of Jacobs (1961), advocate the need to create denser, walkable, community-oriented, and human-scaled neighbourhoods that are facilitated by local transit and proximity to retail and retail service areas. Growing out of discontent and opposition to the modernist and car centred planning priorities of the post-WWII era, new urbanism is a counterpoint to dominant forms of low-density suburban sprawl. In doing so, it places a strong emphasis on urban design, including the narrowing of streets, widening sidewalks, and reclaiming public space (Lehmann, 2010). It is further supported by parallel strategies for encouraging transit-oriented development and increasingly overlaps with ideas of sustainable city-building, including the regional planning and preservation of open space; contending with urban sprawl; and easing the traffic pressure (Caves, 2005). The principles of new urbanism have been broadly adopted as planning standards in official documents across

Canadian cities. We can find that most cities encourage features like connectivity, walkability, and transportation options (Grant, 2003).

As one element of new urbanism, walkability is highlighted and increasingly valued for a variety of reasons. As a significant role in the modern urban pattern, the green space supports walking by offering recreational activities and improving neighbourhoods’ environmental quality. Research results show that shorter distance among individuals and ample open space are highly attractive elements to encourage people to walk (Giles-Corti et al, 2005). Besides, not only because walking reduces traffic congestion and has a lower environmental impact than other fuel-consuming transportation, but it also promotes people’s mental and physical health (Southworth, 2005).

Nowadays, with the development of new urbanism, there is a multitude of new and emerging definitions regarding urban green space. The following table lists the interpretations of different terms, which will also appear in later chapters.

Table 3: Different definitions of urban green spaces

Name	Definition
Urban open space / Public open space	Open places accessed by the public and designed for entertainment, which may include parks and community gardens, green corridors, public squares, and pedestrian streets (Lynch, 1981; Ignatieva, Stewart, & Meurk, 2011).

Green networking	Minimizing resources usage by choosing energy-efficient networking technologies and products (Bolla et al., 2013).
Green infrastructure	Integrated areas including natural, semi-natural, and artificial green land which provide various benefits such as reducing urban heat and improving storm-water management within the city extent (Tzoulas et al., 2007).
Urban forestry	Sustained planning and maintenance of trees and forests around communities and cities in order to provide environmental and social benefits for people (Johnston, 1996).

While green space planning is increasingly recognized as an essential element of progressive and sustainable urban design, it is no without its challenges and continues to face barriers to implementation. Importantly, ongoing urbanization, development and expanding urban footprints mean that cities are often facing an ever-growing demand for green spaces and the recreational opportunities they afford while facing pressures against preserving land from development. Urban residents now expect good living conditions, including access to urban green spaces (Buijs, Mattijssen, Van der Jagt, Ambrose-Oji, Andersson, Elands & Møller, 2016), but maintaining equitable access within urban areas becomes potentially problematic. For instance, even when guided by the sustainability logics of new urbanism, focus on re-densification policies (e.g. infill) in inner-city areas potentially squeezes open space and green space access. In addition, there is a recognition that attempts to balance green space values

across a city, or even within a single park or corridor, is challenging. As Briffett (2001) notes, providing connected wildlife corridors, while also ensuring human recreational access, may not always be compatible. Thus multifunctional green space planning, at the very least requires, practices innovations in managing values or a need to recognize the incompatibility of values in some instances.

The evolution theories and essential concepts in modern green space planning are the basics of understanding the research questions of the thesis. In the next section, I will introduce the influence of social and humanities appeal on green space planning.

Public engagement theories including a contemporary interest in active forms of collaborative planning

“Public engagement” has become an increasingly prevalent topic for municipal governments and urban planners in recent years. In general, engagement refers to the increased involvement of the public in the practice of policy-forming activities, policy development and decision-making (Rowe & Frewer, 2005). Public engagement might also be termed public participation, public involvement, or citizen engagement. Most large Canadian municipalities, including the City of Edmonton, have created engagement guidelines or policies in recent years to advance their approaches to citizen relations. Commonly these policies are put forward in response to concerns about deficits in public trust in the actions of a municipal government. Concerned about creating more positive dialogues with citizens during a widespread development and change in the City, Edmonton brought forward a revised engagement framework through the introduction of a Council led initiative (City of Edmonton, 2017). The advance of engagement initiatives can also be understood in relation to the growing expectations

of citizens to speak their voice in municipal planning and policy, particularly as those policies and development strategies can directly impact the quality of their lives. As my research will document below, in Edmonton green space planning and the environment have become particularly important motivation for citizens to get involved in their city, and assert their right to participate in the future planning directions of the City.

Recent developments in municipal engagement are rooted in a wider tradition of public engagement emerging in Western democracy over the last century. Tightly coupled with the idea of deliberative democracy, discussed below in further detail, engagement has been part of a wider move to extend and enhance democratic participation within Western democracies. It is a response to the growth and the complexity of government and society, and advocates for systems of participation which extend democracy beyond the ballot box to include more inclusive and meaningful ways of advancing pluralism. At the scale of the City, there has also been recognition of the inability of traditional rational planning and decision-making to address a whole diversity of interests, and planners are often accused of simply reflecting the powerful voices of developers and municipal elites. Sherry Arnstein, in her seminal theory of the 'ladder of participation', thus sets out the challenge of engagement as one of redistributing power in order to "enable the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future" (1969: p. 216)). Similarly, the French theorist Henri Lefebvre (1996) put forward the slogan of "*the right to the city*", advocating for a spatial politics addressing the exclusion of citizens both from the qualities and benefits of urban life. Harvey (2008) further developed the concept and defined it as "a right to change ourselves by changing the city" (p.23). Engagement, following these developments, is the recognition that urban citizens have a role and interest in determining what kind of place they want to live, as opposed

to simply occupying those spaces planned and developed by government and the private sector. As Arnstein (1969) further argued, it is the responsibility of local government to take the lead for creating equitable citizen participation processes through the building of long-term “partnerships” with local community groups.

Out of these early advances for greater engagement and the democratization of municipal planning and decision-making a broad and developed area of intellectual thought and professional practice has developed. For the purposes of my analysis I broadly divide the discussion below in relation to deliberative and collaborative modes of engagement. While simplifying the complexity of engagement activities this division highlights potential sources of innovation in engagement in greenspace planning.

Deliberative democracy begins with the premise that effective and inclusive dialogue is a necessary part of engagement and governance. Described as “the soul of democracy” (Kin, Wyatt, & Katz, 1999), deliberative conversation improves public discussion and challenges participants to reach the best possible responses to a policy challenge or problem (Gordon & Manosevitch, 2011). In general, deliberation is a reflective practice which stakeholders analyze gathered information and reflect together on the results. Patsy Healey (2006), a prominent voice and advocate for the development of communicative forms of planning, has argued that deliberation offers a new paradigm of planning for a contemporary society which usually mediates conflicts between organizations through consensus-building processes. Instead of solely relying on the professional expertise of planners, Healey advocates for a model in which this expertise is brought together with citizens through processes of facilitated negotiation which recognize the contribution of citizens to the planning process.

These ideas have been very influential in guiding the development of municipal engagement policies internationally. Founded in 1990, the International Association for Public Participation (IAP2) has been very successful in translating the conceptual development of deliberative and communicative forms of planning into policy and practice. It is an international association of people who seek to promote the practice of public participation in relation to individuals, governments, institutions, and other entities that affect the public interest in nations throughout the world. IAP2's development of the oft-cited public engagement spectrum has helped governments extend their understanding of the public's role in public participation from traditional preoccupations with informing and consulting communities, to better involving, collaborating, and empowering them. At the far end of the spectrum, IAP2 has prefaced a greater need to make engagement meaningful and constructive, in the ways in which scholars have described, by connecting decision-making to communities through deliberative opportunities.

This spectrum is also adopted by the City of Edmonton on the official document called The Council Initiative on Public Engagement. Under the spectrum, it proposed some engagement methods, such as workshops with staff and the public, obstacles workshop, strategies workshop, and advisory committee (City of Edmonton, 2017). Through long-term and regular engagement activities, stakeholders can reflect on and negotiate a more comprehensive and democratic answer. Compared to simple forms of consultation, which is similar to a one-way question, deliberative democracy has communicated with the citizens and listened to their suggestions. After several rounds of discussions, the mutual benefits are more suitable for municipal government to make long-term planning and maintain good relations with different groups of citizens.

An increasingly popular planning model called “*collaborative planning*” is advocated as means of further extending the benefits of engagement (Morton, Gunton & Day, 2012). Collaborative planning advances the engagement model further through an emphasis on the creative interaction of communities and planners to plan, design, and build communities (Harris, 2002). It advocates that the government or planners are not the only sources of planning expertise, but that citizen groups can play active and creative roles in developing plans and enacting those plans through policy and decision-making. They should collaborate with other communities and social agencies to form a network and have a dialogue with them under equal empowerment (Booher & Innes, 2002). In this situation, every organization can share information and learn new ideas through mutual understanding, and public engagement can be improved through collaborative planning in the city. There are formal and informal types of participation during collaborative planning. To distinguish “formal” and “informal”, there should be a fixed standard or structure. Formal types focus on influencing decisions from within the institutions of the planning system, including, for example, co-design, mapping, applications and public meetings within the public consultation process (Damurski, 2015). Informal types are inspired beyond the institutions and often generate high levels of public concern on issues as well as the leading of elected representatives (Scott, Redmond, & Russell, 2012).

Compared with communicative modes of engagement, which emphasize deliberative methods such as citizens’ forums and juries, collaborative planning has adopted more design centric modes of working which are more closely integrated within an overarching planning process. Where deliberative processes are often criticized for taking place down-stream in the policy process, for instance at the point of planning approval or a decision point, collaborative planning suggests the need for recurring participation. Democratic participation, in other words,

is enhanced through the articulation of planning as a collaborative process itself, and its advocates suggest a strong reorientation of the profession in this manner (Lord et al., 2017). In this way collaborative planning is imagined as a means of increasing the creativity of addressing a social or spatial problem, has more flexibility in project direction, and improves learning possibilities which are benefit for all organizations participating in the program. It greatly enhances stakeholder relationships when all communities are aiming at one goal, thus promotes citizen engagement and policy progress.

In recent years public participation has become to be seen as a vital part of addressing environmental problems and bringing about sustainable development (Islam & Bonilla, 2004). Research shows that the collaborative planning approach through devolving the governance of ecosystem services to non-government organizations is a positive way to preserve public green spaces (Dennis & James, 2016; Krasny & Tidball, 2015). Participation by stakeholders and the public is commonly regarded as an essential part of landscape planning and management (Selman, 2004). Engagement and a suitable approach for improving green infrastructure planning and management are needed since stakeholders desire a greater voice in the planning and design of green infrastructure (Southern, Lovett, O’Riordan & Watkinson, 2011). In Edmonton, the City promulgated public engagement policy and the integrated green network strategy called Breathe in 2017 simultaneously, which primarily increase the interaction with the public and stakeholders in city-run projects related to Breathe. The most remarkable result is that they have established an online feedback map for city parks, and is preferred by many policymakers and residents.

However, with the growth of the population in the urban areas, some local governments have experienced a widening gap between the planned requirements and the actual provision of

green space (Maruani & Amit-Cohen, 2007). The increasing urbanization and the rapid development of urban society leads to a tension between modern planning and quality of life (Risse-Kappen, Risse, Ropp & Sikkink, 1999). There is a large degree of exclusion in shaping the city for various kinds of marginalized groups, for example, the working class, people of colour, immigrants and so on. They are also city inhabitants and have the right to shape the environment and their living conditions. These are not only the material manifestation of taking back the city but also imply that people have the power to choose and pursue the quality of their lives in the city (Lefebvre, 1996). In order to build a humane and harmonious society, the public is meant to be engaged in the planning process and struggled for a secure, environmentally sustainable, and preferable public space. Some cities face the dual challenge of opening up expert decision-making systems, while explicitly creating opportunities for communities underrepresented in the mainstream of democratic participation.

The theories above are some basic guidelines of the engagement in the planning process in Western countries. They summarize the social factors that play a role in green space planning, sort out the relationship between public engagement and collaborative planning, as well as some existing challenges. An argument that shall be developed further within this thesis is that there is a need to consider more collaborative approaches to engage publics in the planning process, than those often defined in current policy, as a means of fostering more direct and active involvement of publics. Compared to simply asking the comments and suggestions of a plan draft, collaborative planning integrates citizens all the way through the planning process. The next section will set Edmonton as a case and analyze its policy system.

Urbanization, sustainability and engagement in the development of current green space policies in Edmonton

As the capital city of Alberta, Edmonton leads the prosperity of politics, culture, and open space planning. Occupying the central part of the North Saskatchewan River, the city gradually expanded and owns a wealth of green space resources (City of Edmonton, 2017). The City of Edmonton is also making continuous efforts to update the policies around green space to follow the international trends of sustainable development. Including the policy and system introduction, this part of the literature will also be used to analyze the development history as well as the data collected in qualitative approaches.

In Edmonton, there are various green spaces with different functions. Most of them serve for human activities, such as providing places for socializing and entertainment. Besides, a sizeable concentrated area of natural green space plays a role in regulating ecosystems, such as wildlife corridors and green infrastructure. The following table shows the types of green spaces in Edmonton.

Table 4: Classification of Edmonton’s green spaces

Parklands	Including city parks (such as River Valley Parks), district parks (such as Rollie Miles Athletic Field District Park), and neighbourhood parks.
Plazas	Public squares and open spaces, such as Churchill Square and Centennial Plaza.
Main streets	Such as Jasper Avenue and Whyte Avenue.
Natural areas	Such as the River Valley and ravine system, grasslands and

	various wetlands.
Corridors and linkages	An area connecting wildlife separated by human activities or structures, such as Mill Creek Ravine and Wolfwillow Ravine.
Green infrastructure	Bioswales (such as Mill Woods Park Parking Lot), publicly accessible green roofs, and bioretention / rainwater gardens (such as Government House Park).

