Urbanizing the Academy

The University of British Columbia's Planning, Development and Sustainability Story

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Abstract

Universities are traditionally focused on education and research, yet in a shift toward more entrepreneurial activities, some universities are using their large physical institutions and land base for land development projects and to demonstrate sustainability initiatives. While a move to market-based activities has been criticized for straying too far from the academic mission at the core of a university, supporters point to the new revenue stream from land development as a means to contribute to the University's academic mission. As a politically autonomous institution from neighbouring municipalities and the regional government, and with its land use and permitting authority, UBC is ambitiously undertaking major urban development projects on its land. To understand how UBC arrived at its current context, this case study focuses on the key features, figures and processes of property development, land use planning and sustainable development undertaken at the University. Using document analysis and semi-structured interviews, this practicum includes a background study and provides insights specific to UBC's experience as well as highlights relevant lessons for other universities seeking to engage in property development and integrate sustainable development initiatives into their design and operations.

Key words: land develop, property development, land use planning, sustainability, sustainable development, entrepreneurialism, growth coalition

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Table of Contents

List of Figures

List of Tables

1. Introduction

The university is an indispensable institution to a prosperous society. Along with local governments, private corporations and religious institutions, the university is a key component to modern society (Perry & Wiewel, 2005). As a centre for higher learning, it specializes in educating generations of professionals, engaging in research and knowledge creation in science and technology, and acting as the home of open cultural and moral debate. For some, the university is meant to be, "removed from the turmoil of the city and free from the distractions of modern civilization" (Bender, 1988; Perry & Wiewel, 2005, p.4). However, the university is not a self-contained entity because as a large landowner, large employer and a place of considerable economic activity, it has sway over the surrounding community. Unlike other large organizations that are able to relocate, the university is fundamentally tied to its physical location, and is consequently invested in the quality and health of its surrounding environment (Calder & Greenstein, 2001).

A university is typically subject to local development regulations and zoning bylaws, but remains independent from the local municipalities and can make development decisions about their property in relative isolation (Perry & Wiewel, 2005). Whether a university is located within a residential neighbourhood or in the central city, its autonomy to develop its property can be contentious, leading to tensions and causing relationships with the surrounding community to strain (Bertrand, Kelley, Levitan, Patton & Perry, 2008). Yet, when a university collaborates with its neighbouring community, its development projects tend to be successful (Perry & Wiewel, 2005). A university can bring to bear its network of knowledge and expertise to demonstrate innovative approaches and new technologies, and have access to power and finance in ways that a city may not have. Armed with these qualities, projects spearheaded by a university can be beneficial to both the university community as well as to the neighbouring community (Melhuish, 2016).

A combination of internal and external motives is behind a university's decision to develop its land (Perry & Wiewel, 2005). The internal and external motives are representative of different obligations a university has to a variety of stakeholders. On the one hand, internal stakeholders are the faculty members, students, administrators, alumni and donors. On the other hand, external stakeholders include the neighbouring communities, municipalities, partner

enterprises, and, increasingly, international students and potential faculty (Campbell & Wylie, 2017). However, Perry and Wiewel (2005) suggest the impetus toward land development is largely motivated by a university's, "internal goals of campus design, academic program needs, and endowment growth" (p.9).

Whatever the driving forces may be, when a university engages in land development, its complex and often conflicting characteristics are revealed (Perry & Wiewel, 2005, p.5). In comparison to the hierarchical decision-making structures of governments and most private enterprises, a university's decision-making structure is more complex because it is distributed between different governance bodies such as the Board of Governors, the Senate, the Academic Faculty, the student body as well as others. This unique internal structure of various interest groups with contrasting agendas and goals leads to differing opinions of how to interpret the university's high-level academic mission (Moore et.al, 2005, p.74). Accordingly, opinions on how the academic mission ought to be achieved can vary. However, when the different interest groups are in agreement on the desirability and benefits of land development, this constitutes a growth coalition that transcends many other points of disagreement such as politics.

Land development taking place at a university, particularly non-institutional development, is indicative of its growing entrepreneurial character. A university acting in its own best interest toward a more self-reliant state in a way that has been historically unconventional denotes entrepreneurialism. While academic freedom has always set the university apart as an independent entity in society, some entrepreneurial universities are also exerting their independence by generating new sources of revenue, developing new institutional and non-institutional facilities, and instituting far reaching and impactful policies. Of especial interest to this research project are the sustainability policies being instituted.

1.1 Study Context: Land Development at UBC

In 1910, the Province of British Columbia endowed the newly established University of British Columbia (UBC) with a large tract of undeveloped land on the peninsula west of the City of Vancouver known as Point Grey, indicated in Figure 1.1 by the red star and detailed in Figure 1.2[1]. The endowed lands were deemed adequate to support the expansion of UBC's campus as

[1] It should be noted that Point Grey is an umbrella geographical name referring to the peninsula west of the City of Vancouver and includes UBC, the University Endowment Lands, Pacific Spirit Regional Park and the Musqueam First Nation community.

well as to facilitate agricultural experimentation, and perhaps provide a source of revenue to help finance the university's activities (Birmingham & Wood Architecture and Planning, 2009, p.3). Since UBC hasn't needed all the land it was endowed for its academic pursuits, the University has chosen to develop the vacant non-institutional lands for residential and commercial uses.

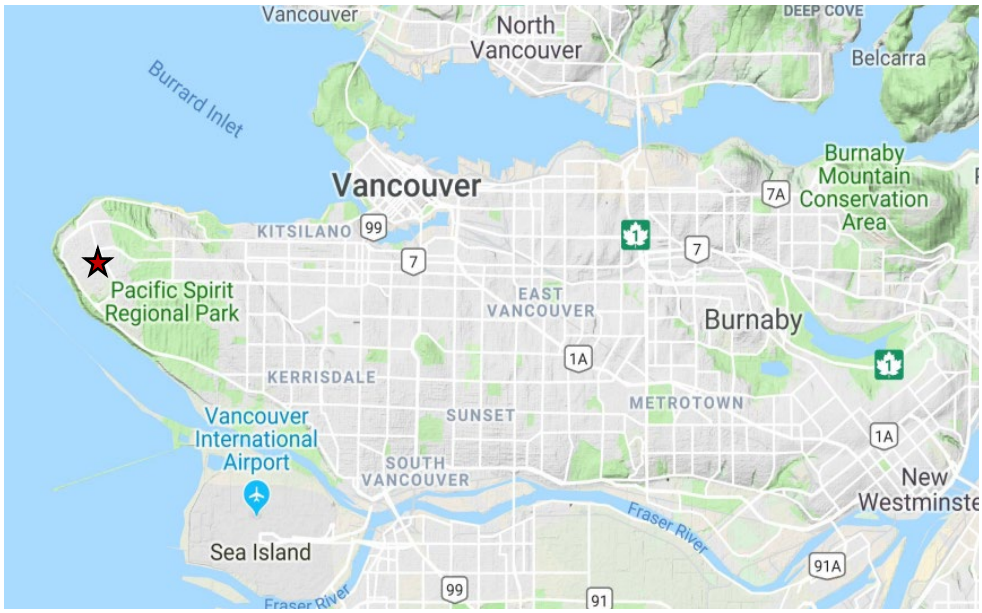


Figure 1.1 UBC's Regional Context (Google Maps)

UBC is a worthy case study from Canada because of three defining features: its property development, its institutional commitment to sustainable development, and its regulatory control of land use planning. When it first waded into land development, it established the UBC Real Estate Corporation in 1989, which later became the UBC Properties Trust in 1997 (Properties Trust) to act as the master developer for all development projects at the University (UBC Properties Trust, 2018). The Properties Trust is now responsible for project managing all development at UBC, both institutional and non-institutional, and manages all of UBC's real estate holdings. In 1990, around the same time the UBC Real Estate Corporation was established, UBC made a formative commitment to sustainable development, which was later enshrined as a university policy in 1997 and supported with the establishment of an office dedicated to promoting sustainable development in all areas at the University in 1998 (UBC Sustainability, n.d.d). In 2009, after a quarrel with Metro Vancouver over their proposed zoning bylaw for UBC, the University successfully lobbied the provincial government to grant them regulatory control of land use on its lands. As a result, the provincial government adopted UBC's Land Use Plan under the *Municipalities Enabling and Validating Act*, giving the University land

use regulatory authority over all their property on Point Grey, superseding Metro Vancouver's regional governance authority (UBC: Office of the University Counsel, 2018).

UBC's campus is one of Metro Vancouver's major urban development sites. UBC's neighbourhoods areas are collectively home to roughly 19,000 residents, including students (UBC Campus & Community Planning, 2017). Since sustainable development has been advanced over the years as an important guiding principle, land use plans, policies, building designs and infrastructure performance are all shaped by it.

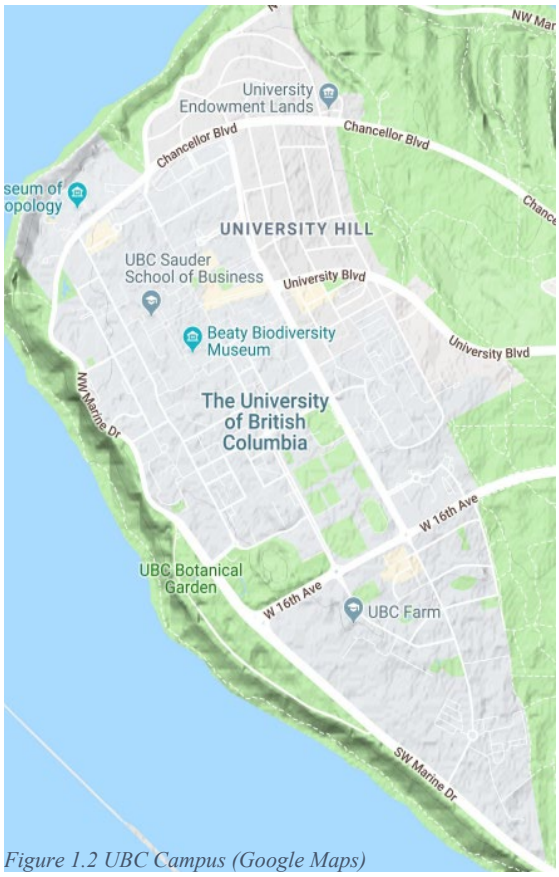


Figure 1.2 UBC Campus (Google Maps)

1.2 Research Purpose and Questions

UBC's current state of land development is the result of a confluence of important events. I address several objectives together to create a clear picture of land use planning and development at UBC. First, I discuss the context of UBC's activities, introducing the surrounding communities, and outlining and describing the major internal constituents to land use planning, development, and sustainable development at UBC. Second, I present the plans and policies forming the University's guiding framework for planning, development and sustainable development. I present the considerable cohesion between the plans, especially in terms of commitment to sustainable development. Third, I discuss the underlying conditions and motivations which led to UBC's current land use planning and development regime. This part of the discussion also encompasses how and why sustainable development became integral at UBC, and in what ways it is implemented in planning and development. As UBC has engaged in land development, it has also taken on a new set of relationships and responsibilities with its stakeholders. Finally, I offer recommendations based on the UBC case study for other universities to drawn upon for guidance. To these ends, this research is guided by the following key questions:

Q1 What are the key features of land use planning and property development at UBC?

Q1a. What are the underlying conditions and motivations that led to UBC planning and developing its land?

Q2 What were the contributing factors that led to sustainable development become a leading objective at UBC?

Q2a. In what ways is sustainable development incorporated into land use planning and land development?

Q3 In what ways has land development created new relationships and responsibilities for UBC?

Q4 What lessons can other universities, such as the University of Manitoba draw from UBC's experiences?

To help answer these questions and create a case study of UBC's land use planning, real estate development, and sustainable development, I have assembled a conceptual framework designed to address several observations. Perry and Wiewel (2005) compile and examine several cases of university-based land development, and outline the features they found to be particularly salient to university-based urban development. These features include leadership, internal structure, relationships, and financing which I will speak to in relation to UBC. A notable feature of the character of UBC's development activities is its shift toward entrepreneurialism. Through his extensive research, Burton Clark (2004) offers a series of five 'pathways' that lead a university to becoming more effectively entrepreneurial, which is to say UBC's development choices are in its own best interest and intended to support more self-reliance. In order to dig deeper into how UBC's entrepreneurial activities fit into our society's capitalist structure, I turn to David Harvey's (1989) concept of the entrepreneurial city as well as the growth coalitions discussed by Logan and Molotch (1976, 1989 & 2007), I believe their work and observations are helpful in explaining the university's shift toward self-reliant entrepreneurial practices.

The research also examines how sustainable development is an integral part of UBC's activities, focusing on how it fundamentally shapes land use planning and development. The work of Mark Roseland (2012) speaks to the elements necessary for sustainable development to be successfully implemented, and provides a useful framework to understand where UBC stands in this regard. The principles of sustainable development are composed of the ecological,

economic and social dimensions of society. This research uses these three sides of sustainable development as yardsticks to analyze UBC's efforts in sustainable development. In addition, other researchers offer insights as to how a university can successfully implement the principles of sustainable development into their programs and operations.

1.3 Significance and Interest in the Study

As will be discussed in Chapter 2, there is a considerable body of research on universities and property development. There is also considerable scholarship on the application of sustainable development at universities. With this research project focusing on UBC I intend to add to the body of knowledge of land use planning, urban development and sustainable development initiatives occurring at a university. University land use and land development in Canada have not been explored in any great detail thus far in the literature. While UBC is a singular example with contextually unique features, it is a worthy candidate for research because its policies, interorganizational relationships, key personalities and milestones throughout its history can be instructive for how to approach development, planning and sustainable development at other universities.

The University of Manitoba (UofM) is at the foundational stage of developing its own non-institutional property, at the time of this research project. In 2008, the UofM purchased the adjacent Southwood Lands from the Southwood Golf and Country Club (University of Manitoba Campus Planning Office, 2016). The University intends to develop the 120 acres of greenfield into a new mixed-use, transit-oriented university neighbourhood. To pursue the development of Southwood Lands, UofM established the UM Properties Limited Partnership in 2016-17 which will be responsible for the planning, development of the infrastructure and roadways, and the negotiations with developers and builders (Crown Lands and Property Agency, 2018: 309). In May of 2018, the University of Manitoba appointed the directors of UM Properties GP Inc. who will oversee the development of the Southwood Lands (Bonneville, 2018).

1.4 Biases

One of the motivations for selecting this topic is based on UBC being my alma mater and my familiarity with the institution. Despite the years I spent at the University and my affection for it, my findings are founded on sound research and the data I collected. However, I believe my

familiarity with UBC and the surrounding communities have been beneficial to understanding the University's geographic context.

1.5 Limitations

While the research adequately addresses each dimension of the case study, limitations have nonetheless been identified. From the outset of this research, the objective has been to focus on planning, property development and sustainable development at UBC. Throughout the research, it became increasingly evident that each topic could be tackled independently with greater depth, but given the scope of the research, deeper dives into each topic could not be accommodated. For example, future research could probe further into the financial details of UBC's various endowments, the benefit and drawbacks to creating government benefit enterprises, and investigate the background and development of the Campus and Community Planning office. Further suggested research topics are revisited in Chapter 8.

One of the intentions of this research project is to provide general recommendations to universities intending to engage in development activities on their land, and the University of Manitoba was identified as a specific recipient of recommendations. While the recommendations can be valuable, the scope of the research does not include an in depth study of the UofM's context, which makes providing recommendations specific to its unique situation unreasonable. Even so, I believe the resulting findings are valuable.

1.6 Chapter Structure

I have structured this document to guide the reader through my process of investigating and writing this case study about UBC. In Chapter 1, I introduce the research topic, provide some background information about the University, propose the research questions guiding the inquiry of this research project and describe the significance of the research. In Chapter 2, I discuss the findings from my literature review and provide the theoretical context underpinning my research. The resulting conceptual framework is a combination of the work on university urban developments by Perry and Wiewel, the five pathways to university entrepreneurialism by Burton Clark (2004), growth coalitions, and sustainable development. In Chapter 3 I present the research methods I employed for this research project, which are the exploratory case study. I use document analysis and semi-structured interviews with five interviewees to support my case

study investigation. In Chapter 4 I discuss in more detail UBC's context and the constituent organizations pertinent to this research project. In Chapter 5, I present a comprehensive review of the policy and regulatory framework governing planning, property development and sustainable development at UBC, including some background context to some policy development. In Chapter 6, I discuss at length how planning, property development and sustainable development became prominent features at the University, focusing on influential people and milestones. In Chapter 7, I revisit the conceptual framework and highlight the findings of my research as they align with theory and previous work from the literature. In Chapter 8, the final chapter, I provide answers to the research questions and offer some recommendations to UofM specifically, but which I believe apply broadly to any university pursuing development, planning and sustainable development.

2. Literature Review and Conceptual Framework

A university's place in a city is typically defined by its role as a centre of higher education and research. A diverse array of people is attracted to universities as either faculty, staff, or student. As a destination, universities can be one of the primary places people commute to in a city, making it a hub of employment and economic activity. In an effort to expand their influence as a site of economic activity, some universities engages in many different activities, including urban development. In this chapter, I present literature illustrating universities in their roles as land use planner, urban developer, and centre for sustainable development. Universities are motivated in these different roles by a desire to increase its presence, influence and sources of revenue, demonstrating their shift toward entrepreneurialism and a more active engagement in the economy. Throughout this chapter, I will explore the entrepreneurial characteristics exhibited by some universities as they manifest through various activities.

In support of this goal, I focus on the traits of development at some universities as observed by Perry and Wiewel (2005) throughout their compilation of case studies. Next, I introduce the *five pathways of transformation* to entrepreneurialism of universities, as identified by Burton Clark (2004) in his extensive university case studies. I then discuss Logan and Molotch's (1976) model of the *urban growth coalition* to explain how urban development and entrepreneurial activities of some universities fit into a broader shift among cities toward capitalist practices to attract capital investment. Later in the chapter, I shift to examine the principles of sustainable development, and outline how they are implemented at a university scale. My intent is to show how UBC incorporates these principles into planning and development.

Figure 2.1: Conceptual Framework

2.1 Key Features of University Urban Developers

In their compilation of case studies on university property developers, Perry and Wiewel (2005) identify a number of traits and conditions instrumental to the process of real estate development at several American universities. They present several key factors influencing

universities' engagement in real estate development. As with any complex undertaking, *leadership* is a central characteristic of university urban development projects. Perry and Wiewel (2005) outline three types of leadership styles. The first type involves a prominent individual, such as a university president, who champions and personally guides or intervenes in a development process. An example of a strong leadership presence is with Georgia Tech's president, Wayne Clough, who in 1996 focused on aligning the University's infrastructure and physical campus with the its ambition to become a more competitive leader in technology moving into the 21st century (Bertrand et. al, 2008, p.26). To accomplish this goal, the campus needed to be expanded and modernized. The president commissioned a new campus master plan calling for a dramatic expansion and rehabilitation program for the next 15-20 years (Bertrand et. al, 2008, p.28).

The second type is institutionalized leadership, where the responsibility for real estate projects is more distributed throughout the administration, and tends to proceed smoothly. The third type of leadership style is characterized by the lack of a clear leadership. In this case, responsibility for guiding development projects is not fully taken on by an individual at the university or by the administration, in which case a project tends to be difficult to complete (Perry & Wiewel, 2005, p.303-304).

The *internal structure* of a university is undeniably critical in determining whether a university will carry out projects independently or in partnership with another enterprise or organization. When a university is primarily responsible for implementing a project, the internal capabilities, its in-house expertise will influence the scale and complexity of the project a university is able to take on (p.304-305). With time and experience, a university can cultivate its internal expertise and expands its organizational structure to accommodate the necessary personnel. Perry and Wiewel (2005) note the ability to make decisions quickly, especially in an active real estate market, is of considerable importance (p.305). When a university decides to enter a partnership, it is either with an intermediary or a private developer. An intermediary is an arm's length entity established by the university, such as a properties trust, to undertake and manage a development project. Although Perry and Wiewel categorize this as a partnership, in the case of UBC, it is essentially the University leading development projects, through a legally separate entity.

A university lacking the internal expertise and capacity to carry out a development project will partner with a private developer (p.306). The private developer can enact a project more quickly, cheaply, and can provide needed capital, though a university can likely borrow at a lower rate (p.306). In Canada, universities cannot borrow from a bank the way American universities can. However, the intermediary, as an arm-length organization of the university, can borrow from a bank on behalf of university. Furthermore, intermediaries like UBC's Properties Trust are government benefit enterprises (GBE) and are able to generate revenue for the university from sources outside of student fees and government grants.

Georgia Tech's campus expansion plan called for a mixed education and hospitality area in an adjacent neighbourhood called Midtown. To achieve this goal, the university partnered with an intermediary called the GT Foundation, itself a partnership between 3 developers having received special funding from the Governor's Office. The completed project was a sizeable mixture of academic, commercial, and residential spaces creating a cluster of research and knowledge production that could then be shared with industry. (Bertrand et. al, 2008, p.28-29).