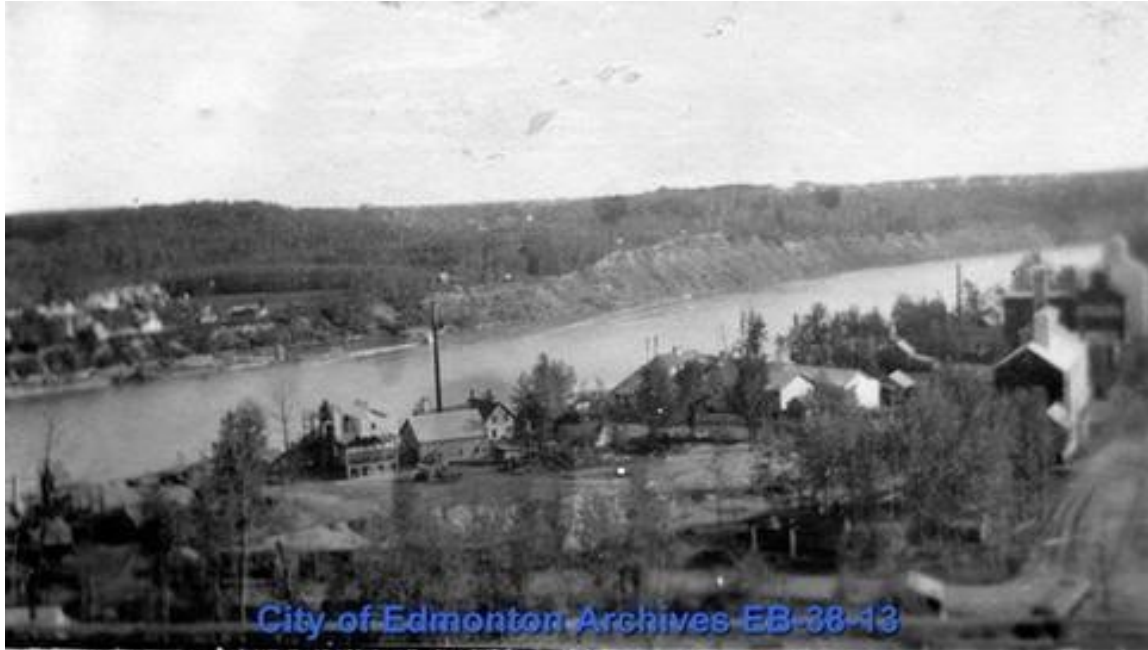
Source: About Breathe, City of Edmonton.

Most Edmontonians regard the River Valley, which is the city parks as a landmark. With more than 160 kilometres of pathways and 20 major parks, the River Valley is the largest urban park in Canada. The areas around the North Saskatchewan River are almost the natural environment and can be seen as urban forestry. Mentioned in the previous section, urban forestry is an increasingly popular concept in the past few decades. It emerged during the 1970s and 1980s in North America (Miller, Hauer & Werner, 2015). Based on the natural characteristics of the vast forest area in Canada, there is a countrywide Urban Forest Management Plans (UFMPs), which have become the defining documents of urban forest management (Ordóñez & Duinker, 2013). More actions can be seen in planting trees and protecting natural areas programs. The importance of the urban green space has been realized (Madureira, Nunes, Oliveira & Madureira, 2018). Many researchers indicate that urban green space can inject cities with vitality in terms of ecological, social, and economic benefits (Givoni, 1991; Heidt & Neef, 2008; Tzoulas, 2007). Konijnendijk et al. (2013) also presented the relationship between urban parks on one side and health, biodiversity, tourism, social cohesion, and urban climate. Characteristics of green space

urge people to participate more in outdoor activities, and different enjoyments can be obtained from different types of green spaces (Sugiyama, Thompson, & Alves, 2009; Fleischer & Tsur, 2003), which promote the physical and mental health of people. Besides, community relationships can be bonded when frequently using the outdoor green space (Kearney, 2006). If there is abundant green space in a community, it is anticipated that more positive social and cultural interactions will happen in that place. River Valley is such a place that gathered thousands of people to entertain and explore. Even during the COVID-19, a large number of people still choose to go to the valley to relax while maintaining social distance.

At the beginning of the twenty-first century, in order to better accommodate more people and continue sustainable development, Edmonton has developed a series of environmental and public engagement policies (City of Edmonton, 2017). Till now, most nature areas are concentrated around the River Valley, and the urban open spaces are located throughout the city. The following figures below show significant changes in the North Saskatchewan River Valley compared to a century ago.

Figure 1: North Saskatchewan River Valley view in the 20th century



Source: City of Edmonton Archives CA EDM MS-1200-EB-38-13

Figure 2: North Saskatchewan River Valley view in the 21st century

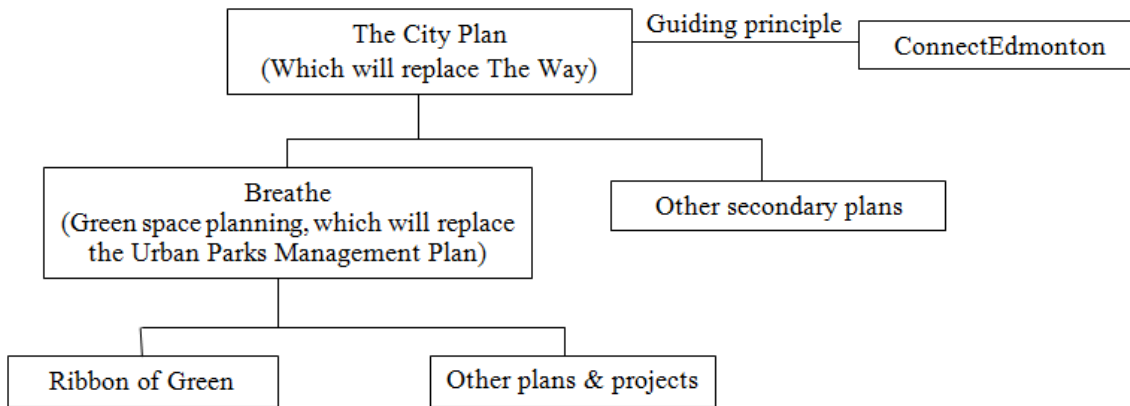


Source: Getty Images

The City of Edmonton has carried out various kinds of strategies to guide open space planning in the early years: *The Way Ahead*, *The Way We Grow*, and *The Way We Green*. The last one mentioned “protects ecosystems and ecosystem services by working closely with citizens, school boards, and community stakeholders to establish, implement, and maintain a strategy for attracting families to mature neighbourhoods (City of Edmonton, 2011)”, which shows the importance of public engagement in the environmental policies. In fact, these strategies have made attempts to invite different stakeholders to participate in discussions and to play an essential role in society (City of Edmonton, 2017). Various stakeholders can contribute knowledge and guidance to the completion of the strategy, and interactions and engagement between different organizations can push forward the action implementation (City of Edmonton, 2018). In 2019, the City put forward *The City Plan and ConnectEdmonton: Edmonton’s Strategic Plan 2019 - 2028*, which will replace “*The Way We’s*” and sets the direction for our future where we need to change and realize our vision for Edmonton in 2050. It emphasizes more on communities and neighbourhood engagement and invites the public to plan the city together. Along with the Public Engagement Policy, the City is inclined to have more practice of engaging internal and external stakeholders, communities, public, and indigenous people.

Specifically, urban green space has been mentioned in various kinds of official documents in recent years. Concluded from the plans and projects, the following figure shows the level of the current plans related to green space:

Figure 3: The level of the current plans related to green space



Based on the Urban Parks Management Plan 2006-2016 as well as the Natural Connections Strategic Plan, the City established Breathe – the Green Network Strategy. The vision of the Breathe is to make sure that a sustainable green space network will support each neighbourhood as the city grows, and it went through a collaborative planning process (City of Edmonton, 2017). The strategy’s fundamental goal is to plan a healthy city by encouraging the connection of open space at the site, neighbourhood, city, and regional levels. Breathe intends to create a connected system that enhances the environment (ecology), promotes healthy living (wellness), and connects people to each other (celebration). These are also three main themes in Breathe. The area and support level of the three main themes were shown on the GIS map separately and integrated with the urban infrastructure network to form the green network map. What’s more, Breathe includes fifteen open space functions governed by different plans and policies. Every open space was assigned a functional score based on the degree to which its amenities and characteristics supported each function. Besides, including ten policy actions, Breathe is meant to foster an integrated network of open spaces within Edmonton. The “integrated” is reflected on the comprehensive coverage of the ecosystem – the limited green space should be well-arranged to provide habitats for wild animals; support activities as well as wellness of different individuals;

and improve interactions between communities. The plan thus creates a considerable onus on planners and municipal officials to balance green space planning across a multitude of functions and to be integrated with other areas of planning. Besides that, the Ribbon of Green guides the conservation and preservation of the North Saskatchewan River Valley and ravines, focusing on the southwest and northeast corner development of the city. Together with other City-run projects and plans, it is adherent to Breathe and follow the guidelines and principles of it.

From the outset, citizen participation has been recognized as an essential element of the development of the City's new green space plan (City of Edmonton, 2017). The City of Edmonton invited both internal and external stakeholders to participate in the policy design process: internal stakeholders include various departments from the City; and external stakeholders contain federal and provincial departments and local communities. Thus, various kinds of people were engaged in meetings and workshops, such as planners, experts, architects, environmentalists, Councilors, and community leaders, to gather opinions and suggestions from different fields. Therefore we can see plenty of stakeholders cooperated and contributed to Edmonton's sustainable development, for example, the provincial stakeholder Alberta Environment and Parks set resource management for water, land, and biodiversity and reduce the traces of humans on natural lands. External stakeholder River Valley Alliance coordinated the planning, invested the capital, and projects to protect the natural areas of the River Valley while ensuring its accessibility and recreational function. In addition, citizens and residents were invited to state their thoughts. The City has expressed an interest in hearing what the public thinks and what do different individuals need when planning and building Edmonton (City of Edmonton, 2017). Throughout the project, many engagement events were held to share people's opinions and suggestions about the park and open space system. More than 1000 people were

engaged in discussion, and more than 2000 people were involved in online surveys (City of Edmonton, 2017).

Edmonton's policy system illustrates how the policies that emerged during the development had affected the current green space planning. It also claims how these influences are reflected in the existing green space policies in Edmonton. This will help us understand the policy background and further explore the role and engagement of different organizations in collaborative planning.

These three sections of the literature reviewed above will be used to address research questions, and are used as background knowledge and tools to analyze the information provided by the participants in Chapter Four and Five. This also provides full context to make Edmonton a case.

Chapter 3: Methodology

This study adopts the social constructivist worldview and applies mixed qualitative research methods, including semi-structured interview, case study, and document review to explore the development of public engagement in green space planning.

Rationale of methodology

Social constructivism is regarded as an approach to qualitative research. Social constructivists hold the view that individuals explore subjective meanings from their experiences (Creswell & Creswell, 2018). The context and environment where people are engaged may shape their interpretation and influence them to take a critical viewpoint to understand the world (Burr, 2015). In this kind of research, open-ended questions are adopted because the participants can share their opinions based on their lives and perspectives (Crotty, 1998).

There are two reasons to choose this methodology. On the one hand, the City of Edmonton uses qualitative approaches to get feedback to support city development during the public engagement process. Edmonton's green space plans and strategies have been developed and drafted through discussions among urban designers, architects, community stakeholders and citizens. These plans are integrations of professional knowledge and experiences from different fields. Since the essence of public engagement involves qualitative modes of inquiry, it is reasonable to use social constructivism. On the other hand, the study aims to evaluate the engagement process of Edmonton's green space plans, which should rely on various documents and the experience of diverse individuals. Participants are able to tell their stories to point out advantages, disadvantages, and suggestions to improve the engagement process through the semi-structured interviews. Based on these descriptive qualitative materials and in-depth

discussion of the public engagement system, Edmonton can be formed as a unique case, which can not only help fellow scholars have a comprehensive understanding of the current engagement system but also pave the way for future research and development.

Role of the researcher

I am currently a MACE graduate student at the University of Alberta, and I am the research investigator of this study, which is also acknowledged as my graduation thesis topic. I took topic-related courses in my Faculty, for example, The Practice of Community-Engaged Scholarship, City-Building and Community Engagement, and The Principles of Qualitative Inquiry. From these courses, I learnt the solid knowledge of urban planning, community engagement, as well as the qualitative research process. In 2019, I was fortunate to volunteer at the engagement phase of a City-run project called the Bike Plan. This project intends to support active and safe transportation for people commuting to work and having recreational trips through improving the current bike routes. I attended daily meetings related to the public engagement process and put forward ideas and suggestions on upcoming engaging activities. I also assisted the project manager with organizing qualitative data collected from interviews, focus groups, pop-up events, drop-in activities, and workshops; uploading them to Google docs and sheets, and drafting a summary after analysis. Through previous study and work, I have a deeper understanding of the importance of public engagement in urban planning - for the City, it is a useful tool to form a comprehensive view through feedback and negotiation from different organizations and individuals; for the public, it allows them to be able to shape the city during this process. In addition, I joined IAP2 Canada as a volunteer in the Youth Engagement Network (YEN) since February. It is dedicated to establishing a network and platform to facilitate increased awareness, participation, and involvement of young professionals in IAP2

Canada. We also intend to build a YEN Community of Practice, which would gather young practitioners to share resources, ideas, opportunities and challenges they want to brainstorm with others related to public participation. We discussed ways to achieve the network during monthly meetings, including setting up websites, registering mainstream social media accounts, and conducting webinars. In the past volunteer experience, I figured out the necessity of cooperating with link-minded peers - although we are from different fields, we could make diverse contributions based on our knowledge and experience. The improvement of a system requires considerations from different aspects, precisely the meaning of public participation. It deepened my understanding of different angles from participants in this study and is reflected in making recommendations for better engagement around green space planning in Chapter Five.

My fundamental role and responsibilities in this study include i). Prepare to conduct this study. I wrote a proposal for this study; defended the proposal from my research committee board; got the ethics approval from the University of Alberta Research Ethics Board One to conduct this study. ii). Be a recruiter and interviewer. This study includes semi-structured interviews, so I prepared the letter of initial contact (See Appendix A), information sheet and consent form, and interview scripts (See Appendix B) in advance. Then I started to recruit participants, got informed consent, and interviewed them. iii.) Be a data collector and data analyst. I got the audio records of conversations and transcribed them. Then I analyzed the interviews using various theories and tools. I ensure the objectivity of the qualitative data description, but my experience mentioned before may shape the way of understanding and interpreting the data. iv). Address the existing ethical issues. For the interview, I left my email and phone number to participants and let them know that they could contact me whenever they have questions or new contributions. I will keep a long relationship with them regarding the

publication and feedback for the thesis. For the researching process, I follow ethics all the time and respect the copyright of online and offline materials.

Semi-structured interview

Interviews are verbal interchanges that the interviewer attempts to elicit information from the interviewee (Dunn, 2000). In a semi-structured interview, the researcher usually has a list of questions to be covered, but the interviewee can have leeway in how to reply (Bryman & Teevan, 2005). The purpose of the interviews is for city planners and stakeholders to comment on the green space strategy and public engagement practices from personal perspectives, thus providing various angles on the evaluation of the current public engagement system. In this research, fifteen participants are purposefully selected using the snowball sampling technique. Snowball sampling is used when it's difficult to define the participants (Goodman, 1961). For example, I knew a city planner who participated in the Breathe engagement process, and I asked if she could recommend other planners who have similar experiences. Then I gradually gather policymaker participants using this technique. Meanwhile, my supervisor Dr. Kevin E. Jones gave me strong support on defining the potential participants through his network. All of the interviews were conducted from November to December 2019. I sent out the letter of initial contact, a summary of the research, information sheet, and consent form to the potential participants and waited to see if they would like to participate in this research. I got fifteen permissions from twenty-five invitations, including six policymakers, eight community stakeholders, and one former Councilor. Then I made an appointment with each participant based on their convenience. Twelve face-to-face conversations were held with participants either in their offices, or nearby coffee shops, and three phone interviews for those who were not able to make it in person. When an interview started, I discussed informed consent with them and made sure they knew the entire conversation

was audio-recorded and then transcribed to analyze in my thesis. Then I asked them open questions based on the interview scripts. The interview scripts included research questions and sub-questions. The central question was given, and the sub-questions might change regarding the participants' replies. Each interview lasted around forty-five to sixty minutes.