Two defining relationships for a university are with the adjacent neighbourhood community, and the surrounding city. These overlapping relationships are together referred to as the *town-gown* relationship. Tensions often characterizing town-gown relations stem from universities failing to consult with their neighbouring communities when they make major decisions about land use and development. As Perry and Wiewel (2005) put it, "nothing riles up the 'townies' as much as campus expansion" (p.306). While in the past, campus expansions were mired in conflict with residents of neighbourhoods, tensions have subsided markedly because residents have successfully advocated for their inclusion in the decision-making process at many universities (p.307). An innovative approach to the town-gown relationship is the use of university intermediaries to manage the consultation process with the community (p.308). Two examples of the town-gown relationship follow, demonstrating the university as a good neighbour and as a bad neighbour.

When Atlanta was awarded the 1996 Summer Olympic Games, a great deal of revitalization took place around the city in preparation for the event. This preparation also extended to the city's colleges and universities. Unlike other institutions, much of the land Morehouse College planned to use for its future growth was in its adjacent neighbourhood on three sides, neighbourhoods that had experienced significant socio-economic decline in the

preceding decades (Bertrand et.al, 2008, p.21). Atlanta is divided into twenty-five Neighbourhood Planning Units, or NPUs, "which are citizen advisory councils that make recommendations to the Mayor and City Council on zoning, land use, and other planning issues" (City of Atlanta GA, 2018). Through the consultation process with Morehouse College, the community challenged the institution to use its intellectual and monetary capital in a way that would benefit the community. Morehouse saw many opportunities in partnering with the neighbouring community: it would provide training for students in community leadership and development; neighbourhood revitalization would be done with the community and not in spite of it; community buy-in would mean support for the plans through the NPU process; and a safer more livable neighbourhood would benefit the college's expansion ambitions as well as the quality of life for the community (Bertrand et.al, 2008, p.21-25). The Morehouse College case demonstrates the collaborative approach a university can use when proceeding with its development plans. For a university to consider neighbouring communities as a worthy stakeholder, a university should already have made a commitment to engage the community. In Morehouse's case, the University was already committed to community engagement and its active leadership was already willing, as a point of principle, to partner with the neighbourhood. Atlanta's NPU process is another feature that helped nudge the University to partner with the community since the NPU process necessitates meaningful resident participation in evaluating Morehouse's plans lest they fail to gain city approval. Ironically, as the neighbourhood improves, the potential for displacement through gentrification tends to increase.

While the case of Morehouse College illustrates the university as a good collaborative neighbour, in other instances, the town-gown relationship can be fractious. In Philadelphia, Temple University has long maintained an uneasy relationship with the mostly black community neighbouring the campus (Hyatt, 2010, p.21). Over the decades, the University had been absorbing areas from the neighbouring community for real estate projects aimed at transforming itself from a commuter campus to a residential campus for more affluent white suburban students (Hyatt, 2010, p.11 & p.25). The neighbouring residents were never economically critical to the University and the neighbourhood's character and history never figured into the University's development plans. When Temple University was facing a decline in enrollment, it devised a strategy designed to attract more students from the suburbs. The strategy involved a new marketing campaign, tougher admissions standards, more recruiting from suburban high schools,

and construction projects (Hyatt, 2010, p.24). Thus, the housing developments on and off campus along with the accompanying amenities were designed to appeal to students, faculty and professionals from outside the immediate area of Philadelphia (Hyatt, 2010, p.10). While this approach to development was at odds with the neighbouring community, it was a strategy aimed at serving the economic ambitions of the University. In using and expanding its assets, Temple sought to appeal to more affluent people to maximize its revenue potential.

As some of the largest organizations in a city, universities are major employers and provide valuable amenities to the broader city population such as cultural and sporting events. However, points of friction can exist between the University and the city and are often rooted in disagreements surrounding taxation, bylaws and the provision of infrastructure and services (Perry & Wiewel, 2005, p.309). For good relations to be maintained between the University and the city, as well as local business, and political and civic elites, *communication* is paramount (p.310). While communication with a City's planning department is commonly on a project basis, the fact the university is an immovable, permanent institution warrants closer and more consistent collaboration in areas of planning (p.312). Yet, universities are taking on the role of planners themselves increasingly.

One example of a university taking a more active role in planning is the case of Georgia State University (GSU) in downtown Atlanta. The University took advantage of the residential infrastructure built for athletes at the 1996 Olympic Games that it inherited in the centre of the city and added education facilities (Bertrand et al, 2008, p.8). Furthermore, the University's development led the way in Atlanta for mixed-use developments that include commercial and residential components. In the absence of a city masterplan for the downtown core where GSU is located, the University conducted a planning process to guide its own development, making it the lead institution in redeveloping the downtown area (Bertrand et al, 2008, p.11). GSU's president was crucial to the University taking on the lead role in the planning of the downtown core. Since the president was an urban planner as well as an academic leader with extensive experience in campus planning and economic development, it was a natural fit (Bertrand et al, 2008, p.11). Initially, GSU developed a strategic academic plan with action plans and budgets eventually leading to the articulation of an urban plan guided by two focal tenets the president promoted: measurable results and accountability. Campus planning was then undertaken in cooperation

with the city, a partnership forged through personal relationships and informed by broader urban master planning (Bertrand et al, 2008, p.12).

Financing of urban development projects at a university can make use of a variety of financial options, although they are not likely available all at the same time. Nonetheless, based on the case studies they compiled, Perry and Wiewel (2005) provide a diverse list of funding sources that range from bonds, public capital grants, debt financing through a separate entity, endowments, and internal funds from cost recovery measures, tuition and revenues (p. 313). At the University of Toronto Victoria College, the College entered into commercial real estate ventures with its surplus land through leasing agreements with private businesses (Kurtz, 2005, p.227). While this leasing approach first took place at Victoria College in the 1950s, UBC takes a similar approach through long-term leasing of its non-institutional land to private developers to create revenue to finance its future projects, while maintaining fee simple ownership of the land.

2.2 Pathways to Entrepreneurialism

Burton Clark (2004), in his research on universities, identified five 'pathways of transformation' as major contributing factors to a university becoming entrepreneurial. The use of the entrepreneurialism concept is quite deliberate because it denotes a university's effort to act in its own best interest toward a more self-reliant state (Rhoades & Stensaker, 2017). When a university has a *strengthened steering core,* it exhibits the ability to implement decisions and respond to opportunities in a timely and advantageous manner, as Filippakou & Williams explain (2014, p.78). To be effective in making decisions and responding to opportunities requires a focused group of decision makers composed of a diverse and proactive group of figures. Clark states the ongoing trouble with decision-making at an entrepreneurial university is maintaining balance across the multiple disciplines (2004, p.359). As a university expands its activities into new ventures, new interest groups and stakeholders will emerge, consequently requiring a reevaluation of who participates in decision making (p.359). The growing residential population at UBC in the neighbourhood areas is such an emerging stakeholder group. According to Clark, an effective entrepreneurial university does not have a centralized nor a decentralized administration, rather, it has strength throughout different groups that have the ability to influence decision making (p.359).

Perhaps the most identifiable of Clark's pathways, particularly for a university engaged in urban development, is the *expanded development periphery* (Filippakou & Williams, 2014). This refers to a university's activity outside of its core academic mission. Among the different attributes of an entrepreneurial university, the expanded development periphery draws the most criticism and contention from a university's faculty because of the pressure it puts on traditional university pursuits, which is to say scholarship, research and debate (Filippakou & Williams, 2014: 78). In some cases, this expansion incorporates an independent entity, like an intermediary discussed by Perry and Wiewel.

In the absence of sufficient government funding, universities will turn to other sources of revenue. It's not uncommon for student fees to increase, or to attract international students, who pay substantially more in fees than domestic students, which is the case in Canada as evidenced by a quick comparison of undergraduate tuition fees by faculty and department at UBC (UBC Student Services, n.d.). Certainly, at the heart of a university's shift toward entrepreneurialism is its drive to seek out new sources of revenue. The *diversified funding base* is therefore one of the defining pathways according to Clark. New sources of funding for a university can be divided into three broad categories: other government sources, private sources, and university-generated income (Clark, 2004, p.357). The motivation of a university to become an urban developer is to generate its own sources of revenue through real estate development. As outlined by Perry and Wiewel (2005), development may be done in partnership with a private developer, or through an intermediary. When all three categories of diversified sources of funding are taken together, they offer an array of funding options. However, Clark cautions against entrepreneurial behaviour that leads to the commercialization of university activities. To avoid losing sight of the academic mission that ought to be central to all entrepreneurial activities, maintaining a faculty presence as part of the steering core during decision making will be effective in keeping educational values in focus (Clark, 2004, p.359).

Another challenge is *stimulating the academic heartland* in response to, or as a result of, entrepreneurial activities. This is more difficult to achieve because many university faculties and departments are not naturally oriented toward entrepreneurial activities (Filippakou & Williams, 2014). The business and STEM (Science, Technology, Engineering, Medicine) faculties are generally more adept at incorporating entrepreneurial behaviours as compared to the social sciences (Clark, 2004, p.306). At UBC, research and development from the STEM faculties have

led to new technologies being successfully incorporated into its urban development, and eventually marketized more widely. All the varieties of mass timber developed at UBC have been used in construction at the university and have resulted in the world's tallest wood-frame buildings.

Entrepreneurialism should not be understood as the result of, "a one-time burst of collective effort", but instead as a lasting transformation brought about by an ongoing and proactive will toward change (Filippakou & Williams, 2014, p.81). The *integrated entrepreneurial culture* is more difficult to evaluate, because even though entrepreneurialism may be active in parts of the university, it likely does not characterize the institution as a whole, particularly a large university like UBC. As a result, when examining how integrated entrepreneurialism is throughout an institution, Clark suggests focusing on the relative intensity of entrepreneurialism.

The work of Perry and Wiewel (2005), and Clark (2004) are particularly useful in examining the entrepreneurial activities of a university as an urban developer. They complement and overlap in many ways, and speak to the structural characteristics of university development activities. However, these approaches do not offer a critical look at the underlying conditions leading to entrepreneurialism and urban development at universities. In the following section, I explore a critical perspective to this shift at the university.

2.3 Entrepreneurialism and Growth Coalitions

Acting as an entrepreneur, according to Bertrand et.al (2008), a university seeks to leverage its intellectual and research capacity to advance the market value of its assets, as well as to attract research grants, alumni donations, and increase its reputation among universities[2]. Underlying entrepreneurialism is a spirit of competition (for reputation, staff, students, revenue) that David Harvey (1989) identifies as an underpinning characteristic of urbanization in general. In reference to cities, Harvey says, "urban governments had to be much more innovative and entrepreneurial, [and] willing to explore all kinds of avenues through which to alleviate their distressed condition and thereby secure a better future for their population" (1989, p.4). His observation is also relevant to universities since the proportional share of public funding for

[2] It is worth noting here that for a university and its scholars, reputation is an end goal in itself, and can be seen as a type academic currency (Engwall, 2008).

universities in Canada began to decline markedly in the 1970s due to the economic slowdown of that time, and universities had to explore other sources of revenue (Metcalfe, 2010).