Fifteen participants are included in this research study determined primarily in relation to their roles in green space planning, and participants enrolled in this study were expected to have a clear understanding of some related concepts. They are also required to have personal experience of participating in the engagement activities of green space planning. Since the green space plans and the public engagement policy are newly published, and the list of stakeholder organizations is relatively fixed in participating engagement activities, these requirements determine that the number of the participants would not be that much. These participants come from main stakeholder communities included in official green space documents, and the number of the policymakers and community members are almost equal, which can better reflect the unique situation of Edmonton's green space planning based on various perspectives. Despite the small sample, my interviews did suggest some degree of saturation in the sample. Saturation refers to the point where responses to questions exhibited a consistency in the themes discussed and the analytical categories created. This is necessary to be somewhat confident in the replicability of the study (Walker, 2012) and when further data collection would lead to similar themes and results (Guest, Bunce, & Johnson, 2006). Because this research is bounded to those who were involved in the design and participation of specific greenspace plans in Edmonton, to consider a broader community-based analysis of participation for example, would require a wider sampling net, and might be expected to generate a wider range of themes and outcomes.

Case study

A case study can be used to understand a bounded system (Mayan, 2009). Both Stake (1995) and Yin (2003) base their approach to the case study on a constructivist paradigm. According to Yin, a case study is

“an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (2003, p.13).”

One of the essential sources for the case study is the interview (Yin, 2003). Through interviews, I can explore how the green space plans are formed in Edmonton, what methods are used in the engaging process, and how different organizations think about the planning, thus making Edmonton’s public engagement system a unique case. In addition, documents can be collected to assist and enhance the findings of the research.

Document review

The documents are collected both from the book and the online resources, for example, journals, articles, maps eBooks, and official websites. These data are used to build the planning history context in Edmonton and claim the practical cooperation between different organizations during the engagement process. The data is gathered at Zotero and shared with my supervisor Dr. Kevin E. Jones. He also suggested various kinds of articles for me to review.

Data analysis

The data collection and data analysis procedure are simultaneous processes in qualitative research. Qualitative data analysis is a “process of bringing order, structure and meaning to the mass of collected data” (Marshall & Rossman, 1989).

For the data from the documents, I try to quote and conclude the opinions from the journal articles and books. Besides, policies, plans, and engagement methods can be found in the

government files, which is a great resource to combine with other data and then analyze. For the interview data, after collecting them, I transcribed the data by myself, and changed the name of the participants and blurred the personal identifiers to keep their information confidential. Later, I first printed them out and started coding them. I marked several themes using different colours and started to make them the main themes. Then I used NVivo, a qualitative software program produced by QSR International, to analyze the data because it may significantly improve the quality of research (Hilal & Alabri, 2013). It reduces plenty of manual tasks and gives the researcher more time to discover themes and derive conclusions (Wong, 2008). I categorized them in NVivo and shared with my supervisor Dr. Kevin E. Jones to discuss further analysis. All of the qualitative data are categorized in the software and prepared to be analyzed.

Rigour

Lincoln and Guba (1985) define rigour in terms of the credibility, transferability, dependability, and confirmability of the research. Credibility is to check whether the representation of participants and the findings are valid (Lincoln & Guba, 1985). I employed a prolonged engagement strategy and keep a long relationship with the participants. Through meeting and talking with them, I gained a better understanding of their values based on their backgrounds in the social context. Transferability means the research findings can be applied to other settings to increase external validity (Lincoln & Guba, 1985). In this study, Edmonton's engagement system in green space planning is formed to be a case, which might be used as a reference or comparison for other city studies if the knowledge is shared. Next, dependability refers to the quality of being trustworthy and reliable. "Audit trail" strategy is used to track the author's behaviour and decision-making process (Mayan, 2009). All online resources are quoted, and interviews are ensured by email records and informed consent. Last, confirmability is also

reflected by the audit trail to make sure that the data collection and analysis processes are logical (Mayan, 2009).

Chapter 4: Data Composition

This Chapter provides an overview of the data collected during this research project organized around several key themes. Data sources are primarily derived from a series of qualitative semi-structured interviews and documentary sources, including policy reports, municipal maps, and official documents. The interview data provides a synopsis of the diverse attitudes and experiences of participants in their development, or participation in, collaboration and engagement strategies conducted in the formulation of green space planning in Edmonton. These insights are organized in relation to six areas derived through a thematic analysis of interview transcripts reflecting common areas of discussion, and related to the project's research aims. In Chapter Five, a more focused analysis of this data is presented and is focused more directly on the research questions and scholarly literature. Five themes were coded during the initial analysis of the data: **i. perceived values of urban green space; ii. governance of green space planning; iii. municipal-citizen engagement; iv. contributions in collaborative planning and public engagement; and v. challenges during the planning process.** There are also two to four secondary themes under each primary theme, which will be explained in detail in this chapter. For a better understanding of the data from each perspective, the background information of each participant, while still ensuring anonymity, is presented in table form in Appendix E (see Appendix E).

Figure 4: High-frequency words of the interview



This word cloud graph produced with NVivo qualitative analysis software contains high-frequency words from the interview transcripts, which gives the readers a sense of the focal points during the conversation before diving into the data description.

Perceived values of urban green space

Before exploring the collaborative and engagement process in green space planning in Edmonton, I first reflect upon how participants defined and expressed values for these spaces. The values ascribed to green space are essential as they inform how the City manages and plans for these values and how stakeholders can influence and contribute to planning.

Values of Edmonton’s green space.

As introduced in Chapter 2, there is a diversity of green space typologies within the City's planning approach. Participants mainly focused their comments in relation to parklands and natural areas. Particularly in parklands, River Valley parks are generally valued, and the development and preservation have deeply entwined with people's perceptions of the city. It not only provides habitat for wild animals but also offers spaces that make people close to nature and create conditions for communication. All participants had experience in spending time and exploring this natural beauty. It is noted that River Valley has a significant meaning for them - they regarded it as an Edmonton identity. For example, a conservative community stakeholder Kate highly praises the North Saskatchewan River Valley:

I personally evaluate a lot and feel that the River Valley in particular is an absolute gift. I feel like it's something that no other city anywhere has. This is what distinguishes Edmonton.

Policymaker Ella states a similar dialogue:

What comes out overwhelmingly is the River Valley - that is what people valued the most. That's a different kind of park in an open space system. I found it interesting that there wasn't much discussion around playing fields, like soccer or baseball. People really in their hearts are connected to the River Valley, and that's important to always remember and be reminded of, not only for us but for Council and senior managers.

District parks are also an important part of the City's parklands. They contain large sports fields and facilities and are used by people from different neighbourhoods and communities as recreational places. Lucas, a community spokesperson interviewed as part of this project, is familiar with it and has been involved in many district park-related planning projects. He explains:

The district parks are where the major facilities are, like multiple sports fields. You can do more competitive sports. They're a bit bigger so you don't have to go to the River Valley to get a good long walk. You can go to your district park.

Unlike district parks, neighbourhood parks have a smaller group of users and are mostly used by family residents, especially the younger generation. Policymaker Nick states the typical characteristics of the neighbourhood park: spray decks and playgrounds are the priorities. Where in reality, there is already a relatively well-established network of amenities geared towards children. The City has developed a Kid's Map (City of Edmonton, 2020) based on the datasets from Open Data Catalog, including playground sites, recreation facilities, drop-in programs, and so on. These neighbourhood parks form a network and provide social spaces for residents nearby.

The various parklands and natural spaces are indispensable parts since they provide plenty of valuable functions to the city's development. The participants mentioned six types of values in the interview: ecological, wellness, social, cultural, economic, and political.

Ecological value is a natural characteristic of green space. When talking to green space, participants obviously look at the ecological benefits of natural areas, such as protecting water, providing significant habitat for a multitude of flora and fauna species, and resisting climate change. Mia, a consultant with rich experience in open space planning, suggests that ecology is becoming more and more valued nowadays. The functions of green spaces seem to be more, like ecological services and ecosystem services that go beyond just for beautification. Another community stakeholder Justin also believes that people have paid more attention to ecological values in recent years. He sets the River Valley as a particular example:

By the end of the 20th century, people began to think of the River Valley from an ecological aspect. It has an ecological purpose, such as the wildlife corridor. Even up into the present time, there is a thought that under the context of climate change, the River Valley will be a key resource for migrating animals because there are different pressures on their existing habitats, and the River Valley provides an important ecological service.

The wellness function of green space is an emerging theme in green space planning and mentioned routinely in interviews by both planners and stakeholders. Green space provides a place for people to step out of buildings and be close to nature, which makes most participants believe that it has a significant influence on human wellness. Community stakeholder Isabelle mentions a Japanese idea called “forest bathing”, which means when people are in nature, the physical characteristics start to change: blood pressure goes down, breathing slows down, and anxiety lessens. So being in nature, especially in an urban environment, can help people stay healthy both physically and mentally. Based on the consensus that green space has enormous benefits for people to stay healthy, stakeholder Grace has a hypothesis:

People look at or think about green space as being healthier for them to have places where they can walk, meditate if they wish, exercise in those areas, and run and climb... I suspect that most city people expect green space is relatively close to where they live so that they can access them.

Policymaker Ella holds a similar view:

It runs the gamut from nature, providing services to humans in terms of places to exercise and recreation, and all the way to mental health benefits, like an infinite sort of benefits for humans. I think it is right that we need to be out in the parks and open space in order to just make ourselves better people.

Perceived social values of green space mainly relate to providing gathering and celebrating space for the community. Neighbourhoods parks, for example, are places where communication happens. Daisy thinks that these spaces provide a venue for people to meet and engage in activities that promote community wellness. A stakeholder explains the potential interpersonal relationship as follows:

It's a place that you can call your own as a small community. You can live in a big city, but it really makes you feel like living in a village - you have a community center where you can meet and have affordable social recreational activities.

Several participants valued that “inclusion” is a crucial part of green space planning. As Young (2002) suggested, when participants acknowledge each other, the similar views they hold are more substantively inclusive in democratic practice. Most participants tried to reinforce the message that the River Valley belongs to everyone during the interviews. This “inclusion” is mutual: River Valley is open to any individual, and the citizens feel that they are closely tied to the River Valley as well. In fact, people are taking plenty of onuses to create, improve, and connect to the green space. Potentially, when people establish a relationship with a specific green space, they also establish connections with other people who use green space. That’s how green spaces enhance interpersonal networking in a society.

Other values account for a minority but still have meanings. Several participants demonstrate that the importance of cultural values should not be ignored. In addition to the rich Indigenous and settler history of the River Valley, there are various ethnic groups and races in Edmonton. Many community events focus on different cultures, and many of them occur in parks. Therefore, cultural exchanges taking place in these spaces are essential for urban development. Besides, some participants mention the economic value of green space. Arthur reveals the economic values of green space:

If you look at it from an economic perspective, parks provide venues, for example, construction of parks creates jobs, and properties around the park are worth more than other properties. It weighs way more when you’re adjacent to River Valley. There are jobs in parklands, so you have recreational facilities and vendors that supply special events and stuff, so there are all kinds of economic benefits.

Research conducted in the United States tries to quantify the economic benefits of the parkland through carbon sequestration, urban heat islands, pollution reduction, and so on (Harnik

and Crompton, 2014). Ella thinks it may also relate to government and councils, which reflects the potential political value of green space.

According to policymaker participants, the City of Edmonton is inclined to pay more attention to better planning and developing urban green space, which implied the increasing values and function provided by green space from another side. In addition, people's attitudes towards existing green space may also become one of the factors that continue to affect green space planning.

Participants' attitudes towards existing green space.

Participants showed personal opinions and attitudes towards the existing green space in Edmonton. Two opposites became the central attitudes: whether to preserve or to develop natural green space like River Valley? Although the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) aims to maintain the natural environment and avoid overdevelopment around the River Valley, debates focus on whether to explore the River Valley have continued to rise in recent years. Some participants stand for preservation. They are always worried because even small developments can affect the ecological environment around the River Valley. Harper holds an opinion that just leaving the River Valley as natural as possible rather than seeing it as entertainment like park spaces and climbing walls – that is not necessarily the “green space.” She says: “I believe the most important thing we can do as Edmontonians is to preserve and conserve our present green space and then just let it be.”

On the contrary, other participants would like to see the promotion of proper development within the City's natural green spaces, for instance, which would increase and ease citizens' access. Bryan thinks what would be increasingly important, especially as the city grows and the

neighbourhoods become denser, is to have access to green spaces. He highlights that equal access opportunity is essential in citywide, which means not just focusing on neighbourhoods that live near the River Valley can get into the green space, but also people living in other parts of the city.

Except for the arguments around the natural lands of River Valley, when several participants look around the green space across the city, they feel a lack of different land types. In the last couple of decades, a lot of the new neighbourhoods have been built with a particular model, which includes spray decks and playgrounds - it has homogeneously applied in every neighbourhood. However, they did not look at the diversity of people who live within the community - they might have different types of interests and demands. Bryan asks: “Do we have the right mix of open spaces within those communities in newer communities? I mean, there might be spaces that probably aren’t used very often, especially in winter.” Nick also conveys his view that there should be diverse kinds of green spaces with various functions when looking at the city-level.

In general, from the conversation with the participants, we can see the high values of Edmonton’s green space. Based on these values and affected by the global trend of sustainable development, Edmonton is trying a comprehensive approach (Breathe) to plan and manage green spaces. The next section tells the evolution story of green space planning in Edmonton.

Governance of green space planning

History and changes of green space planning in Edmonton.

As I mentioned in the literature review, Edmonton has been changing in social and policy development. The governance of green space changes step by step with the evolution of society. Grace brings her memory back to the last century: “If I looked backwards in 1992, we didn’t have anything dealing with the environment at all. The city hadn’t developed the wetlands, forests, etc, and there was no attention paid for corridors for animals that move along.” Daisy agrees with Grace’s opinions. She says that although there are some common values, the green space planning has definitely changed over time and manifested differently in the new era. “As planners, we have to realize the recent trends,” she claims, “Even though environment stuff was not recognized in the past, we do pay attention to its role now, and I think it will remain as a strong value that we have to associate when we talk about open space in the future.”