In cities and universities alike, urbanization and the shift toward entrepreneurial strategies take place at different scales from the regional to the neighbourhood level. Similar to cities, urbanization at a university is a process that is spatially grounded to a particular place. They are places actively attracting capital circulating in the economy to settle and become 'fixed' through investment in the built environment, which is to say residential and commercial spaces, and research centres (Harvey, 1985). Once capital has been settled and invested, it creates opportunities for profit by leveraging the economic value of property.

A useful conceptual lens to examine the process of urbanization and capital accumulation in property and real estate is what Logan and Molotch have described as the *urban growth machine*. The urban growth machine has also been referred to as a growth coalition, the term I will use. According to them, a *growth coalition* is composed of a diverse group of local elites united by the consensus that urban growth is desirable and a universally good outcome for a community. For these groups of people and organizations, property and real estate can provide the means of creating wealth through urban development and increased property values (Logan & Molotch, 1989). The imperative for growth is a powerful value, one that tends to override all other positions, such as a political affiliation, that would otherwise be grounds for disagreement (Molotch, 1976). Cox and Mair (1989) add that the imperative for growth is anchored to a local area of a growth coalition because their investments and social relations are not easily transferable to another place (p.142). Collectively, they work to attract and fix capital to their urban area through investment.

Fundamental to examining urbanization is the notion that a place can be commodified, as it presents the opportunity for capital accumulation. "Land, the basic stuff of place, is a market commodity providing wealth and power, and some very important people consequently take a keen interest in it" (Harvey, 1985: 121; Molotch, 1976, p.309). However, this presents a tension between two values inherent in a place: its *use value* and its *exchange value*. Use value of a place refers to the benefits derived from that place for living and human well-being, and doesn't capture the economic definition of value. Exchange value is the commodification of a place, and is strictly in reference to the capital gain from a place in a market. Yet, use and exchange values can be captured by the same place concurrently. In the case of a university, the use value of its

facilities for education and research is fundamental to a university's mission. Nonetheless, those same facilities can derive an exchangeable value through their entrepreneurial activities and partnerships with private enterprise, such as with research and development and create revenue for the university. Thus, both use and exchange values are relevant.

Figures central to deriving wealth from land are called place entrepreneurs. These people drive the commodification of land and are divided into three broad categories. The first type is characterized as a mainly passive actor in their activity, unimportant to this research. The second type is called an active entrepreneur who seeks to benefit from changes in land values, and is involved in buying and selling land (Ward, 1998). Their active speculation relies on social networks formed and nurtured through growth coalitions (Ward, 1998, p.1095). The *structural speculator* is the most active place entrepreneur who tends to have access to political circles and policy makers. Through their relationships, they seek to influence decisions on development, like timing and location (Ward, 1998). The more active and creative they are as a group, the more robust the growth is in a particular place, and as a further consequence can embolden them to continue their activism as entrepreneurs (Logan & Molotch, 1989, p.201).

Although the growth coalition is paramount in driving local growth, there are other local actors, three in particular, who participate in the growth coalition (Logan & Molotch, 1989). The first of these actors is the *local politician*. They have the unique capacity to directly effectuate change in policy that impact development favourably. They can use their authority in a variety of ways to maximize growth. Since politicians of all political stripes rely on campaign contributions from a variety of people including influential members of growth coalitions, urban growth has been effectively depoliticized, making it an issue that all politicians typically support (Logan & Molotch, 1989, p.210).

The *media* is second of the affiliated local actors. When Logan & Molotch first wrote *Urban Fortunes,* the media landscape was considerably different. Nonetheless, it still plays an important mediating role on topics of urban development, but there is room for more perspectives. In the past, 'media' referred to newspapers and television news outlets. Nowadays, local commentators are free to voice their support or critique to urban development projects on blogs and social media platforms.

Leaders of public or *quasi-public agencies* such as water utilities, electrical utilities, and public transportation services play notable roles in supporting growth coalitions (Logan &

Molotch, 1989). In the case of public transportation, especially when mass transit infrastructure is in play, growth in real estate investment is often tied to where transit service will exist. In the Metro Vancouver region, urban development has been taking place along Skytrain lines, with the highest concentration of developments occurring at stations, known as transit-oriented developments. This type of development serves as an example of a transportation authority playing an active role in growth coalitions.

With all these factors taken together, growth coalitions have been very effective in gaining a near universal acceptance for urban growth as a good thing. Growth is considered apolitical and value-free, and criticism of it is easily stifled as impractical (Rodgers, 2009, p.13). As Logan and Molotch state, the challenge for growth coalitions is to link urban growth and all the associated economic and social benefits with civic and collegiate pride (1989, p.206).

Originally, Logan and Molotch identified universities as allies of growth coalitions in the way politicians and newspapers are viewed, but given the entrepreneurial activities of universities, they are now primary members of growth coalitions. With the goal of diversifying its sources of revenue, the entrepreneurial university commodifies its land in the same way a place entrepreneur does in a city, and attracts capital investment for real estate developments. Proponents argue that universities participating in the market is a natural and necessary step to diversify their sources of revenue in order to survive (Filippakou & Williams, 2014). Some even suggest that a university system that emphasizes economic development in addition to the more traditional mandates of education and research is a natural step in the evolution of a university (Johnson & George, 2014, p.6).

Nonetheless, concerns exist about the entrepreneurial behaviour of a city as well as a university. Harvey (1989) argues that entrepreneurialism tends to focus on improving the conditions for investment and economic development rather than on the conditions of how people live, work or study. There is a real uneasiness accompanying the thought that private interests and capital accumulation will be prioritized over the interests of the public, or in the case of universities, over the interests of academia. How entrepreneurialism's propensity to seek new sources of investment and funding will compromise the academic mission of the university is cause for anxiety among some faculty members. Criticism has been directed at the use of university land for purposes that are not directly related to a university's academic goals. Members of university faculties have expressed concerns for academic autonomy as academic

governance shifts away from the faculty (Johnson & George, 2014). Furthermore, some scholars have observed entrepreneurial activities can aggravate the conflicts between advancing knowledge and generating revenue, and can result in more secretive behaviours by university administrators and academics alike (Johnson & George, 2014).

There are some objectives, however, that have the power to unify the different member of a university. At UBC, sustainable development is a value that students, staff, faculty and administration all support. As a ubiquitous part of the university, sustainable development also plays a prominent role in UBC's urban development.

2.4 Sustainable Development at Universities

Universities are integral institutions to achieving a sustainable future, because they have the ability to develop innovative approaches through research and development. Universities are also crucial in disseminating knowledge and expertise to society either through their role as educators, their partnerships with external organizations, or through demonstration. A growing number of universities have committed to enacting principles of sustainable development on their campuses by signing agreements and making use of different assessment tools (Katiliute et. al, 2017). To establish what is meant by sustainable development, the following section discusses its background beginning with its emergence in the 1960s.

2.4.1 Background

The contemporary concept of sustainable development emerged out of the 1960s ' environmental movement as the negative effects of human industrial activities on the environment were starting to show (Wheeler, 2000). A number of publications had been sounding the alarm of the coming ecological problems stemming from unfettered and unsustainable use of natural resources. Even though the tragedy of the commons was first discussed in the late 19th century, ecologist Garett Hardin used it in one of his essays in 1968 to characterize the unregulated use of resources like air, water, trees and fish stocks. Hardin identified the negative impacts of an ever-growing human population on the finite resources of the planet. Not long after, the book *The Limits to Growth* argued that the scale of natural resource use is increasing exponentially, yet the technological responses attempting to increase the availability of resources only increase in a linear fashion (Roseland, 2012). In other words,

humanity would not be able to innovate fast enough to avoid an ecological collapse sometime in the middle to late 21st Century.

As the 20th Century drew to a close, the need for a shift to sustainable practices was gaining a wider acceptance. With the establishment of the United Nations Brundtland Commission, the environmental problems identified in the preceding decades were taken seriously, and a significant amount of effort was committed to finding solutions. The Brundtland Commissions report, *Our Common Future,* published in 1987, provided the first working definition of sustainable development: "development that meets the needs of the present without compromising the ability of future generations to meet their needs" (Roseland, 2012, p.6). In the World Conservation union's 1991 definition of sustainable development, the concept of carrying capacity was included: "improving the quality of human life while living within the carrying capacity of supporting ecosystems" (Wheeler, 2000, p.7). Carrying capacity refers to ability of an ecosystem to meet the needs of a given population in a sustained manner, which can also be described as the ecological limits of an environment. In the same year, when senior representatives of 33 universities from around the world met in Halifax, they collectively recognized the importance of sustainable development:

> "Human demands upon the planet are now of a volume and kind that, unless changed substantially, threatens the future well-being of all living species. Universities are entrusted with the major responsibility to help societies shape their present and future development policies and actions into the sustainable and equitable forms necessary for an environmentally secure and civilized world"
> (Higher Education and Research for Sustainable Development, 2016).

In 1993, the Commission of European Communities and the UN Environment Program sponsored a workshop for the Business Council for Sustainable Development and it was concluded that if the needs of a growing world population are going to be met equitably within the planet's ecological boundaries, then the material used for energy production, and the scale of environmental degradation taking place would need to be reduced by 90% by 2040 (Roseland, 2012). Consequently, sustainable development gained favour across disciplines and from the perspective of often competing corners of society.

Building on the definition of sustainable development are the three core dimensions that are vital to achieving its defining purpose. Simply put, sustainable development aims to create and maintain the prosperity of three intimately linked systems: *social*, *environmental* and *economic* systems (Folke et al, 2002). In reference to these three features of sustainable development, John Elkington coined the *triple bottom line* as an accounting approach that values each part as equal to the other (Elkington, 1994). The social dimension of sustainable development includes a commitment to social equity. As is stated in the Brundtland Commission definition, this social equity is intergenerational, and does not simply concern the creation of wealth and conservation of resources, but also a fair distribution between and within nations, as well as between generations (Hamstead & Quinn, 2005; Roseland, 2012). Consideration for the environmental dimension should be embedded in policy making, particularly economic policy. As such, environmental objectives can inform and constrain economic policies (Roseland, 2012). The economic dimension of sustainable development is the most controversial and contested because it calls for the most significant shift in the current economic order. In varying degrees, it calls for limits to economic growth that is achieved at the expense of the environment.

2.4.2 Key Principles of Sustainable Development

At the core of sustainable development is the goal to meet the needs of today without compromising future generations from meeting their needs. The crux of sustainable development is to develop better than our current approaches. According to Roseland, there are four key principles that need to be incorporated in order to meet the challenge of sustainable development.

First, any kind of growth or development must happen within the *ecological boundaries* of our environment, and make use largely of natural income rather than *natural capital*. Any development or growth that results in an ecological or environmental deficit makes us poorer rather than richer. Therefore, concerted and well-designed efforts need to be put into place to safeguard the ecological dimensions within and around our communities. Second, consumption and waste of resources must be reduced, whether through behavioural changes or improvements in efficiency of energy and resource use. Third, the concept of 'quality of life' should replace that of 'standard of living.' Whereas standard of living typically refers to the disposable income people or households privately have, the idea of quality of life is a more substantial metric considering several factors like healthcare, education, and, safety, as well as the quality of

natural elements like air, and water. The final principle is the realization that economic security is not enough to bring the most meaningful aspects of life such as family, community, and interpersonal relationships. For these to be realized, society needs the intangible elements of trust, imagination, courage, commitment and community (Roseland, 2012).

2.4.3 Types of Capital

One of the principles of sustainable development focusses on changing the way resources used. The resources at issue are collectively encompassed as *natural capital,* which is all the valuable goods and services provided to humanity from the natural environment and its ecological systems. From an economic point of view, natural capital is the stock that produces a flow, like the ozone layer which provides protection from UV radiation (Rees, 1995). The life-support services that are provided are considered the *natural income* because it can be sustained through the self-reproducing system, but only as long as the key attributes of the system do not change (Roseland, 2012). There are three types of natural capital: renewable, replenishable and non-renewable. *Renewable* natural capital refers to the living species and ecosystems that are self-producing and self-maintaining (Daly & Costanza, 1992). *Replenishable* forms of natural capital, like the ozone layer groundwater, that are renewed and recharged (Daly & Constanza, 1992). *Non-renewable* kinds of natural capital are the minerals and fossil fuel which take eons for regeneration, and are therefore finite within the human timeframe.

Social capital is an important component to achieving a just sustainable development. Roseland describes it as the glue holding communities together. The OECD describes it as, "the relationships, networks and norms that facilitate collective action" (Roseland, 2012:15). Social capital can exist in many different forms within a society and community, but is typically either formal, as with institutions and programs within a community, or an informal aspect as with social networks. Unlike other forms of capital, social capital is not limited by material scarcity, which is to say it is not contingent on tangible things, but rather depends on the imagination and motivation. An interesting inversion to other types of capital is that social capital does not wear out with use, but is actually strengthened and multiplied, whereas lack of use causes it to dissipate. Social capital is not a transferable or purchasable capital, and has limitations that other forms of capital do not have, like it cannot be manufactured (Roseland, 2012). People, after all, are at the core of social capital, and they don't like to be treated as commodities.

2.5 Implementing Sustainable Development

As more universities commit themselves to sustainable development, actually implementing the principles requires leadership, and relies heavily on using social capital. While incorporating changes at large institutions tends to be difficult because of institutional inertia and resistance to change, there are factors that, when brought together, will overcome barriers to sustainable development (Katiliūtė, Stankevičiūtė & Daunorienė, 2016). *Strong leadership* is an integral part of 'good governance', which Zenchanka and Malchenka argue is one of the 'three Gs' necessary to achieve campus sustainable development: good governance, greening of campus, and gain of responsibility (2017, p.291). They echo Perry and Wiewel's observed need for leadership for urban development.

To define good governance, Zenchanka and Malchenka argue that the International Standards Organization's (ISO) standards for quality management systems known as ISO 9001 is a valuable benchmark. According to this standard, there are seven principles that must be brought to bear in order to meet the standard for governance:

1. *Principle 1* focuses on the stakeholder, which at a university would refer to students. Essentially, university administrators and faculty members need to maintain and develop new programs to meet the needs and expectations of students. As sustainable development becomes more prominent, it would have to be reflected in new materials and programming.
2. *Principle 2* addresses the need for leadership to establish a united vision, as well as to engage with staff and constituents.
3. *Principle 3* requires engagement with all people within the organization in order to enhance its capacity and create value through competent and empowered people.
4. *Principle 4* calls for the creation and use of a well-defined process model for management and supportive actions and procedures.
5. *Principle 5* involves making a commitment to improvement, which requires revisiting Principle 1 to ensure the needs of students are being met.
6. *Principle 6* encompassed evidence-based decision making and necessitates relying on good data and information.

7. *Principle 7* espouses the benefits of managing relationships, and calls for identifying and regularly interacting with valuable partners.

All of these principles taken together will amount to good governance according to the ISO, and will give an organization the flexibility in managing the diversity of demands that come with implementing sustainable development (Zenchanka & Malchenka, 2017, p.296).

In Pavlova-Gillham and Swinford's study on the implementation of sustainable development at the University of Massachusetts Amherst (UMA), they found that establishing clear governance and internal leadership from the outset were key. For sustainable development to be successfully implemented, continuous and consistent authority needed to be in place (2017, p.111). Similar to Principle 3 and 4, they also found the processes effectively engaging stakeholders, such as a comprehensive planning process, were also key to a broader buy-in and legitimacy. Katiliute et. al (2016) also noted in their study that successful campus 'greening' initiatives depended on leadership with the ability to create consequential links between different faculties, departments and administration.

Enacting sustainable development policies at a university can be a complex undertaking. Typically, the goal of sustainable development initiatives is to manage issues like carbon emissions, air and water quality, waste, energy use, impacts on the surrounding natural environment, and human well-being. Considering its size, its range of infrastructure, and the scale of resource use it requires, a university can be thought of as a small city (Katiliute et. al, 2016, p.51). The types of sustainable development initiatives, often referred to as *greening* initiatives, can be categorized based on whether they are designed to address the demand side or the supply side of resource use. In terms of energy use, the distinction between demand and supply can be thought of as the difference between energy efficiency and energy conservation. On one hand energy use is related to the hardware, and on the other hand it is related to behaviour (Katiliute et. al, 2016, p.51).

According to Zenchanka and Malchenka's 2017 study, the second of the three Gs is 'greening of campus', and involves two ISO standards. The first is ISO 14000, a series of standards that address environmental problems through the use of an environmental management system. These systems are designed to focus on implementing proactive initiatives for environmental protection, sustainable resource use, and climate change mitigation. Furthermore, the standard emphasizes incorporating life cycle thinking, as well as a stakeholder-focused

communication strategy (Zenchanka & Malchenka, 2017, p.297). ISO 50001 standards focuses on the specific requirements of an environmental management system, considering energy policy, environmental objectives, targets and action plans. Similarly, Pavlova-Gillham and Swinford (2017) highlight the usefulness of integrating frameworks like STARS (Sustainable Development Tracking Assessment Rating System) and LEED (Leader in Energy and Environmental Design) to establish goals and identify target areas for improvement on campus. Using established standards and frameworks will assist in overcoming a number of potential barriers to implementing sustainable development.

The third G described by Zenchanka and Malchenka is 'gain of responsibility,' which speaks to the social responsibilities an organization internalizes and exhibits when successfully managing its operations and stakeholders. Effectively engaging stakeholders and implementing comprehensive planning processes are valuable components to building an organization's social responsibility. The ISO 26000 standard for Social Responsibility outlines several features organizations can incorporate into their engagement approach.

For sustainable development to become embedded in the culture of a university, enacting changes to plans and policies must continue to take place. It is not enough for them to occur in one burst of activity, but require a consistent and ongoing commitment, which is a key feature of good governance and leadership. In many ways, implementing sustainable development requires the same steady commitment Clark observed in university entrepreneurialism.

2.6 Summary

The purpose of this chapter is to examine universities as more than institutions of higher learning, but also as complex organizations actively engaged in both urban development and sustainable development. While each university has its own experience with urban development, through the numerous case studies in their compilation, Perry and Wiewel (2005, through the numerous case studies in their compilation have distilled the most prominent features useful to examining planning and urban development at UBC. When a university plans and develops, whether on its own land or on land adjacent to its campus, it is indicative of the larger shift it has made toward entrepreneurialism. The underlying rational for this is to create new streams of revenue and attract investment in the absence of sufficient public funding, a trend first felt in cities. As universities have taken on a more proactive entrepreneurial role in urban development,

they take on characteristics of an urban growth coalition, which as a conceptual construct helps to explain some of the underlying motivations and features of university urban development.

While urban development at a university can cause tension and division, there is near universal support for sustainable development projects given the benefits to both university and society. A university is in a unique position to research, develop and demonstrate sustainable practices. Where sustainable development, urban development and entrepreneurialism at a university overlap is, first, in the strategies needed to effectively implement then, and second, in the benefits they can bring to a university. The UBC case study illustrates how sustainable development is effectively incorporated into planning and development at the university. The following chapter described the methodological process this study followed for research and data collection.

3. Methodology

Common to all qualitative research projects are some basic steps to research design. Neuman (2014) outlines a standard process for a qualitative researcher to use, and which my research project also follows. The beginning steps involve selecting the research topic and identifying its socio-cultural or economic context (Neuman, 2014, p20). Simultaneous to choosing the topic is recognizing one's own set of assumptions, biases and beliefs (Neuman, 2014). Personal experience and interests naturally play into how the research is designed and influences the choice of theoretical perspective the research project follows. Qualitative research can be a fluid process that allows for the designing of a study to occur concurrent to data collection, analysis and interpretation (Neuman, 2014, p20). This back-and-forth affords a researcher the flexibility to test more than one theory. The final step of the research project is to present the study to inform others of the findings.

Gray (2014) explains the role of a qualitative researcher is to gain a deep and holistic overview of the context under study (p.201). By paying close attention to the context of the research subject, a deeper insight into how things are taking place can be attained. Qualitative research is a naturalistic approach to research, which is to say it is derived from real life examples (Gray, 2014, p201). Since of this project's investigation focusses on the groups, communities and organizations involved with planning, property development and sustainable development at UBC, the chosen methodological approaches will provide a richer understanding of UBC's context.