Bryan explains the evolution of green space planning through a comparison of two main open space strategies: preceding Breathe was the Urban Parks Management Plan in 2006, and the city hadn’t done engagement on a significant scale and depth at that time. He adds: “I’ve been working in the City for 14 years and the communication has changed enormously, especially in the last 5 to 10 years. Specifically, engagement looks so different. Externally, they held open houses with few advertising opportunities. The formats of engagement are less abundant than the City used now, and the project information sharing methods are different. The data access is more public-friendly rather than just for internal staff to use as well. ” He also mentions: “We want to make sure that we share back with all of the people who gave time to the engagement activities so that they would know how their feedback looks and how their information is going to be used.” Within the municipal government, the support to reach out to communities was provided. The City has staffs in the Community Services Office who are directly connected to agencies, for example, homeless people and newcomer populations, and they have built up

relationships with various organizations now, which they never have before. Even with the indigenous groups, the City has learnt a lot from the previous engagement mistake. The Rosedale Power Plant area, which is a very archaeologically sensitive place for First Nations who lived there 10,000 years ago, experienced an unsuccessful development due to insufficient engagement. Now the City has established a network with 26 indigenous groups and invites them to have discussions in projects such as Ribbon of green so that every group has an opportunity to participate (interview with Daisy).

However, not all changes are positive. Arthur points out an issue in the process of governance evolution: “You can see that from the last decades, the City has been putting forward more and more strategic plans, for example, The Way series, Breathe, Ribbon of Green, Downtown Open Space Plan, and so on. Two problems reflected: people get consultation critique, and the plans are competing with each other. An interesting question to ask is how to deal with the dilemma of green space and housing? They are both necessary parts when Edmonton is developing, but there is nothing in between to mediate them.” The City has massive plans in different realms. Moreover, each of them has a unique scale and perspective. Which one takes priority might leave a problem. At last, with the popularity of engagement promoted by the City, the community and public engagement need to have suitable and effective methods to fit into the big picture of the city’s planning.

Policies, green space plans, and associated plans.

Participants comment on the strength and weaknesses of different policies, green space plans, and associated plans. Among them, public engagement policy has been mentioned the most. Consultant Oscar who worked closely with Breathe, introduces its engagement phases:

“We do various stakeholder and public engagement events, and it was divided into four phases. The first phase was to introduce the project and to know how people think about the River Valley. The second phase presented some vision and principles that were gathered during the first phase, and started to present some of the key concepts that we were beginning to work on. The third phase presented the land management classifications, the way of creating a land use system that was unique in the River Valley, and some key sites or locations. Then the last phase was to present the final plan for feedback and ask if there are any reflections.”

Bryan also believes that without the City’s emphasis on engagement at the time when Breathe strategy was drafted, the situation would not be the same. And they benefited a lot from other project teams who were also doing the engagement work. He tells a story: “At that time, Transit Strategy was a citywide project. They had tried a lot of new things with both the stakeholders and the public that we were able to learn from. When I occasionally met with their project manager, I talked about ideas that we have, and she suggested I do more effective engagement based on their experience. It was valuable, and I felt the culture of engagement was just emerging. They were kind of key people working on different projects and shared ideas with us.” Planners that were responsible for the engagement were trying to adhere to the policy at that time. There was a desire for project teams to ensure that they were doing engagement, which was transparent and innovative during the program.

The engagement ran throughout the planning phase. Cindy deals with massive engagement activities at the implementation stage of ongoing projects. “We have the ‘chevron’ in parks planning: strategy, concept, design, build, and operate. In all of those phases, we’re doing engagement”, she introduced, “We may engage different groups and the public in different stages because the life cycle of a project could be 5 or 10 years. Depending on that, we are always going out and engaging.” Thus, the engagement is not just at the strategy concept

planning level but also through the policy cycle, and it is a large component of decision making balanced with operational requirements.

Breathe is the main green space strategy that was affected by the engagement policy. The City emphasized that they should spend more time on the stakeholder and public consultation. Breathe was showing Edmontonians on how they intended to manifest that policy. Isabelle regards it as a good learning curve for the City. Although it seems to take longer to do projects since the City staffs have to go through that complicated the consultation, they were in a much better position to say that we reached out and received citizens' feedback at the end of the day.

Participants hold contrast opinions on Breathe strategy: some participants think it is going backwards while others thought it was moving on. Some participants are glad that the City of Edmonton has done some forward-thinking work during the formulation of Breathe. They mentioned that the City has recognized the importance of green space and invited communities and the public to speak out their voice. Stakeholder Isabelle claims:

I think the knowledge and learning curves are growing on how to do better public consultation, and I think it's going to improve. They also realize and appreciate that this is what people want.

Consultant Nick also thinks that the city administration and Council had placed a high value on parks and open space planning compared to what he worked at other municipalities, and Edmonton is doing proactive attempts to involve stakeholders and the public in the planning process. He is quite optimistic about this developing trend.

However, Kate is not a fan of Breathe and Ribbon of Green. She feels that there is a lack of differentiation among the different types of green spaces in the city of the way that needs to be. In her opinion, River Valley should be primarily considered an ecological corridor, so the use of

the River Valley should align with prioritization. She claims: “Generally I think the ecology function of River Valley should be put in the primary list, and then we can look at all open space. I don’t think Breathe reflected that. It was more about connectivity and access, which is a very human-focused way of looking at the River Valley.” She has concerns about this perspective, and maybe later, the planning trend will be more recreationally focused rather than ecologically focused.

Other associated plans are mentioned, including the River Valley Area Redevelopment Plan, Downtown Public Spaces Plan, and Bike Plan. Participants against the development of River Valley are more inclined to support the River Valley Area Redevelopment Plan. They care more about the River Valley and have the same thoughts to keep it just being natural, but they have a limited perspective on other green spaces. The Bike Plan also emphasizes public engagement and borrowed experience from the Breathe. Last but not least, the Downtown Public Spaces Plan takes up the Breathe framework to guide each park and open space in downtown neighbourhoods. Ideally, the planners want a park to have three themes and functions in Breathe, but that is not always possible due to the environment and target groups, so this plan gives priorities and directions in parks planning.

Decision-making process.

There are different departments in the City that work on different types and levels of projects; therefore, the decision-making level is different. According to policymaker participants, the project team has decision-making power in terms of forming the engagement process and plan. However, there will be a higher level to consult and provide direction, for example, a senior planner, a director, a branch manager, and even a deputy city manager above that. Therefore, the

decision-making process depends on the complexity of the decision or potentially involved in all of the processes. The project team holds a certain amount of decision-making power. It is not held with one unit, because many people have jurisdiction across park space. For example, the operation unit has jurisdiction because they maintain all the park systems. The structure also has a part of decision-making: sometimes, they sit on the project team; sometimes, their decisions flow through from inception to operations, like a value chain. It depends on where the process is in the value chain, and who makes that decision. Lucas, a former planning advisor in the EFCL cites a few examples to reflect the level of influence of the public and stakeholders on final decisions:

I think for the neighbourhood parks, it's higher. It's a little bit easier because you have a defined geographic area and it's identifiable. When it's for the district park, it can be all the huge area around the district park. When it's citywide, it's just like kind of thrown out on the internet. There are very few opportunities to get involved in citywide planning if you're not hooked up to the internet. I think that's a big challenge. The City does try their best to put up some signs here and there, but the influence is minimal. We rely on the web and the internet for city-wide planning. Then it's up to people to take the initiative to get involved.

Besides, some stakeholder participants expressed their desire to be more involved in the decision-making process since sometimes they did not see their reflection matters that much.

Justin states:

I think you have to push pretty hard to get a chance to shape the plan. You cannot just state your opinion; you have to write emails to the City planners and try to meet with them and Councilors. It seems your message gets through, but I think it takes a bit more than an open house or a meeting; you have to push it to be heard.

Since the engagement planning mode is still in the development stage, it is challenging to explore set a standard of who should be included in decision-making. The principal divergences might occur in follow-up communication and transparency of the data - the City makes decisions

after a comprehensive consideration, but the reasons are not clearly informed to stakeholders and the public. From the City's perspective, they have tried their best to invite stakeholders and citizens to join the conversation and have considered those feedbacks, while the general public believes that the government has not paid much attention to their demands. The City should think about how to make society understand their decisions in the future.

Municipal-citizen engagement

The City adopts different approaches while engaging with different organizations and groups, so the data collection and analysis are different. This section mainly illustrates the municipal-citizen relationship and introduces the traditional and new methods of engagement through participants' practical experience.

Relationship with stakeholder, public, and indigenous.

The City advocates that Edmontonians should have an opportunity to shape the city. It proposed public engagement policy and emphasized the importance of collaborative planning in plans and initiatives. Therefore, the City is seeking collaborating opportunities and building relationships with different stakeholders, public, and indigenous people in Edmonton.

Collaborative planning reflects in cooperating with internal and external stakeholders. Internal stakeholders have the closest relationship and meet frequently and regularly to discuss how the project is going. External stakeholders, such as community leagues, school boards, and industries, hold various approaches to activities to work and give feedback to the City.

Nevertheless, each participant has a different definition of internal and external stakeholders, and we can see how distinctive the opinion is from everyone's perspective. For example,

community engagement advisors and consultants are included in the internal stakeholders since they support and work closely with the project teams. They can also be divided into external stakeholders because they are not from the project team. The City will set the agenda for each meeting and lead the conversation to keep the right direction and timeline of the project. Most participants thought that they maintain a good relationship with the City, but there are still negative aspects. Few stakeholder participants conveyed the message that they are more like a founder rather than a copartner. Stakeholder Isabelle said that they paid for two-thirds of the projects, but ultimately the program belongs to the municipality. Lucas also reflects that once they raised money for a skate park, the City took over the project management of the implementation. However, the City came back later and said you have to raise more money because there needs to have a paved parking lot. It is unreasonable that the City has control over the design and standard in building, but it is up to the communities to raise the money and to meet that standard. He says: “They become like fundraising machines rather than community builders.” In this case, the relationship between the City and the stakeholders is unfair, and their roles are worth considering.

The relationship with the public is maintained through various engagement activities. Therefore, improving the quality of activities, asking wise questions, and handling inquiries from the citizens have become vital elements. Cindy gives some factors that the City needs to pay attention to during public engagement activities:

We’re trying to ensure that people with physical disabilities are welcome and able to participate fully, and not just in engagement, but any program. There’re also gender-based analysis training that we’re all taking. We also have to ensure that we’re looking at the intersection of racial issues: different levels of income, multicultural groups, various generations...all of those things need to be concerned when we do planning for engagement events.

The indigenous engagement can be regarded as a separate part from the public engagement. It mainly focused on treaty rights as well as indigenous rights. There is a list of things of treaty rights as the protection of their culture. That is a separate stream because it is focused on rights, whereas the other stream of public engagement is focused on engagement. Policymaker Daisy introduces: “Consultation is an illegal term for indigenous communities that are related to a process when it’s regulated. It is engagement and we are not building anything, we are just having an early conversation for the City to move forward.” Participant Lucas feels glad: “there is an Indigenous Relations Office within the City of Edmonton that you can turn to. If you need to contact indigenous groups, they could point to some people.”

Engagement methods.

The City is doing online and offline engagement activities which include both traditional and new methods, public and indigenous stakeholders. There are applicable objects based on the characteristics of each method. The following table lists the commonly used engagement methods.

Table 5: City-citizen engagement methods

Form	Methods	Characteristic and object
Offline	Open house	A place where members of a community, stakeholders and the general public can learn about a project. Mainly used in public engagement
	Meeting	Usually holding with stakeholders

	Workshop	A small group of people that focuses especially on techniques and skills in a particular field. Usually holding with stakeholders
	Interview	A structured conversation where one participant asks questions and the other provides answers. Usually holding with stakeholders
	Focus group	A demographically diverse group of people assembled to participate in a guided discussion about a particular topic. Usually holding with stakeholders
	Others	Methods used recently: drop-in, pop-up, site view...
Both online and offline	Survey	Used both in public and stakeholder engagement
	Mapping	An operation that associates each element of a given set with one or more elements of a second set. Used both in public and stakeholder engagement
	Newsletter	Used both in public and stakeholder engagement
Online	Edmonton Insight	An online citizen panel made up of diverse Edmontonians who provide feedback on City policies, initiatives and issues. Mainly used in public engagement

	Social media	Website, social apps...
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As we can see in this table, each method has its characteristics and is suitable for different target groups. An open house is a traditional method and is most frequently used in public engagement. It can be used to introduce, update, or present projects' results and explain where it will move forward to the public. As for the City, it is also a useful approach to gather information and build relationships with the public. Policymaker Ella commented on this method: "It seems like with public engagement you have to do an open house." Everyone is welcome, and you will learn some background information if you are interested in the upcoming project. Consultant Oscar gave a relatively positive evaluation of the open house as a method of reaching a broad Edmonton community on broad planning topics:

When we're trying to do citywide or large regional planning, I think the most successful engagement tactics are the ones that don't focus on a specific area. So having open houses that people can come and ask questions to the planners and understand the project in detail is always super beneficial.

However, more than half of the participants found the open house approach deficient or problematic in many instances. An open house might largely depends on public awareness and not be well attended. It also lacks opportunities for meaningful interaction and dialogue. Stakeholder Harper felt that the open house could best be understood as a type of a 'show-and-tell', rather than an interactive engagement which fostered communication and strong group dynamic. "The power of engagement is hearing what other people said," she claimed, "this format is too individualistic." Consultant Mia was not similarly pessimistic about the open house as an engagement method:

Going around to a bunch of public meetings is extremely ineffective, and you only get a tiny percentage of the people involved. Although you will get some good information, you're not reaching very many people. You have no idea what the general population really thinks of what you're presenting. You have an idea of what the people who went to the open house think.