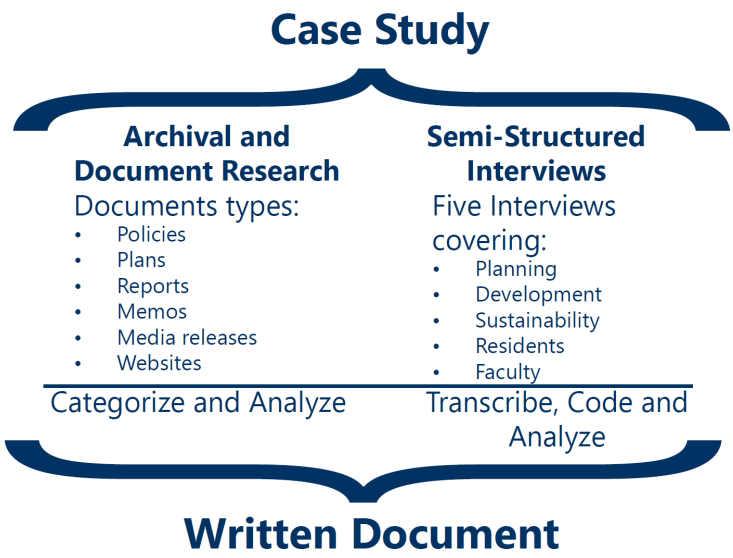


Figure 3.1: Methodological Structure of the Research Project

3.1 Research Strategy: Case Study

For this major degree project, the case study is the overarching research strategy. As a methodological approach, a case study is often synonymous with qualitative research (Gray, 2014). Johansson argues the case study has a special importance to practice-oriented fields like architecture and planning (2003, p.4). The knowledge of existing cases is beneficial to professional planning practice and a case study of UBC adds valuable knowledge about planning, property development and sustainable development at a university (Johansson, 2003, p.4). Yin defines a case study as "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" (2009, p.13). This has been particularly useful in identifying details about UBC, such organizational structure, history, key figures and important interpersonal relationships that are not immediately evident.

The case study is an effective tool for researchers to compile a multitude of variables and actors into a comprehensive and detailed picture (Neuman, 2014). Yin outlines three types of case studies: descriptive, explanatory and exploratory. Since the topic of research has not been significantly examined to date in the literature, my research used an exploratory approach to examine the UBC case. According to Neuman, exploratory research is done for the purpose of examining a little-understood issue or phenomenon in order to develop preliminary ideas about it (2013, p.38). In practice, exploratory research is often descriptive as well, and is meant to present a picture of the specific details of the situation being studied (Neuman, 2014p. p38).

A case study approach to qualitative research can be composed of several cases, but this proposed study delves into a single case. There are five instances outlined by Yin for employing a single case study when that case is critical, unusual, common, revelatory or longitudinal (2014, p.51). This research project is intended to be a revelatory case study as UBC stands apart from all other universities. While there are other universities engaging in similar planning, property development and sustainable development activities, UBC is singular among Canadian universities with respect to its unique regulatory context and the magnitude of its planning, property development and sustainable development activities.

Once UBC was identified as the site of my research, the research began looking into how it fits in with the existing body of literature on university-based planning, property development and sustainable development. To gain a deeper understanding of the case, conceptual framework

was devised combining social theory and previous academic research that assists in understanding the UBC's context and underlying motivations.

One of the cornerstones of research is exploring the existing body of knowledge of a subject in the written word. Gaining an awareness of how others have approached university-based planning, property development and sustainable development as well as being familiar with the existing perspectives, arguments and controversies are necessary elements to my case study research (Gray, 2014, p.33). Keeping in mind how knowledge is the culmination of accumulated efforts by others, the literature and document review helps to build on what others in have already done in regard to the study of universities (Neuman, 2014, p.126). The review of the literature stimulated new ideas and inspired me to use existing procedures and frameworks. The literature and document review also helped to identify gaps in knowledge worthy of investigation (Gray, 2014, p.133).

This research project draws from several bodies of research and social theory in the literature. The work of Perry and Wiewel provide the main source of research about university-based planning, property development and sustainable development. The case study also draws from the work of Burton Clark on the characteristics of entrepreneurial universities provides a conceptual lens for understanding university-based planning, property development and sustainable development. Another conceptual dimension is provided by Logan and Molotch's research on growth coalitions, which adds some insight into the motivations and structure of property development at UBC. In defining the principles of sustainable development, several sources in the literature are referenced, notably the work of Mark Roseland. Implementation is key to sustainable development's effectiveness, and to speak to this essential element the work of Zenchanka and Malchenka and Katiliute et. Al are referenced.

3.2 Data Collection

To achieve a holistic understanding of UBC, this case study combines two methods of data collection (Johansson, 2003, p.3). The first is a thorough review of primary, secondary and grey forms of literature and documentation. These documents include the broad collection of strategic planning, policy, development, design, and sustainable development documents guiding UBC's activities. The second involves several semi-structured interviews conducted with a diverse selection of key informants, further elaborated below. Multiple observers with alternative

perspectives, differing backgrounds and social characteristics adds richness to a case study (Neuman, 2014, p.167). Since planning, property development and sustainable development at UBC involve several actors and organizations, the coordination, collaboration and tension taking place between varying interests is captured through conversations with key informants. Information from interviews adds depth and further elucidates details about the planning, property development and sustainable development at the university.

3.3 Context Study

This research involved creating a clear understanding of UBC's geographic context. Its location in Point Grey in the Metro Vancouver Region embeds the University in an area where the administrative, regulatory, economic and social milieus are unique in Canada. This research focusses on identifying the surrounding communities, characterizing the demographics of residents and discussing the variety of governing bodies and relevant organizations. Establishing UBC's context was necessary to examine and discuss the planning, property development and sustainable development activities it has undertaken. Throughout this research project, imagery, maps and data tables are used to illustrate and accentuate important points. This information was also pertinent to addressing research questions 1 through 3.

3.4 Document Analysis

In addressing research questions 1 to 3 a thorough review of a wide range of documentation was primarily used. Farthing (2016) rightly points out that all research projects utilize document analysis in one way or another (p.136). This research drew extensively from a wide selection of documents:

- UBC's planning and policy documents;
- UBC's Board of Governor documents;
- UNA documents;
- Consultant reports
- City of Vancouver documents;
- Metro Vancouver documents;
- Province of British Columbia documents;

- Articles from various media sources;
- Previous studies relevant to my research;
- Information from relevant websites; and
- Real estate pamphlets.

Policy analysis was an important component to this research because UBC's planning, property development and sustainable development are governed by an extensive body of University policy. Moreover, the historical development of UBC's policies rely on the analysis of both past and present policy documents, as well as policy documents from outside UBC.

3.5 Semi-structured Interviews

Research for this case study also relied on semi-structured interviews with five key informants. An interview can be a powerful tool in eliciting and gathering information on people's attitudes, views and goals that underpins the organization actions and plans (Gray, 2014, p434). As an exploratory research project, semi-structured interviews are an especially useful tool in probing for more detail on feelings and attitudes of the people involved in planning, property development and sustainable development, as well as to clarify information from both sets of interviewees to ensure accuracy and relevance (Gray, 2014, p.434).

A semi-structured interview approach is non-standardized and allows for a more flexible approach to questioning. An interview is the type of inquiry best suited to probing the unwritten context of a situation, and often assists in building an understanding of the social and cultural influences involved in policy development and implementation. In order to interview effectively, Zeisel (2006) describes five steps that ought to be followed. The first step is to select interviewees who have been involved in situations material to the research project. Crucial to an in-depth interview is an interview guide to outline areas of particular interest for each interview (see Appendix A: Interview Questions). During the interview, the researcher must determine the level of understanding and knowledge the interviewee has of the issues being studied. Throughout the interview and when appropriate, the researcher will use "probes" that are meant to get a respondent to clarify an answer, give further information, or to shift the topic (Zeisel, 2006, p.203).

Gray outlines three distinct purposes an interview can serve. The first is how it can be used to gather information about a person's knowledge, values, attitudes and preferences in regard to a particular issue (2014, p.435). The second reason relates to how an interview can be used to test a hypothesis, or to identify different variables important to consider about a relationship. Lastly, interviews can be used in conjunction with another source of information that may have been gathered during the literature and document review, or from other secondary sources of data, as is the case with this research project. The mix of interviewees provided a balance of unique and knowledgeable perspectives regarding planning, property development and sustainable development taking place at the University. The information gathered during the interviews was valuable to framing my research and provided new insights and avenues to investigate through document research.

This research projected contains information and insights from five interviewees. This number was decided upon because it represented one individual from each area of interest addressed by this research project: planning, development, sustainability, residents and faculty. A representative from each of the following organizations were interviewed: The Campus and Community Planning office, the University Properties Trust and the University Neighbourhoods Association and sustainable development at UBC. Additionally, someone knowledgeable of sustainable development policy and its background at UBC was also interviewed. The intent was to gain a more robust understanding of how the different organizations coordinate and collaborate as well as to identify any tensions therein. Furthermore, the goal of conducting the interviews was to gain a more robust understanding of how the principles of sustainable development became prominent features of UBC's policy regime and how they are incorporated into planning and property development. For a more critical perspective, a longstanding member of the UBC community who has valuable insight into the University's activities was interviewed.

Thus, the list of interviewees in as follows:

- Interviewee 1: University Planner
- Interviewee 2: UNA representative
- Interviewee 3: University sustainability practitioner
- Interviewee 4: University faculty member
- Interviewee 5: Properties Trust representative

The search for potential interviewees began by searching UBC;s Campus and Community Planning website and calling one individual. They declined to be interviewed, but instead introduced three of the five interviewees by sending them emails behalf of the research. Each of these three interviewees agreed to be interviewed and reached out separately to set up a day and time for a phone interview. The other interviewees were identified through a web search and contacted by email. Prior to the interviews, each interviewee was provided with a copy of my interview questions. Each interview took place over the phone at a prearranged time. Each conversation was recorded and generally followed the outline of the questionnaire distributed to each participant.

3.6 Data Analysis

Any qualitative research project involving the collection of data should be analyzed logically and with rigour (Gray, 2014, p.667). As explained, this study involved collecting data from a variety of documents, academic literature and through semi-structured interviews. These data were interpreted to create conceptual connections and to provide fresh descriptions in relation to broader subject matter, which in this case are planning, property development and sustainable development (Gray, 2014, p.667).

To make sense of the data, they were organized into categories based on themes and concepts. The process of conceptualization based on evidence presented by the data was of great importance. Concept and evidence are mutually interdependent, especially in a case-study analysis because apart from data, cases do not have a pre-established empirical unit or categories (Neuman, 2014, p.480). Mason states that important questions a researcher must ask themselves are, “What count as data or evidence in relation to my research?” and “How do I wish to ‘read’ my data?” (2002, p.148). These questions guided how to read the date generated through the data collection methods. Data can be read literally, interpretively and reflexively. A literal reading of the data will consider the actual form, content and structure of the collected data (Mason, 2002, p.149). The data collected during interviews is examined for its literal content, teasing out the important content to the research subject? A similar approach was used throughout the document analysis.

Devising a consistent system for indexing the whole of the data set according to common principles and measure was a key task to analyzing the data (Mason, 2002, p.150). Coding was

the foundational approach to making sense of the data collected in this research project. Gray (2014) outlines a number of steps involved in the coding process, which I will follow. My coding began by transcribing data into tables and assigning initial categories. To begin identifying emerging themes, codes were assigned to the data early in the process. Once all the data was collected, a more focused reading was undertaken. By underlining words and key phrases, content was categorized more easily. More reflection could be committed to the research's content and more emerging themes identified. A review of the data as well as the coding through a second reading further focused the significance and organization of the project's content.

Coding is a skill that according to Neuman – in quoting Strauss (1987) – "is the most difficult operation for inexperienced researchers to understand and to master" (2014, p.481). To effectively code the data, three types of qualitative data coding were used throughout the process data analysis (Neuman, 2014, p.481). Open coding was used during the initial stages of data collections and condensing. The various components in the conceptual framework were useful in determining the initial categories. Once all the data was assigned a code, axial coding was used during the second pass over the data, which gave more focus to the coded themes than the actual raw data. Reviewing and examining the initial codes is imperative to organizing ideas and themes into a conceptual and structured order (Neuman, 2014, p.481). In the third and final stage was selective coding. This stage involved scanning all the codes and data for examples that can be pulled out, or selected, as representative of a particular idea, theme, or concept pertinent to the discussion in the research project.

The next chapter begins to introduce and explore in more depth the subject matter of this research project. UBC and its surrounding context are presented to set the stage for a later discussion about the University's development, planning and sustainable development activities.

4. Study Context

This chapter is intended to present a clear picture of the context in which UBC exists. The University is part of an ecology of communities and would be difficult to examine in isolation of the shared history, territory, infrastructure and services. In the first section of this chapter, I focus on the array of communities and their governing jurisdictions located within Point Grey. Included are the municipal, indigenous and regional authorities surrounding UBC. In the second section of the chapter, I home in on UBC's internal organizations relevant to land use planning, development, governance and sustainable development. This chapter lays the foundation for later discussions of UBC's evolution in planning, development, resident relations and sustainable development.

4.1 Point Grey Context

The Point Grey Peninsula is at the western tip of Metro Vancouver and hosts a unique array of communities, land uses and jurisdictions. The City of Vancouver's West Point Grey neighbourhood is the city's western most area, and borders the University Endowment Lands. The University Endowment Lands (UEL) are composed of several distinct areas: The University Endowment Lands community, the Pacific Spirit Regional Park, the Musqueam First Nation community, the City of Vancouver, and the University of British Columbia.

The natural environment of the area is described as Coastal Western Hemlock, dry maritime biogeoclimatic zone, and is on west-southwest sloping terrain above steep edges leading down to English Bay to the north, Georgia Straight to the west, and the northern arm of the Fraser River to the south. Stands of mature coniferous trees such as the western red cedar, western hemlock and Douglas fir dominate the landscape, and are interspersed with younger stands of big leaf maples and red alders. A number of habitat types supporting a variety of birds and other wildlife species characterize the environment (UBC Campus & Community Planning 2016b, p.5).

4.1.1 The University Endowment Lands Residential Community (UEL)

At the time UBC was established, the provincial government endowed the University with a large tract of land in Point Grey. Figure 4.1 presents the divisions within the endowment lands as they exist today, which includes UBC's Point Grey Campus, the University Endowment Lands community and Pacific Spirit Regional Park. When UBC was established, all the land within the black outline as well as the campus were part of the University.

In the early years of UBC's history, a residential community began to grow outside the campus area. Originally, this growing UEL community was administered by the University through the *University Endowment Lands Administration Act*, but due to a dramatic slowdown in development in the 1930s, it could not afford the cost of governance, and transferred responsibility for the community to the Province (Ministry of Community, Sport and Cultural Development, 2017b, p.5). In 1965, the province created the Greater Vancouver Regional

Figure 4.1 University Endowment Lands (University Endowment Lands Boundary, 2019)

District (now the Metro Vancouver Regional District) in order to provide regional organization and governance to its communities. Electoral District A was established at the same time as well, and encompasses UEL and UBC (Ministry of Community, Sport and Cultural Development, 2017b, p.5).

As part of Electoral District A, UEL and UBC are regionally represented on the Metro Vancouver Board, which provides the only elected representation for the residents of UEL and UBC, an issue I address below. The UEL is an unincorporated community governed directly by the province through the Ministry Municipal Affairs and Housing, formerly the Ministry of Community, Sport and Cultural Development, and is responsible for community planning, bylaw adoption and amendments, with routine day-to-day powers being delegated to the UEL Manager and Administration (Lazaruk, 2018). The 4,000 people, living in the four UEL neighbourhoods (Area A, Area B, Area C and Area D) elect a Community Advisory Council to represent the community in regulatory matters, although the council has no decision-making authority (Ministry of Community, Sport and Cultural Development, 2017k). Subdivision approvals are the responsibility of the Ministry of Transportation and Infrastructure, which is also responsible for a number of roads in the area, including on UBC campus (Ministry of Community, Sport and Cultural Development, 2017k). Most property in the UEL is privately owned, and according to the 2016 National Household Survey (NHS), the average dwelling price in UEL was $1.4 million (Statistics Canada, 2017c: 9330069.01). The price of a single-detached home is certainly higher because the NHS price includes condominiums, townhomes and single-detached homes. One of the features that makes living in the UEL so desirable and thus so expensive is arguably Pacific Spirit Regional Park.

4.1.2 Pacific Spirit Regional Park

Pacific Spirit Regional Park is located adjacent to the UEL and UBC Campus. In 1989, 1,885 acres were removed from the UEL to establish Metro Vancouver's largest urban park for recreation and ecological protection (Pacific Spirit Park Society: About the Park, 2018). The park functions as more than a valuable green space, as it serves a green buffer between the City of Vancouver's Point Grey Neighbourhood, UBC and the UEL, as can be seen Figure 4.1. The Park is administered by Metro Vancouver, and is part of the Regional District's larger network of parks, greenways, and ecological reserves (Metro Vancouver, n.d.).

4.1.3 The Musqueam First Nation

Although this research project focusses on events and developments of the late 20th and early 21st centuries, the Musqueam First Nation (Musqueam FN) have been occupying the lands in Point Grey for over 9,000 years as evidenced by archaeological records (UBC Sustainability, 2014). Their community is centred on the Musqueam Indian Reserve No. 2, located on the southern edge of the peninsula. While the community was once home to 30,000 people, with the advent of colonization and the spread of disease, the Musqueam's population was devastated (NAIOP Commercial Real Estate Development Association, 2014). Currently, there are 1,416 registered Band members, but only about half of the community members live on reserve (Indigenous and Northern Affairs Canada, 2020). The Musqueam possess both reserve land and fee simple land in and outside of Point Grey. For example, they have reserve lands on Sea Island and in the Town of Ladner, known as Sea Island Indian Reserve No. 3 and Musqueam Indian

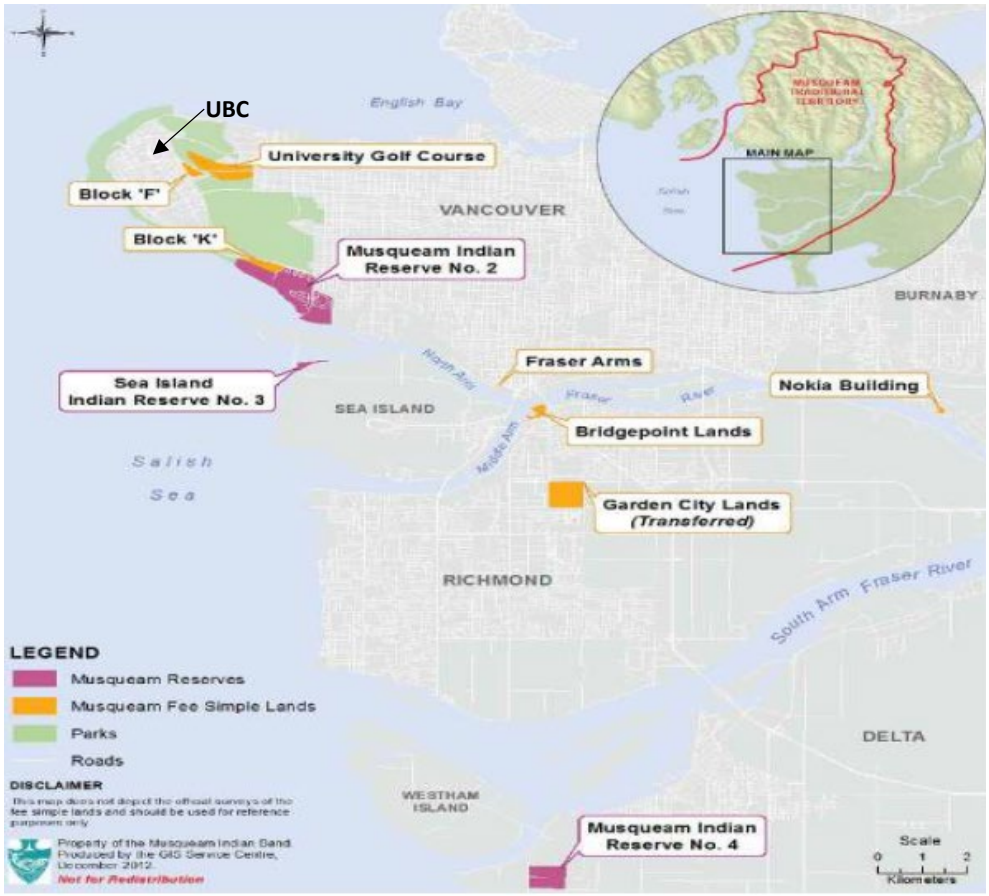


Figure 4.2 Musqueam First Nation Lands (NAIOP, 2014)

Reserve No. 4 respectively (NAIOP, 2014). The most pertinent and notable freehold properties owned by the Musqueam are located in Point Grey and includes two undeveloped parcels known as Block 'F' and Block 'K'; as well as the University Golf Course. These lands were acquired as part of a larger cash and land settlement with the Province of British Columbia through *The Musqueam Reconciliation, Settlement and Benefits Agreement* signed in early 2008 (Dolha, 2008). While the deal requires the Musqueam to maintain the UBC golf course until 2083, Block 'F' and Block 'K' can be freely developed. The intent is to develop the 22-acre Block 'F', known as Lelem, or 'home' in the Musqueam language, into a mixed-use residential and retail village, which could double the population of the UEL once completed (Lazaruk, 2018; Smith, 2013). Since the development is taking place in the UEL, a Ministerial Order was needed to update the UEL's bylaws, and added two more clauses related to how the project is developed and operated (Ministry of Community, Sport and Cultural Development, 2017k). Instead of selling the land, the Musqueam will transfer the property to developers as 99-year leases, which is the same approach to land development as taken by UBC.

UBC and the Musqueam First Nation signed a Memorandum of Affiliation in 2006 to solidify the relationship between the two communities. The MOA seeks to expand and enhance the working relationship between the UBC and the Musqueam and establishes the principles, objectives and process for planning and developing programs to capitalize on the strengths of the relationship (UBC Sustainability, 2014).