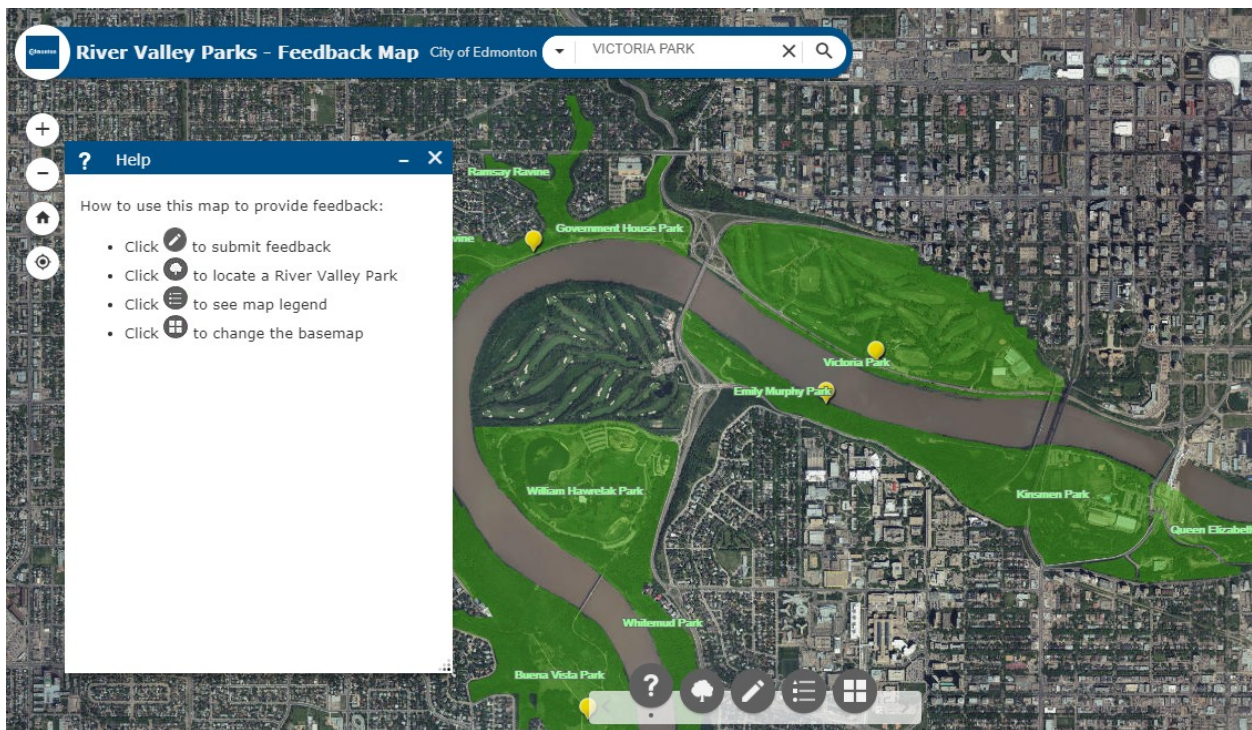
Compared with public engagement, stakeholder and indigenous engagements targeted smaller and more discretely defined populations. Engagement methods, with such targeted populations were perceived as better able to engage communities more profoundly and produce more detailed deliberations and outcomes. Meetings, workshops, interviews, and focus groups are cited as commonly used methods when collaborating with stakeholders. They have a longer time for fewer groups of people to discuss focused topics; thus, everyone has an opportunity to present their opinions. Oscar is a supporter of the workshop since it invites different organizations to sit at the same table and share perspectives that they may not have authorized there. He expresses: "A lot of times, individuals in a workshop came with a broader understanding of what this plan needed to achieve, and I think that was a key success in getting general support for the plan." Similarly, Mia thinks focus groups do help when you are systematically asking for input into the various areas with people who know something about what they're talking about. This approach will let you know why a community has this specific insight and can provide you with a more comprehensive perspective through communication and interaction among different organizations.

Given the disadvantage of this traditional method, the City has adopted new methods when engaging the public. Drop-in and pop-up activities are held in neighbourhoods. Various new engagement approaches are launched online for the inconvenience of going to a site to participate in events. Online mapping is an increasingly popular engagement method. Bryan sets an example in the engagement phase of the Bike Plan:

We had an online interactive map where people could go, drop a pin, and make a comment about a bike lane that wasn't working well, or where we needed a new bike lane. That tool created an understanding of what the technical project team needed in order to develop a draft future Bike Plan network map.

The following map is the Feedback Map of the River Valley Parks provided by the City of Edmonton.

Figure 5: Feedback Map of the River Valley Parks



Source: City of Edmonton.

Mia also praises this method:

I would probably say the most successful engagement we did was online, and we were able to engage thousands of people through some very innovative methods that we developed and literally get thousands of comments, which was probably the most useful data. We didn't do any formal surveys on what should be done, but I would say the online engagement was the most effective. We showed plans and information was mapped and placed in a way that people could zoom in on-air photos and mark up

comments on a map. It was quite an innovative engagement process, and I think that was probably the best part of the engagement. We're talking about designing almost the entire city or miles and miles of open space.

The online mapping is suitable for large-scale planning programs in the city since people can express their ideas only through the internet - it's convenient and fast enough. Several participants also mentioned the Edmonton Insight Panel, an online community that provides personal feedback on City policies, initiatives, and issues. Felix introduces: "When you go to Edmonton Insight, you can decide which topics you want to speak on, so you are never really told to talk about something you don't want to talk." The data is also accessible for all citizens, which enhanced transparency in decision-making to some extent.

Data collection, analysis, and access.

Nowadays, "data-driven" is widely advocated and regarded as a significant part of green space planning. In the beginning, good topics and questions determine how valid the data is. Oscar mentions: "We want to make sure that we're using people's time wisely and meaningfully, and we're asking the questions that we needed to ask in order to create a great plan. Thus, all of the comments and feedback are beneficial not only to develop the plan but also to refine and adjust the plan as it was being produced." Most policymaker participants thought that they tried their best to give out the highly related questions for engagement events. Some stakeholder participants confirmed that the government had done a great job in some cases, but not all occasions. Kate once joined an open house and thought that they were asking the wrong leading questions. The City is also trying to engage with the right groups of people. According to Arthur, they tried the snowball sampling techniques to expand the scope of engagement as much as

realistic and possible, and the project team would have discussions with consultants to make a list of stakeholders.

Data is usually collected and sorted out by project team members. Daisy explains that they would not point out what people said indeed because that is not representative of the whole. The aim is to focus on a broader picture. Furthermore, it is hard and takes more time when sorting out that massive data. Cindy also lists an approach to collecting the data: there is an in-house group called corporate research, and the staff there help project teams collect all the online survey feedback. They advise on best practices for data collection and organization, and public engagement advisors also give suggestions.

The data is analyzed like what a researcher doing in academic research. After organizing the data, the project teams find primary themes and have further conversations with consultants to write a report. A point to note is that they are not taking all input from people; they need to ascertain the correct level of using the data. Mia puts forward that people are not the ones that are going to design the outcome. They are going to provide the inputs in terms of what the design of the plan has to accomplish. The staff will consider their input, but they will not necessarily respond in the final design to everything people have asked for. There is also a doubt that most citizens are concerned about: where are our views reflected?

Several participants insisted that the data should be accessible by the public. In fact, after analyzing the data, the City will put forward What We Heard Report on their website, which is a public-facing document. It can be accessed by any citizen who is interested in it. Besides, in Edmonton Insight, anybody who has ever done a survey can find out the results. Ella points out that:

All of our data is open. We want people to access it if they choose, and our typical pattern is to upload the data into a tableau site so that people can manipulate it... We don't keep anything back, so it's been my practice that if I got it, you can have it right away; that doesn't hurt me. I really believe that transparency gets you further. If you don't show them, maybe you're covering something. I think the best policy is to release everything, including engagement results.

Contributions of collaborative planning and public engagement

The process of collaborative planning and public engagement is bound to have an impact on green space planning. Participants generally believe that the positive impact of this process is much higher than the negative impact.

All participants truly realized the contribution made by public engagement. They see this as a giant leap in governance and has mutual benefits for both the City and citizens - it not only represents that all citizens have the right to shape our society but also helps communities understand how the City might view things and negotiate all these different interests and concerns. Some participants illustrated that it gives the City a better idea of how to talk with the community rather than leaving it open and just having the loudest people to talk. It also gives people more confidence that they are representing their community and delivering their needs. The following are some of the advantages.

Arthur believes that when you engage the community in a park planning process, it creates ownership in this space. He expresses: "The city owns the land legally, but the community is so integral to everything we did with the city." And it is significant to understand who owns the land and include them in the planning process. Lucas also emphasizes its importance in park planning:

The public lands belong to all of us. We need to all be involved as much as possible. There are direct contributions. The parks' development is better because of community engagement - the decisions made with parks are better decisions that more people would be pleased with. The second benefit of this is the whole feeling that is brought to people. It is their space, and they have a voice for this park. It also gives more responsibility, because people would take care of the parks better. They'll do some of the monitoring work. So you get a lot more maintenance and care for the park because of community engagements, especially if people are able to make decisions in their park.

Oscar learns new lessons through this process. He realizes that the timeline is significant during engagement phases: if there is a long time gap between the phases, people tend to forget what's going on; if it's too close, people are just overburdened with too much engagement. Therefore, a reasonable timeline has a positive impact on planning results as well.

Challenges during the planning process

In recent years of development of public engagement, many issues have also been exposed. The participants commonly mention three types of challenges.

Engagement challenges.

The challenge of engagement reflected in two aspects: city-citizen relationship and engagement results. Stakeholder Lucas reflected that sometimes community leagues or community leaders are not informed when there is a project. However, they are the bridges between the municipality and neighbourhoods. If the City would like to let the neighbourhoods know about the upcoming projects, they should reach the community leagues and use their network to spread the news. "The City often initiates an agenda and says that we have covered everything. However, the truth is not like that," he said. And it used to put too much work on volunteers in communities; it is hard to balance the extent to which they are willing to support the community leaders to be fully engaged in the broader community. The City carried the

weight, and they were ultimately responsible, but the community members were both jointly responsible.

Stakeholder Harper found another challenge. When he goes to those stakeholder sessions or even open houses, it is very white. He was curious why there are just white people since it certainly does not look like Edmonton's ethnic makeup. He thought that maybe the City is not connecting with all Edmontonians.

There isn't a longer relationship between the City and the stakeholder as well. Consultant Mia thought that the communities didn't get enough follow up after the engagement. The internal units of the City frequently change so that it prevents long-lasting relationships. It's a barrier to relationship maintenance.

Governance issues.

Most participants believe that part of the challenge is related to governance. There are multiple plans and policies over multiple years, so what particular policy or what plan is good or bad? According to Ella, there is a big discussion now within the City: do we need to have so many plans and policies? And which ones should we get rid of? She has seen this going over the years. The challenge also exists in the execution of those documents. It's always hard to bring down those visions to life.

Grace doubts about the administration. She thinks that the City captures what stakeholders and the public says in those engagement activities and provides that to Council. Nevertheless, they know that the developers are working it in another way. It seems like the developers don't know what the people said. Besides, Ella points out that:

When we're looking at Breathe, the hardest stakeholders are the internal ones, because it needs changing. The external peoples were ready for the change. They welcomed that change, but the attitude of the internal ones was not sure. We had to do more work internally. Within the City, we have operations, design group, and strategic group. There is a value chain, so there are people that have responsibilities sitting along that value chain. You might have excellent strategic planning, but nobody can afford or has the competencies to implement it.

Except for the administrative problem, Isabelle feels like there isn't a good connection between the previous work and future planning. The City did a project, wrote a report, put it on a shelf, and then started a new master plan. Past work isn't rolled into a future work to use the information that they got previously from doing other public consultation. It seems like a waste of money and human resources if they don't use past results.

Kate is not satisfied with the framework of 311 as well. 311 is a non-emergency phone line for the City of Edmonton and provides residents access through a central point of contact for their city needs. She regards it as a real obstacle for anyone who has concerns because it has quite a low efficiency. She prefers to call somebody within the City directly. It even enabled communication and engagement with higher quality.

Public understandings of green space planning.

The challenge also happens when the City is engaging at a high level of strategy. For example, Breathe is about the development plan of the whole green network in Edmonton, so it's hard to get the public to understand the citywide strategy if it's not happening in their backyards or within their neighbourhoods. Policymaker Cindy states:

It's hard for the public to understand the objectives of a high-level document, and it's also hard for policymakers to translate the individual experiences into overarching policies because people talk about themselves. I think it's just the nature of that policy language is inherently vague because it's a higher level thing, and it has to be.

Daisy sees the challenge for the public to get a particular image. It's easy to have those big picture conversations like what needs to be improved, but people get less interested because it's writing formally. There is an obstacle in translating the governmental documents and making it simple for the public, which is a point worth considering.

Overall, this chapter organized the participants' opinions with five themes. These themes explore the values of green space, illustrate how the City is doing engagement work internally and externally, and show the contribution and challenges during the planning and engagement process. In Chapter 5, I will conduct an in-depth analysis of these themes, combining it with literature, and explore the last area, which focuses on participants' suggestions for green space planning and engagement to make suggestions for future development.

Chapter 5: Discussion

The categorized data in the last chapter introduces participants' experiences and attitudes towards the engagement process during Edmonton's green space planning. In contrast, this chapter further analyzes the collected data to answer the research questions, explore Edmonton's engagement system in green space planning, and put forward suggestions for improvement and future development. Four main sections will be discussed in relation to the research questions: **i. the value of green space; ii. governance of green space planning; iii. current situation of citizen engagement; and iv. suggestions for public engagement during green space planning.** Before analyzing, one thing to note is that the interview data follows the post-structuralism view - although every participant has distinctive opinions on the same question, they are all equally treated and analyzed.

The value of green space

Edmonton has paid more and more attention to urban green space planning in recent years. Through research conducted in this thesis, and outlined in the previous chapter, both staffs from the City of Edmonton and stakeholders agreed on the importance of urban green space to our community. The values of green space are mainly reflected in historical perspective, ecosystem perspective, and humanistic perspective.

Edmonton's history and transformation as a major Canadian urban area have always coincided with changes in the River Valley. In its early days, the banks of the river served as a meeting place and center of the colonial fur trade. It has been home to agriculture and industry, the railroad, freeway interchanges and a refuse site. City planners also recognized early on that the River Valley offered sublime natural landscapes and recreational opportunities with

subsequent generations contributing to the creation of a continuous system of parks. Today, as vital green infrastructure, the valley, along with the City's connected park system offers plenty of contributions to social and cultural life, such as reducing noise, purifying air, offering recreation and improving overall livability of the City. New plans and policies for green space, such as discussed throughout this thesis reflect that Edmonton is balancing its green space legacy, while also seeking to innovate and adapt plans in line with contemporary urban environmental concerns and its growth as a significant international city. According to most participants, the River Valley offers the potential to be a significant destination and defining landscape within Edmonton, similar to Central Park in New York and Stanley Park in Vancouver. As a landmark that witnessed the development history of Edmonton, the value of green space should not be underestimated, both in terms of past and future development of the City.

Besides, people are paying more and more attention to sustainable development and are gradually raising awareness of the ecological values of green space since it provides a long-term strategy for maintaining the urban ecosystem (Naess, 2001). As a comprehensive tool of environmental sustainability protection, urban green space plays an essential role in providing habitats for animals, improving water quality (Scott et al., 2016), reducing the energy costs of cooling buildings, in addition to its already well recognized aesthetic characteristics (Haq, 2011). Trees and shrubs have the ability to remove significant amounts of air pollutants (Nowak, Crane & Stevens, 2006) and mitigate the urban heat island effect by providing shade and by cooling the air (Grimmond & Oke, 1991). They are also identified as a tool to reduce water runoff and flood protection (Bartens et al., 2008).

Edmonton's green space carries the ecological balance of the city, which means to keep the equilibrium among living organisms such as human beings, flora and fauna within an ecosystem

(World Wildlife Fund, 2015). The city has its wild side - it is the home of approximately 260 kinds of animals, including birds, mammals, fishes, reptiles, and amphibians, as well as 700 kinds of plants and fungus (Alam, 2018). The North Saskatchewan River Valley and the associated system of creeks and ravines form a highly functional natural core and distributed widely throughout the city, which became the central area of providing ecological service. As the wildlife corridor to allow animals to live and travel between environmental isolates (Newmark, 1993), the valley separates the wildlife territory from the urban while being connected in another way. This not only enriches biodiversity but also facilitates the research and protection of local species to achieve harmony with nature. In recent years, the City has declared a climate emergency, and there are various projects regarding water and waste management, climate regulation, and food production that happened alongside the North Saskatchewan River, which demonstrated the importance of green space in terms of ecological value.

Additionally, recognized by many scholars, green space is beneficial for human wellness physically, mentally, and socially (Kingsley & Ontario, 2019; Schebella et al., 2019; Stoltz & Schaffer, 2018). These diverse functions are fulfilled within different kinds of urban green space: grasslands, alongside their ecological values, offer a pleasant environment to encourage people to interact with nature and be involved in physical activities (Coombes, Jones & Hillsdon, 2010); sports fields and neighbourhood parks provide places for formal or group events, alongside organized recreational and sports activities (Brown et al., 2014); and woodland trails stimulate citizen's interest of walking and cycling. People are likely to feel psychological stress in a fast-paced life. Some participants mentioned that they would like to walk or exercise in parks not only to stay healthy but also to ease tensions and relieve stress.

In addition to affecting individuals, green space also has a potential impact on the relationships of neighbourhoods. Residents who spend more time in shared outdoor spaces and know well about their neighbours have a greater potential to create vital neighbourhoods because green space fosters in-person contacts and improves social interaction (Sullivan, Kuo & Depooter, 2004). During the interview, community stakeholders are more inclined to concern about the planning of public areas. They considered it necessary to provide residents and families with a space to have interpersonal communication. For example, a participant mentioned that community gardens are promoted in Edmonton in recent years. Despite the fact that Edmonton paid attention to urban agriculture which refers to production in the gardens and farms within the inner city (Cohen, Reynolds & Sanghvi, 2012), community gardens are friendly for all ages and are places to share gardening knowledge and experience - it provides communication opportunities to neighbors and automatically build a healthy community. Thus, he believes that green space planning in neighborhoods should be more for networking and assisted by infrastructure such as tables and chairs as well as recreational facilities. This may also promote connections between communities and maintain social harmony.

Different types of organizations have particular evaluations of Edmonton's green space planning, and the debates mainly focus on River Valley. Through the conversations with participants, economic value is potentially the point of disagreement between the City and different organizations. Similar to a two-sided coin, green space has both positive and negative economic impacts. Green space is positively linked to both commercial and residential property prices; parks might generate employment opportunities; other indirect benefits such as long-term investment cannot be ignored either (Saraev, 2012). However, economic value follows development at different scales. The rapid urbanization has affected the protection of urban green

space, disrupted the balance of ecosystems, and left potential risks. Due to the historical and cultural characteristics of the River Valley, some community stakeholders believe that the best way is to maintain it in as natural a state as possible; while some City planners care not only about environmental protection but also to keep economic growth. The City might still make decisions on developing some parts of River Valley after balancing interests. These decisions will then be submitted to Council to review and see whether they are approved, and insufficient communication between the City and the public may lead to greater conflicts during this long process.

In summary, there is no doubt that the urban green space has played significant roles in urban development, and people have recognized comprehensive values of it. The City, communities, and the public evaluate Edmonton's green space planning based on distinctive perspectives and are worthy of being respected and discussed in-depth. The municipal government has promoted collaborative planning and public engagement in recent years, and different organizations are cooperating to maximize the benefits of urban green space planning to citizens.

Governance of green space planning

The evolution of Edmonton's green space plans and policies shows the way how governance has changed. With the rapid development of urbanization since the last century, more environmental issues have been exposed, such as the emission of greenhouse gases and changes in land use (Kalnay & Cai, 2003). The City of Edmonton is not an exception from the global mainstream of environmental protection and sustainable development. Compared to what it used to be, the municipal government highly promoted consulting with community

stakeholders and the public in generating various plans and projects to protect Edmonton's green space. There are more novel engagement methods, and it is accessible for citizens to look for the data on the City's webpage. The involvement of public engagement and collaborative planning has made the plan's formulation process more democratic and transparent. It has mutual benefits both for the City and other groups. Through conversations, communities can understand the reasons for decisions made by the City from their perspective, and the public has the right to speak their voice on the green space planning to some extent. Almost all participants are positive with including citizens in the planning process. Two essential elements - ownership and inclusion are reflected in this process. Once people see themselves as having ownership of public open space and are included in the conversation about how to plan it, their comments value because ultimately, it will be an idealized public space they are satisfied with. This decision made in the engagement process is better than just the planners' opinions because it is what a larger group of people living on this land would like to see. The City also learned from this process, for instance, the unique knowledge contributed by experts in local communities, establishing long-term relationships with various organizations, and doing better public consultation in the future.

Although participants recognize the City's efforts in leading social groups to build a sustainable city, they still believe there is room for improvement. It is worth mentioning the unstable organizational structure within the City. Due to staff movement, the connections with communities, public, and indigenous people might be disrupted. It leads to instability in internal unites and external stakeholder relationships. Besides, some stakeholder participants claimed that the City indeed invited local communities and citizens to give feedback on plans, but they were not feeling heavily included in the decision-making process. From the City's point of view, there

is a need to consider a broader picture of the green space planning in the entire city; from the perspective of stakeholders, green space planning should consider more about people who are using it. It is the question about ownership, which builds a barrier between the City and stakeholders and can lead to a crisis of trust. Besides, participants are confused because there are too many plans and policies. Except for the unclear about the level of these plans, it is hard to determine whether they all have practical value when bringing them down to earth and putting them into practice. In fact, there is not a good connection between the previous engagement exercise and future planning. There might be overlap engagement activities between those plans, but the conclusions are not consistent. People who participate in the same engagement activities may feel fatigued and influence their participation motivation. Thus, it is defined as “useless work” by a community stakeholder.

Current situation of citizen engagement

The City has been seeking collaborating opportunities and building relationships with stakeholders, public, and indigenous people in recent years. Internal stakeholders have the closest relationship and meet frequently and regularly to discuss how the project is going, while external stakeholders, such as community leagues, school boards, and industries, hold various approaches of activities to work and give feedback to the City. The policymakers think that they are trying to connect with various groups using snowball sampling techniques to expand the scope of engagement as realistic and possible and are learning from the previous experience to hold better engagement activities in the future.

Many factors determine the success of an engagement activity: topic, questions, method, target groups, advertising, process, and additional services. Among them, different methods are

adopted for different target groups and topics. For a large number of people, the open house is regarded as a traditional and frequently overused methodology in public engagement. The open house is used to introduce, update, or present results of projects, explain where it will move forward to the public, and solicit feedback in the form of public questions and responses from a local community. Despite its prevalence in the City, and municipal governance more generally, both policymakers and community stakeholders give a low grade to this method. Questions were raised about the efficiency of this method. The City spends considerable money and human energy to hold an open house, but generally, only a few people come. The reasons might be various: insufficient advertising to the public, difficult for people to reach the venue, time cannot be coordinated, and so on.

Recommended by several participants, online methods became the most popular public engagement method in the internet era. The City has tried online methods, such as the Edmonton Insight community to collect feedback from the public, which has gathered quantities of useful information. Most participants prefer online methods because it is a cost-effective, convenient, and intelligent method. Besides, there are different social media now, which could be platforms for project advertising. For example, an organization is searching for ambassadors for the River Valley walking project. They are walking lovers and are invited to each event. They will take pictures or videos and upload them to their social media account. More people will see the charming of the River Valley, and then join the next event to explore this place. The E-newsletter is another method of online engagement. This approach requires long-term operations and can have a fixed number of audiences by updating emails in two days or a weekly basis so that people can receive relevant information. It is a convenient and low-cost method, and the emails can also be used to receive feedback. However, people receive tons of emails every day, which

may lead to ignorance of these kinds of emails, thus becoming a potential disadvantage.

Compared with public engagement, stakeholders and indigenous engagement have a smaller and targeted population. Thus the engagement methods are inclined to get more detailed information from each member. Meeting, workshop, interview, focus group are commonly used methods when collaborating with stakeholders. They have a longer time for targeted people to discuss on a focused topic. Thus everyone has an opportunity to present his or her perspective.

Despite the engagement methods, participants from different organizations hold the opinion that the topic of the collaborative activities should be clearly claimed, and questions related to the topic should be raised and solved. Nevertheless, there is a disagreement that people from different backgrounds will ask different questions because they have distinctive views regarding a topic. For example, if a project is planned near River Valley, the government will consider a variety of factors and ask questions after balancing the interests, while conservative organizations may think that the only question is how to protect green space better. This may reduce the effectiveness of engagement activities.

The challenges are reflected in the maintenance of city-citizen relationships, understanding of green space planning, and engagement results. The internal units of the City frequently change so that it prevents long-lasting relationships. The communities did not get enough follow up after the engagement either. It is a barrier to relationship maintenance. Besides, some public cannot understand a high-level strategy. They care more about what happens in their neighbourhood or backyard rather than over the city. It is hard for them to get a specific image of what this area will be. The official document is also difficult for the public to understand. Moreover, the engagement results could not reflect Edmonton's whole ethnic makeup, which means improvements in engagement approaches are needed to connect with more cultural backgrounds.

Suggestions for public engagement during green space planning

The final part of the interview collected the participants' evaluation of the public engagement process during green space planning and their suggestions on further development. Based on these suggestions, I also put forward an idea of the integrated online system, which would facilitate the engagement process for green space planning and other programs.

Participants' suggestions for green space planning and engagement

i. Governance during green space planning

According to the participants, governance within the City needs improvement. Most of the participants thought that the planning process could be more co-collaborative. For example, how does the City work with some environmental protecting community partners and learn from the people who are experts in those fields during green space planning projects? Efforts from both sides are needed. The participants from the City mentioned that internally, excellent leadership is a crucial element, and the organizational framework should be concise and stable. The City staffs have to spend time adapting to the new system after the reorganization of the internal structure, which leads to the complication of the reviewing process within departments and spends more time checking too much information. It dramatically reduces working efficiency. Except for this, the reorganization also affects the City's relationship with external stakeholders. Both the City and community stakeholders made a wish that a long-lasting relationship can be established with each other. Collaborative planning is an ongoing process that flows through a whole project. As for community stakeholders, they first suggested that the City include the right people in the decision-making process. The essential point is to make sure that not just a small group of people giving out instructions and making all the decisions. Several community stakeholders reflected

that they were not well engaged in the decision-making process. It seems more like a "feedback" rather than an "engagement" - they were included in the reflection. Therefore, in the aspect of government management, the stability of the internal structure is a prerequisite for the development of long-term relationships, and who should be included in the decision-making process should be carefully concerned based on the context of a project.

ii. Community and public engagement process

Massive suggestions have been put forward since public engagement is still on its way to being consummated. For the engagement methods, stakeholder Harper thought it would be nice to have a more dynamic conversation in open houses than just individuals giving their opinions, although that has values. As a traditional offline engagement method, it is still frequently adopted in various engagement projects. Making improvements to it will increase the efficiency of this method. Besides, policymaker Arthur suggested having observation studies in green space sites before planning. He said it is a useful approach to know how the people value that space, then plans a public place that makes people feel convenient and attractive according to these characteristics.

As for relationships, some participants agreed that the best way to connect with the community is by finding the community leaders and letting them get the message out or at least ask them the most efficient way of spreading the news. A large number of conversations about green spaces are required during the engagement process. It is important to have good relationships with stakeholders and post-secondary institutions and let the City also learn from the academic. On the same terms of relationships, they are making sure that indigenous groups

are impacted, and there need to build trust between the City and those groups. Continuously following up with different groups is a significant point to notice.

iii. Other suggestions

Participants also mentioned suggestions on planning diverse types of green space and getting out of the original pattern. It would be great to see different types of green spaces as well as passive and active recreation park spaces outside of the River Valley planned either as district or neighbourhood parks. There may be a need for more inclusive activities or activities that would reach a wider variety of the population, so more age-friendly strategies might be put in green spaces planning. It is just critical to ensure that we have a balance of different types of open spaces across the city

Chapter 6: Conclusion

This study explored the development of collaboration and public engagement in Edmonton's green space planning from the different experiences of policymakers and community stakeholders. Concluded from the study, here is a summary of some **key findings presented directly to the research questions** set out at the beginning of this thesis.

Multiple values and benefits of Edmonton's green spaces are identified through interviews. According to the collected data, green space keeps the city's ecological balance, improves human wellness physically and mentally, offers places for social communication, carries indigenous culture, adds economic benefits to the land, and reflects potential political value. These abundant values reflected the attention paid to green space and environmental protection from various social organizations, and has raised debates on whether to preserve or develop natural green space near the North Saskatchewan River Valley. This is also the conflict between social development and climate change that Edmontonians have been trying to solve. Nowadays, modern planning theory believes that a comprehensive result can be achieved through the consultations from various social organizations. Thus, green space plans and policies include more engagement phases compared to what they have been in the last ten years.

How the City is engaging on green space planning is identified in this research. The City made efforts to conduct formal and informal types of engagement during green space planning process. For example, consulting types might be used when engaging with the public to gather a general data, such as open house; deliberative types might be adopted when reviewing the democracy process, such as deliberative forums and citizens' juries; and collaborative types might be selected when demanding co-design element with local communities, such as

stakeholder workshops and meetings. All of these types has their own characteristics, and can be chosen regarding different target groups and the goal of engagement activity. In participants' view, they prefer activities that include more interactive process, and they believe online methods are more desired rather than traditional types since it's convenient and flexible to join in.

During the engagement process, the City evolved its approaches to strengthen engagement in green space planning. As public engagement is emphasized in green space planning projects, the City is also exploring new means of engaging with internal and external stakeholders. Since online methods are popularizing, most participants are willing to use Edmonton Insight Community and online mapping engagement to reflect their suggestions, while traditional methods, such as open house, are not recommended since they spend too much time and energy without meaningfully accessing the creativity and input of the community. Besides, the City invites citizens, local communities, and also indigenous group to join various kinds of green space planning activities. This kind of engagement enhances the positivity and creativity of public participation, but there are more to learn in how to maintain a stable and long relationship with the public, even establish an engagement network in the future. In this sense, the City has made advances in advancing the methods they use for engagement, and creating new opportunities for publics to be involved. However, it remains uncertain with green space plans, as they are now being enacted, how well they will be able to build upon this to create more iterative and long term community partnerships in stewarding and planning for these essential public spaces. Here, there may be benefits for further advancing engagement beyond deliberation, to continue to find more active and creative modes of working collaboratively with publics going forward.

To identify stakeholders, the City use snowball sampling techniques to discover more potential stakeholders and get advice from engagement advisor and consultant groups. In addition to traditional engagement methods, such as open houses and meetings, local communities act upon their participation in a different way both through online and offline methods. The trend is that an online method (such as online survey and mapping) is preferred over traditional methods because they are effective, convenient, and could gather a broader scope of data. After analyzing and summarizing, the data is accessible by the public, and they update What We Heard Report after doing engagement activities.

All participants recognized the mutual benefit offered by public engagement. On the one hand, it represents that the public, communities, and indigenous groups can speak out their voice to formulate plans and build our city; on the other hand, it helps communities understand how the City makes decisions after balancing different interests and concerns. Through the engagement process, ownership and inclusion are promoted. People feel a sense of belonging and feel that their opinions matter by participating in engagement activities. Since more comprehensive suggestions can be put forward while collaborating with professionals from different backgrounds, the engagement system will lead to better decision-making results.

However, challenges come from multiple aspects. One of the most emphasized issues is a lack of long-term relationships with the public, communities, and indigenous. The municipal government's unstable internal framework will affect the network of relationships that have been established with the local communities. Local communities might miss the opportunities to be followed up because of structural changes. This may lead to potential hazards in subsequent projects due to untimely communication. Therefore, active engagement with community leagues or community leaders is necessary. Besides, the complex and verbose policy infrastructure is

another concern for both City staff and the public. People are confused about different levels of official documents, such as master plans, projects, and strategies, and there is a divergence of the understanding the official documents between the public and the municipal government.

Simplifying the policy hierarchy is what the City should consider. Last but not least, most participants indicate that the planning process could be more co-collaborative. In general, the project team set the engagement process and holds a certain amount of decision-making power, and a higher level might provide directions for the final results. For the City planners, they hope that the stakeholders can participate in engagement activities throughout the project and put forward practical opinions. For community participants, they expressed the desire that to be more involved in the decision-making process since sometimes they did not see their reflection matters that much. A dilemma is reflected here: although stakeholders and the public's opinions are critical, it accounts for a small part of the project. The key point is how to balance these feedbacks and other practical elements in actual planning.

In addition, other findings regarding green space future planning are also mentioned. For example, participants suggested that there should be diverse kinds of green spaces with various functions when looking at the city-level. Every neighborhood has public spaces, but most of them have the same pattern. Unique elements should be developed in each community, and more age-friendly strategies might be put in green spaces planning.

Contributions and further research

This study examines how different organizations and the public collaborate to formulate green space plans in detail and their evaluation of the engagement process. The semi-structured interview collected meaningful engagement stories in the engagement phase, presenting an in-

depth understanding of the green spaces' values among multiple perspectives and the current public engagement framework to potential readers. This study also forms Edmonton as a specific case and makes suggestions for the future development of the engagement system. It can be regarded as a useful reference and inspiration for the development of public engagement in Edmonton.

However, the limitations cannot be neglected. Although the participants are made up of city planners, major environmental organizations and stakeholders in Breathe, engagement advisors, consultants, and a former Councilor, which enriches the diversity of perspectives, it could not be a robust evidence to let the participants represent for the idea of the whole groups. In other words, the interview sample should be expanded to collect more stories and experience to enrich the representatives during the COVID-19 period. It also lacks the indigenous groups' perspective on the evaluation of the engagement process. The land we live in has a long-standing indigenous history, and it carries their spiritual culture. Thus, indigenous groups are necessary makeup of Edmonton and their perspective matters. The reason for not including the indigenous perspective is that they have a particular engagement channel, which is beyond this study's scope. It is a complicated area that requires concentrated attention in building a relationship with them. Fortunately, we have seen the City's effort in connecting with indigenous communities. Except for establishing the Indigenous Relations Office, the City has also invited indigenous communities to have more conversations around green space design and planning. There is a special section in official green space plans to report the engagement between the municipal government and the indigenous groups.

In future research, I would like to collect more fresh and engaging experience to improve Edmonton's unique case, and probably, I wish I could also gather stories after building

connections with the indigenous groups in the future work. I would also do more research on innovative engagement methods, including establishing an integrated public engagement network to improve efficiency during the engagement phase of green space planning.

References

- Alam, H. (2018). City to conduct survey of urban wildlife. *Edmonton Journal*. Retrieved from: <https://edmontonjournal.com/news/local-news/city-to-conduct-survey-of-urban-wildlife/>
- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners*, 35(4), 216-224.
- Bartens, J., Day, S. D., Harris, J. R., Dove, J. E., & Wynn, T. M. (2008). Can urban tree roots improve infiltration through compacted subsoils for stormwater management? *Journal of Environmental Quality*, 37(6), 2048-2057.
- Beveridge, C. E., & Rocheleau, P. (1995). *Frederick law olmsted*. Rizzoli International Publications.
- Bolla, R., Bruschi, R., Carrega, A., & Davoli, F. (2013). Green networking with packet processing engines: Modeling and optimization. *IEEE/ACM Transactions On Networking*, 22(1), 110-123.
- Briffett, C. (2001). Is managed recreational use compatible with effective habitat and wildlife occurrence in urban open space corridor systems? *Landscape Research*, 26(2), 137-163.
- Brown, G., Schebella, M. F., & Weber, D. (2014). Using participatory GIS to measure physical activity and urban park benefits. *Landscape and urban planning*, 121, 34-44.
- Bryman, A. & Teevan, J. (2005). *Social Research Methods Canadian Edition*. Toronto: Oxford University Press Canada.

- Buijs, A. E., Mattijssen, T. J.M., Van der Jagt, A. P.N., Ambrose-Oji, B., Andersson, E., Elands, B. H.M. & Møller, M. S. (2016). Active citizenship for urban green infrastructure: fostering the diversity and dynamics of citizen contributions through mosaic governance. *System Dynamics and Sustainability*, 22, 1-6.
- Buizer, M., Elands, B. & Vierikko, K. (2016). Governing cities reflexively—the biocultural diversity concept as an alternative to ecosystem services. *Environmental Science & Policy*, 62, 7-13.
- Burr, V. (2015). *Social constructionism*. New York: Routledge.
- Caves, R. W. (Ed.). (2005). *Encyclopedia of the City*. Taylor & Francis.
- Chong, S., Lobb, E., Khan, R., Abu-Rayya, H., Byun, R., & Jalaludin, B. (2013). Neighbourhood safety and area deprivation modify the associations between parkland and psychological distress in Sydney, Australia. *BMC public health*, 13(1), 422.
- City of Edmonton. (2011). *The Way We Green: the city of Edmonton's environmental strategic plan*. Retrieved from https://www.edmonton.ca/city_government/documents/PDF/TheWayWeGreen-approved.pdf
- City of Edmonton. (2016). *River Valley parks*. Retrieved from https://www.edmonton.ca/activities_parks_recreation/parks_rivervalley/river-valley-parks.aspx
- City of Edmonton. (2017). *Breathe – Green Network Strategy*. Retrieved from: https://www.edmonton.ca/city_government/initiatives_innovation/breathe.aspx

City of Edmonton. (2017). *Breathe interactive maps*. Retrieved from

https://www.edmonton.ca/city_government/initiatives_innovation/breathe-interactive-maps.aspx

City of Edmonton. (2017). *Open space policy*. Retrieved from

https://www.edmonton.ca/city_government/documents/PoliciesDirectives/C594.pdf

City of Edmonton. (2017). *The council initiative on public engagement*. Retrieved from

https://www.edmonton.ca/programs_services/public-engagement.aspx

City of Edmonton. (2017). *The Council Initiative on Public Engagement Phases 1 and 2 Final Report*. Retrieved from

https://www.edmonton.ca/programs_services/documents/CIPEPhases1and2FinalReport.pdf

City of Edmonton (2018). *Edmonton's urban neighbourhood evolution*. Retrieved from

<https://www.cityofedmontoninfill.ca/public/download/documents/46666>

City of Edmonton. (2019). *ConnectEdmonton – Edmonton's Strategic Plan 2019 - 2028*.

Retrieved from

https://www.edmonton.ca/city_government/documents/ConnectEdmonton_Book_Web.pdf

Coombes, E., Jones, A. P., & Hillsdon, M. (2010). The relationship of physical activity and overweight to objectively measured green space accessibility and use. *Social science & medicine*, 70(6), 816-822.

- Cohen, N., Reynolds, K., & Sanghvi, R. (2012). *Five borough farm: Seeding the future of urban agriculture in New York City*. Design Trust for Public Space.
- Creswell, J. W. & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.
- Grimmond, C. S. B., & Oke, T. R. (1991). An evapotranspiration - interception model for urban areas. *Water Resources Research*, 27(7), 1739-1755.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.
- Damurski, Ł. (2015). From formal to semi-formal and informal communication in urban planning. Insights from Polish municipalities. *European Planning Studies*, 23(8), 1568-1587.
- Dennis, M. & James, P. (2016). Site-specific factors in the production of local urban ecosystem services: A case study of community-managed green space. *Ecosystem Services*, 17, 208–216.
- Dunn, K. (2000). *Interviewing in line* Hay (ed.), *Qualitative research methods in human geography*. South Melbourne: Oxford University Press.
- Fleischer, A., & Tsur, Y. (2003). Measuring the recreational value of open space. *Journal of Agricultural Economics*, 54(2), 269-283.
- Givoni, B. (1991). Impact of planted areas on urban environmental quality: a review. *Atmospheric Environment. Part B. Urban Atmosphere*, 25(3), 289-299.

- Gohar, A. (2016). Urbanization & sustainable development: evolution and contemporary challenges. *Journal of civil engineering and architecture research*, 3(12).
- Goodman, L. A. (1961). Snowball sampling. *The annals of mathematical statistics*, 148-170.
- Gordon, E., & Manosevitch, E. (2011). Augmented deliberation: Merging physical and virtual interaction to engage communities in urban planning. *New Media & Society*, 13(1), 75-95.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, 18(1), 59-82.
- Harvey, D. (2008). The right to the city. *New Left Review*, 53(2), 23–40.
- Harris, N. (2002). Collaborative planning. *Planning futures: New directions for planning theory*, 21-43.
- Haq, S. M. A. (2011). Urban green spaces and an integrative approach to sustainable environment. *Journal of environmental protection*, 2(05), 601.
- Healey, P. (1997). *Collaborative planning: Shaping places in fragmented societies*. Macmillan International Higher Education.
- Heidt, V., & Neef, M. (2008). Benefits of urban green space for improving urban climate. In *Ecology, planning, and management of urban forests (pp. 84-96)*. Springer, New York, NY.
- Hilal, A. H. & Alabri, S. S. (2013). Using NVivo for data analysis qualitative research. *International Interdisciplinary Journal of Education*, 2(2), 181-186.

- Ignatieva, M. & Golosova, E. (2009). Sustainable practice of landscape architecture in the socialist era in Russia: what we can learn from it? In: *Proceedings of (CD ROM) 46th IFLA World Congress on Green Infrastructure: High Performance Landscapes*, Rio de Janeiro, Brazil, 21–23.
- Ignatieva, M., Stewart, G. H., & Meurk, C. (2011). Planning and design of ecological networks in urban areas. *Landscape and ecological engineering*, 7(1), 17-25.
- Islam, N., & Bonilla, M. C. (2004). *Environmental Law in Developing Countries: Selected Issues (Vol. 2)*. IUCN.
- Johnston, M. (1996). A brief history of urban forestry in the United States. *Arboricultural Journal*, 20(3), 257-278.
- Kalnay, E., & Cai, M. (2003). Impact of urbanization and land-use change on climate. *Nature*, 423(6939), 528-531.
- Kearney, A. (2006). Residential development patterns and neighborhood satisfaction: impacts of density and nearby nature. *Environment and Behavior*, 38 (1), 112-39.
- Kim J, Wyatt RO, & Katz E. (1999). News, talk, opinion, participation: The part played by conversation in deliberative democracy. *Political Communication* 16: 361–85.
- Kingsley, M., & Ontario, E. (2019). Commentary Climate change, health and green space co-benefits. *Health promotion and chronic disease prevention in Canada: research, policy and practice*, 39(4), 131.
- Konijnendijk, C. C., Annerstedt, M., Nielsen, A. B., & Maruthaveeran, S. (2013). Benefits of urban parks: a systematic review. *A report for IPFRA. IFPRA*.

- Krasny, M. & Tidball, K. (2015). *Civic ecology: Adaptation and transformation from the ground up*. Cambridge: MIT Press.
- Lehmann, S. (2010). Green urbanism: formulating a series of holistic principles. *Surveys And Perspectives Integrating Environment & Society*, Vol.3/N`2.
- Lefebvre, H. (1996). *Writings on cities*. New York, NY: Blackwell.
- Lincoln, YS., & Guba, EG. (1985). *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.
- Lord, A., Mair, M., Sturzaker, J., & Jones, P. (2017). ‘The planners’ dream goes wrong?’ Questioning citizen-centred planning. *Local Government Studies*, 43(3), 344-363.
- Lynch, K. (1981). *A theory of good urban form*. Cambridge, Mass.: MIT Press.
- Madureira, H., Nunes, F., Oliveira, J. V. & Madureira, T. (2018). Preferences for urban green space characteristics: a comparative study in three portuguese cities. *Environments*, 5(23), 1-13.
- Maruani, T., & Amit-Cohen, I. (2007). Open space planning models: A review of approaches and methods. *Landscape and urban planning*, 81(1-2), 1-13.
- Marshall, C. & Rossman, G. B. (1989). *Designing Qualitative Research*. Thousand Oaks, CA: SAGE Publications.
- Mayan, M. (2009). *Essentials of Qualitative Inquiry*. London, Routledge. Miller, R. W., Hauer, R. J., & Werner, L. P. (2015). *Urban forestry: planning and managing urban greenspaces*. Waveland press.

- Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of health care: systematic review of the uses, benefits, and limitations of social media for health communication. *Journal of medical Internet research*, 15(4), e85.
- Morton, C., Gunton, T. I. & Day, J. C. (2012). Engaging aboriginal populations in collaborative planning: an evaluation of a two-tiered collaborative planning model for land and resource management. *Journal of Environmental Planning and Management*, Vol. 55, No. 4, pp. 507–523.
- Naess, P. (2001). Urban planning and sustainable development. *European Planning Studies*, 9(4), 503-524.
- Newmark, W. D. (1993). The role and design of wildlife corridors with examples from Tanzania. *Ambio*, 500-504.
- Newton, N. T. (1971). *Design on the land: the development of landscape architecture*. La Editorial, UPR.
- Nowak, D. J., Crane, D. E., & Stevens, J. C. (2006). Air pollution removal by urban trees and shrubs in the United States. *Urban forestry & urban greening*, 4(3-4), 115-123.
- Ordóñez, C., & Duinker, P. N. (2013). An analysis of urban forest management plans in Canada: Implications for urban forest management. *Landscape and Urban Planning*, 116, 36-47.
- Pløger, J. (2004). Strife: Urban planning and agonism. *Planning Theory*, 3(1), 71-92.

- Risse-Kappen, T., Risse, T., Ropp, S. C., & Sikkink, K. (Eds.). (1999). *The power of human rights: International norms and domestic change (Vol. 66)*. Cambridge University Press.
- Rowe, G., & Frewer, L. J. (2005). A typology of public engagement mechanisms. *Science, Technology, & Human Values*, 30(2), 251-290.
- Rybczynski, W. (1999). *A clearing in the distance: Frederick Law Olmsted and America in the 19th century*. Simon and Schuster.
- Sandercock, L. (2000). When strangers become neighbours: Managing cities of difference. *Planning Theory & Practice*, 1(1), pp.13-30.
- Saraev, V. (2012). *Economic benefits of greenspace: a critical assessment of evidence of net economic benefits (No. 021)*. Forestry Commission.
- Schebella, M. F., Weber, D., Schultz, L., & Weinstein, P. (2019). The wellbeing benefits associated with perceived and measured biodiversity in Australian urban green spaces. *Sustainability*, 11(3), 802.
- Scott, C. E., Bliss, T., Spracklen, D. V., Pringle, K. J., Dallimer, M., Butt, E. W., & Forster, P. M. (2016). Exploring the value of urban trees and green spaces in Leeds, UK. in *Proceedings of the International Sustainable Ecological Engineering Design for Society (SEEDS) Conference 2016: Conference Proceedings. International SEEDS Conference: Sustainable Ecological Engineering Design for Society, 14-15 Sep 2016 (pp. 310-320)*. Leeds: Leeds Beckett University, Publishing LSI.

- Scott, M., Redmond, D. & Russell, P. (2012). Active citizenship and local representational politics in twenty-first century Ireland: The role of residents groups within Dublin's planning arena, *European Planning Studies*, 20(2), pp. 147–170.
- Selman, P. (2004). Community participation in the planning and management of cultural landscapes. *Journal of Environmental Planning and Management*, 47(3), 365–392.
- Southern, A., Lovett, A., O'Riordan, T. & Watkinson, A. (2011). Sustainable landscape governance: lessons from a catchment based study in whole landscape design. *Landscape and Urban Planning*, 101(2), 179–189.
- Southworth, M. (2005). Designing the walkable city. *Journal of urban planning and development*, 131(4), 246-257.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE Publications.
- Stoltz, J., & Schaffer, C. (2018). Salutogenic affordances and sustainability: Multiple benefits with edible forest gardens in urban green spaces. *Frontiers in psychology*, 9, 2344.
- Sugiyama, T., Thompson, C.W. & Alves, S. (2009). Associations between neighborhood open space attributes and quality of life for older people in Britain. *Environment and Behavior*, 41(1), 3-21.
- Sullivan, W. C., Kuo, F. E., & Depooter, S. F. (2004). The fruit of urban nature: Vital neighborhood spaces. *Environment and behavior*, 36(5), 678-700.
- Taylor, J., Paine, C., & FitzGibbon, J. (1995). From greenbelt to greenways: four Canadian case studies. *Landscape and urban planning*, 33(1-3), 47-64.

- Tzoulas, K., Korpela, K., Venn, S., Yli-Pelkonen, V., Kaźmierczak, A., Niemela, J., & James, P. (2007). Promoting ecosystem and human health in urban areas using Green Infrastructure: A literature review. *Landscape and urban planning*, 81(3), 167-178.
- Walby, K. (2009). Ottawa's National Capital Commission Conservation Officers and the policing of public park sex. *Surveillance & Society*, 6(4), 367-379.
- Walker, J. L. (2012). Research column. The Use of Saturation in Qualitative Research. *Canadian Journal of Cardiovascular Nursing*, 22(2).
- Wong, L. P. (2008). Data analysis in qualitative research: a brief guide to using NVivo. *Malaysian Family Physician*, 3(1).
- World Wildlife Fund. (2015) Retrieved from:
https://wwf.panda.org/knowledge_hub/teacher_resources/webfieldtrips/ecological_balance/
- Yin, R. K. (2003). *Case study research: design and methods (3rd ed.)*. Thousand Oaks, CA: SAGE Publications.

Appendices

Appendix A: Letter of Initial Contact

Dear _____,

Re: Participation in a research study called “Cultivating green space together: exploring the collaborative planning and public engagement of green space in Edmonton, Alberta”

(Pro00093098)

I am writing to request your participation in research being conducted by me, Jie Luo, a graduate student in the Faculty of Extension at the University of Alberta. This research seeks to critically explore the development of collaboration and engagement strategies in the formulation of green space planning in Edmonton. Further information about my research is attached to this email.

Currently, I am looking to speak with participants who have worked or participated in activities related to green space planning in Edmonton. The potential participants may come from the municipal government, stakeholder organizations, or the local community. I would be interested in talking with you to discuss your experience in relation to this topic. The interview is expected to last approximately 60 minutes and may be conducted at office, meeting room, library or quiet cafe.

For more information or questions about the study or to arrange for your participation, please contact the research investigator Jie Luo at jluo1@ualberta.ca. Your participation is voluntary and I will keep all your information confidentially.

Thank you very much for your time and consideration!

Best wishes,

Jie Luo

M.A. Student

Faculty of Extension

University of Alberta

10230 Jasper Ave

Edmonton, AB, T5J 5A

Appendix B: Information Sheet

Information Sheet

Research topic: Cultivating green space together: Exploring the collaborative planning and public engagement of green space in Edmonton, Alberta

Background:

Green spaces are increasingly regarded as important elements in the promotion of environmental sustainability and quality of life in cities. This interview will ask questions about the current green space planning and policies in Edmonton. You are invited to be in this study because of your background related to the topic of discussion.

The results of this study will be used in support of the researcher's thesis, and potentially in academic presentations and publications (with the support of Dr. Jones).

Purpose:

The purpose of this research is to critically explore the development of a collaborative and engagement strategy alongside the formulation of green space planning.

Study Procedures:

This research adopts the semi-structured interview method to collect the data. Interviews will be conducted in an office, meeting room, library or quiet café, and the participant will be interviewed for approximately 40 to 60 minutes. The whole conversation will be audio-recorded and transcribed.

Benefits:

You will receive no direct benefit from participating in this study.

Risks:

It is not expected that being in this study will harm you. However, if you have any questions during or after the interview, you may contact the research investigator or supervisor identified above.

Voluntary Participation:

Before you make a decision to participate, the researcher will go over the Information Sheet and Consent Form with you. You are encouraged to ask questions if you feel anything needs to be made clearer. You will be given a copy of the forms for your records.

You are under no obligation to participate in this study. Participation is completely voluntary. You have the right to refuse this invitation to participate or refuse to answer any of the questions asked during the interview. You are free to stop the interview at any time.

You can request to withdraw from this study or from certain parts of the study within two weeks after the completion of the interview. If you choose to withdraw any part from the study, the audiotape and transcripts of the part will be destroyed immediately.

Confidentiality:

All participants' identities will be kept confidential in the study. The research investigator and the supervisor will have access to the interview data. The research supervisor will only have access to anonymous data so as to further protect the confidentiality of the participant. The information will be used in the thesis and potentially in academic presentations and publications. All data will be communicated and presented anonymously.

Contact Information:

If you have further questions regarding the research, please do not hesitate to contact the research investigator.

The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta. If you have questions about your rights or how research should be conducted, you can call (780) 492-2615. This office is independent of the researcher.

Thank you very much for participating in this study!

Appendix C: Consent Form

Consent Form

Research topic: Cultivating green space together: Exploring the collaborative planning and public engagement of green space in Edmonton, Alberta

Please circle your answers:

Have you received and read the Information Sheet?	Yes	No
Do you understand the benefits and risks involved in this study?	Yes	No
Do you understand that you can quit at any point during the interview?	Yes	No
Do you understand that the interview will be audio recorded and transcribed?	Yes	No
Has confidentiality been explained to you?	Yes	No
Do you understand who will have access to the data collected?	Yes	No
Do you understand that you can withdraw from any part of the study within two weeks after the completion of the interview?	Yes	No
Do you know that the information you provided will be used in the thesis and potentially in academic presentations and publications?	Yes	No

Consent Statement

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form.

Participant's Name (printed) and Signature

Date

Name (printed) and Signature of Person Obtaining Consent

Date

Appendix D: Interview Scripts

Interview Scripts

(for policymakers)

Research topic: Cultivating green space together: Exploring the collaborative planning and public engagement of green space in Edmonton, Alberta

Pre-Interview Checklist

- Introduction of the researcher and the study
- Walkthrough the information sheet and consent form
- If permission is given start recording

Interview

Part one: Introduction and background

Note: The aim of this part is to allow the participant to introduce her/himself and her/his role in the green space planning process. It will also help the interviewer to have a quick understanding of the background of the participant and ask appropriate questions in the following parts of the interview.

Maybe we can start by introducing yourself and tell me a little about your background in _____ and your current role.

What do you see as the values of green spaces in Edmonton? Are these the same as they have always been?

What is your perspective on the current green space planning in Edmonton? Are current plans

appropriate to the types of values we have been discussing? Where are the challenges going forward?

Part two: Collaborative planning and public engagement

Note: This part intends to explore how participants understand the collaborative green space planning and public engagement from their perspectives. The interviewer should ensure that participants are familiar with these concepts.

The focal points of my research relate to collaborative planning and public engagement, and that's also what the City of Edmonton paid attention to during the green space planning process.

Would you be able to tell me a little about the overall process of the development of the Breathe plan?

Were you involved in any planning/stakeholder engagement meetings that took place during the development of the current green space plan?

- If yes, would you mind describing your experience, including what was your role, who was involved, what topic was discussed, what did you say, and what did they achieve? What was the role of the stakeholders, communities, and the public in formulating and enacting policies?

- If no, would you mind telling me why?

Did Breathe draw on the work being done on the Council Initiative on engagement around the same time?

Which department/who determines the process of the public engagement activity related to green

space planning?

Have you ever designed for or worked as staff in any stakeholder and public engagement event?

Which one impressed you the most and why?

How will the City deal with the data from the communities and the public? To what extent were the stakeholders and the public able to get involved in the shaping of the plan?

What contribution has this kind of engagement made in terms of policy development and practice?

Were there challenges in engaging with communities that you didn't anticipate? Do you think you have engaged the right group and in proper methods?

How would you describe the relationships that took place between City planning and stakeholders/communities/citizens?

How do you see this differing from the ways in which green space policies have traditionally been formulated and planned?

Part three: Suggestions and future development

Note: The last part meant to collect the comments and suggestions about the future development of green space planning from participants.

How do you keep communities and public participation going during the implementation stage?

What will you do if future debates arise?

How do you see the future of green space planning in Edmonton?

Do you have any suggestions that could make improvements to the current green space policies and the planning process?

Post-Interview Checklist

- Ask participants if they have any further questions or they would like to contribute ideas that were not mentioned in the interview
- Restate conditions of participation as described in the consent form
- Thanks for their participation

Interview Scripts

(for public and community stakeholders)

Research topic: Cultivating green space together: Exploring the collaborative planning and public engagement of green space in Edmonton, Alberta

Pre-Interview Checklist

- Introduction of the researcher and the study
- Walkthrough the information sheet and consent form
- If permission is given start recording

Interview

Part one: Introduction and background

Note: The aim of this part is to allow the participant to introduce her/himself and her/his role in the green space planning process. It will also help the interviewer to have a quick understanding of the background of the participant and ask appropriate questions in the following parts of the interview.

Can you start by introducing yourself and telling me a little about your current role in

_____?

What do you see as the values of green spaces in Edmonton? Do you see these values changing?

Do you have any knowledge about the current green space plans in Edmonton?

- If yes, do you think the current plans appropriate to the types of values we have been discussing? Were you involved in any consultation with the City about the development

of current green space plans?

- If no, I will introduce a bit before the next part of the interview begin.

Part two: Collaborative planning and public engagement

Note: This part intends to explore how participants understand the collaborative green space planning and public engagement from their perspectives. The interviewer should ensure that participants are familiar with these concepts, and have the basic knowledge of some green space policies.

The focal points of my research relate to collaborative planning and public engagement, and that's also what the City of Edmonton paid attention to during the green space planning process.

Were you involved in any of the community planning/public engagement activities that took place during the development of the current green space plans?

- If yes, what was your overall experience with these activities? Would you mind describing the procedures and your experience, including how did you know the activity, what was your role, who was involved, what topic was given, what did you say, what did they achieve?
- If no, would you mind telling me why?

Could you please list the engagement methods that you were involved in? Which approach do you think is the best to get feedback?

Do you think the questions they asked are necessary to the theme?

How do you think about the overall procedures and quality of the public engagement activities

that you have participated in? Do you think they need further improvements?

Do you think you were able to actively get involved in the shaping of the plan? To what extent have your requirements reflected in the policies?

Do you think the City engaged the right group and in proper methods? What kind of engagement activities should be held and who else could be involved?

How would you describe the relationships that took place between you and City planning?

In your opinion, what contribution has this kind of engagement made to policy development?

How do you understand the value of public participation in planning?

How do you see this differing from the ways in which green space policies have traditionally been formulated and planned?

Part three: Suggestions and future development

Note: The last part meant to collect the comments and suggestions about the future development of green space planning from participants.

Have you ever had an opportunity to be involved during the policy implementation stage? What will you do if future debates arise?

How do you see the future of green space planning in Edmonton?

Do you have any suggestions that could make improvements to the current green space policies and the planning process?

Post-Interview Checklist

- Ask participants if they have any further questions or they would like to contribute ideas that were not mentioned in the interview
- Restate conditions of participation as described in the consent form
- Thanks for their participation

Appendix E: Background of Participants

Table: Background of policymaker participants

Name	Participation
Arthur	<ul style="list-style-type: none"> ● Mainly participated in UPMP ● Rich neighborhood parks and city parks planning engagement experience
Bryan	<ul style="list-style-type: none"> ● Mainly participated in Breathe and Ribbon of Green ● Familiar with Bike Plan ● Vulnerable people engagement experience
Cindy	<ul style="list-style-type: none"> ● Mainly participated in UPMP ● Public and stakeholder engagement advisor ● Joined in various green space planning projects (district park design) ● Partaken in engagement activities both as stakeholder and citizen
Daisy	<ul style="list-style-type: none"> ● Mainly participated in Breathe, especially in indigenous engagement ● Open space and neighborhood parks planning experience
Ella	<ul style="list-style-type: none"> ● Mainly participated in Breathe ● Land use planning experience
Nick	<ul style="list-style-type: none"> ● Participated in UPMP ● Neighborhood parks planning and developing experience

Table: Background of community and stakeholder participants

Name	Participation
Felix	<ul style="list-style-type: none"> ● Joined in Community League ● Grants writing for communities ● Actively participated in green space and climate change related activities
Grace	<ul style="list-style-type: none"> ● Former Councilor ● Rich public engagement experience in multiple projects
Harper	<ul style="list-style-type: none"> ● Main stakeholder in Ribbon of Green and River Valley related projects ● Actively participated in green space related activities
Isabelle	<ul style="list-style-type: none"> ● Main stakeholder in River Valley related projects ● Working with both provincial and municipal governments
Justin	<ul style="list-style-type: none"> ● Active in Community League ● Actively participated in green space related activities
Kate	Main stakeholder in River Valley related projects
Lucas	<ul style="list-style-type: none"> ● Former planning advisor in EFCL ● Heavily engaged in district parks and neighborhood parks planning and their community and public engagement session
Mia	<ul style="list-style-type: none"> ● Worked as a consultant in both Breathe and Ribbon of Green ● Rich landscape architecture and open space planning experience
Oscar	<ul style="list-style-type: none"> ● Worked as a consultant in both Breathe and Ribbon of Green ● Rich community planning and open space planning experience