4.1.4 City of Vancouver

Even though UBC and the Musqueam are separated from their urban neighbour by the expansive Pacific Spirit Regional Park, the City of Vancouver is an important and influential relationship common to them both. The City is the largest municipality in the metro region, with a population of 633,138 in 2017 (Metro Vancouver, 2017). The City is governed by a Mayor and ten City Councilors elected in an at-large system, which means councilors don't represent a particular neighbourhood or areas of the city, as is the case in a ward system like in Winnipeg. While the majority of municipalities in British Columbia are subject to the *Local Government Act*, Vancouver is governed by its own charter, *The Vancouver Charter*, which among other things exempts it from needing an Official Community Plan (OCP). Thus, Vancouver has been without an OCP, instead the city has done its land use planning on a neighbourhood to

neighbourhood basis. However, this is set to change, since the City has embarked on a city-wide consultation process to create its first OCP following the 2018 civic election (McElroy, 2018, November 14).

The two neighbourhoods bordering the Endowment Lands are West Point Grey and Dunbar-Southlands. There is more continuity between West Point Grey and the UEL because of the common transportation routes passing through them both. According to the 2016 NHS, there were 10,073 people living in the neighbourhood, and the average price of a home is $2.8 million (Statistics Canada, 2017[3]). Dunbar-Southlands is more set apart from the UEL because of the large section of Pacific Spirit Park separating them. According to the 2016 NHS, there were 19,059 people living in the neighbourhood, and the average home price is roughly $1 million (Statistics Canada, 2017[4]).

Figure 4.3 Vancouver Neighbourhood Map (Design Eats Blog, 2010 February 1)

[3] Census tracts: 9330043.01, 9330043.02, 9330044.00

[4] Census tracts: 9330008.01, 9330008.02, 9330024.00, 9330025.00

4.2 Regional Context: Metro Vancouver Regional District & Translink

Metro Vancouver has played a formative role leading to UBC's current land use planning authority, although not intentionally. As the overarching regional authority, Metro Vancouver holds significant sway over its regional member such as in arrives of transportation. As a political federation of 23 communities[5], Metro Vancouver operates under provincial legislation as a regional district under the *Local Government Act* which is arguably Canada's most robust legislation enabling regional governance (Metro Vancouver, 2018). As mentioned above, Metro Vancouver Regional District (MVRD) was established in 1965 under the name of Greater Vancouver Regional District (GVRD). The name 'Metro Vancouver' had been used for branding purposes since 2007 to collectively refer to the four legal entities the Greater Vancouver Regional District had under its responsibility. The GVRD was finally changed to the MRVD in 2017 (Metro Vancouver, 2017).

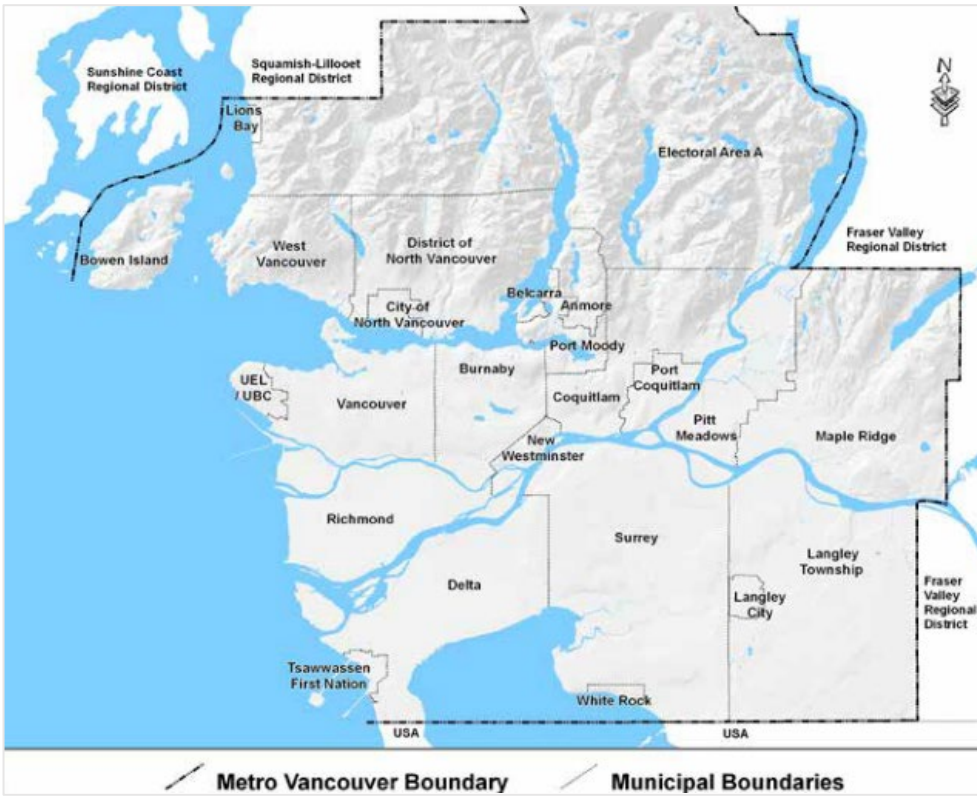


Figure 4.4 Extent of Metro Vancouver (Mortensen, 2016)

[5] 21 municipalities, Electoral District A, and Musqueam First Nation

Metro Vancouver is a corporate entity having seven areas of legislated responsibilities outlined below with the enabling legislation noted in italics (Metro Vancouver, 2015, p.20-28):

- Regional Planning (*Metro 2040 Regional Growth Strategy*)
- Air Quality & Climate Action
- Regional Parks (i.e. Pacific Spirit Regional Park)
- Housing (*Affordable Housing Strategy*)
- Liquid Waste (*Integrated Liquid Waste and Resource Management Plan*)
- Water (*Drinking Water Management Plan*)
- Solid Waste (*Integrated Solid Waste and Resource Management Plan*)

These responsibilities are shared among the four Metro Vancouver corporate entities: Metro Vancouver Regional District, Greater Vancouver Sewerage & Drainage District (GVSDD)[6], Greater Vancouver Water District (GVWD)[7], and Metro Vancouver Housing Corporation (Metro Vancouver, 2018). Since Electoral District A is part of the GVSDD and the GVWD, it provides the UEL and UBC with water and sewer drainage services.

Translink provides a critical service throughout the Metro Vancouver Region, provide essential mobility links for labour, education and commerce. Established in 1999 under the *South Coast British Columbia Transportation Authority Act*, Translink is responsible for a number of services and infrastructures related to public transportation in the Metro Vancouver region (Translink, n.d.). Through its operating companies, subsidiaries and contractors, Translink manages three areas of regional transportation: bus, rail, and roads & bridges. The Coast Mountain Bus Company Ltd. is responsible for all public bus service in the region, including the Seabus service. The British Columbia Rapid Transit Co Ltd. manages the three Skytrain lines and the West Coast Express commuter train. Translink is also responsible for the Major Road Network in partnership with the respective municipalities, and also owns and operates, five bridges, though operations and maintenance for one is contracted out (Translink, n.d.). Fifteen Translink bus routes service UBC and the UEL via Chancellor Boulevard, University Boulevard, 16th Avenue and Southwest Marine Drive (Translink, n.d.). An expansion of rapid transit is planned to take place along Broadway Avenue, set to commence in the coming years. To bring

[6] Governed by the *Greater Vancouver Sewerage and Drainage District Act*
[7] Governed by the *Greater Vancouver Water District Act*

the transit line out to Point Grey, a consortium of stakeholders including the Musqueam and UBC, have voiced support and have gone as far as to tentatively commit finances to a portion of the future project.

4.3 The University of British Columbia

UBC dominates the Point Grey Peninsula as one of the region's largest destinations and employers (Daily Hive, 2013). While the University has expanded its campus footprint into other communities, Point Grey is UBC's primary location.[8] The campus is 994 acres (405 hectares) in area, and boasts 19 million square feet of academic floor space, serving 17 faculties, 14 schools and one college (UBC, 2017; UBC, 2018b). The academic and institutional population of UBC is one of the largest in Canada with 54,236 undergraduate and graduate students attending classes at UBC's Vancouver Campus (UBC's Campus), and 5,003 faculty members and 9,550 University staff members (UBC, 2017; UBC, 2018). There are another 11,000 residents living in UBC's residential neighbourhoods, which combined with the above figures amounts to a daytime population of over 75,000 people (UBC Campus & Community Planning, 2018b). Although UBC's current size, sophistication, and breadth of activities were not foreseen at the time of its founding, its founders always intended for the University to become a great centre of higher education, "A Cambridge on the Pacific" as envisioned by UBC's first president Frank F. Wesbrook (Birmingham & Wood, 2009, p.4). Equally envisioned was the use of its endowment lands for residential developments to create a source of revenue to support the University's academic mission.

4.3.1 UBC's Foundations

The creation of a university for the newly minted province was first suggested when British Columbia joined the Confederation of Canada in 1871. Several decades of muddling and negotiating would pass before UBC was finally established in 1908. The University was founded with great ambition to educate the youth of British Columbia and beyond because, "an educated democracy alone can make democracy better than a terror", words written by an early Canadian planner of influence, Alfred Buckley (1926, p.2). His writing appeared in the December 1926

[8] UBC also has a campus in Kelowna BC called UBC Okanagan; it also has a location in downtown Vancouver at Robson Square; and it has a 25% stake in the Great Northern Way Campus Ltd in Vancouver, managed by another GBE it created: GNW Trust.

Figure 4.5 Depiction of UBC Development in 1926 (McPherson, 1926)

publication of the Journal of The Town Planning Institute, an edition dedicated to the planning of UBC. So, as socially conscious as Buckley's words were for the time, he was also keenly aware of the high cost of funding the public university from government coffers, saying, "householders and businessmen cannot stand unlimited taxation even for so splendid an object as the education of their youth" (1926, p2). Looking to the nearly 3,000 acres of endowed lands lying idle beside the University, he wondered if these could not be used in a more intelligent way than letting them remain vacant or else thrown to speculators. Thus, the idea of town-planning the entire area surrounding UBC, "on modern, scientific lines... and make it so attractive that people would want to settle there" took root in the minds of legislators (Buckley, 1926, p.2). Urban settlements multiply the value of land, and UBC could benefit from this increase in value to finance its academic projects.

While the choice of words and the vernacular of the time dates Buckley's article, there is no mistaking how contemporary his proposed land use approach and reasons for real estate development sound even though they were written 92 years ago. The garden city-inspired development (Figure 4.5)**,** was never built, and though UBC grew steadily as an academic

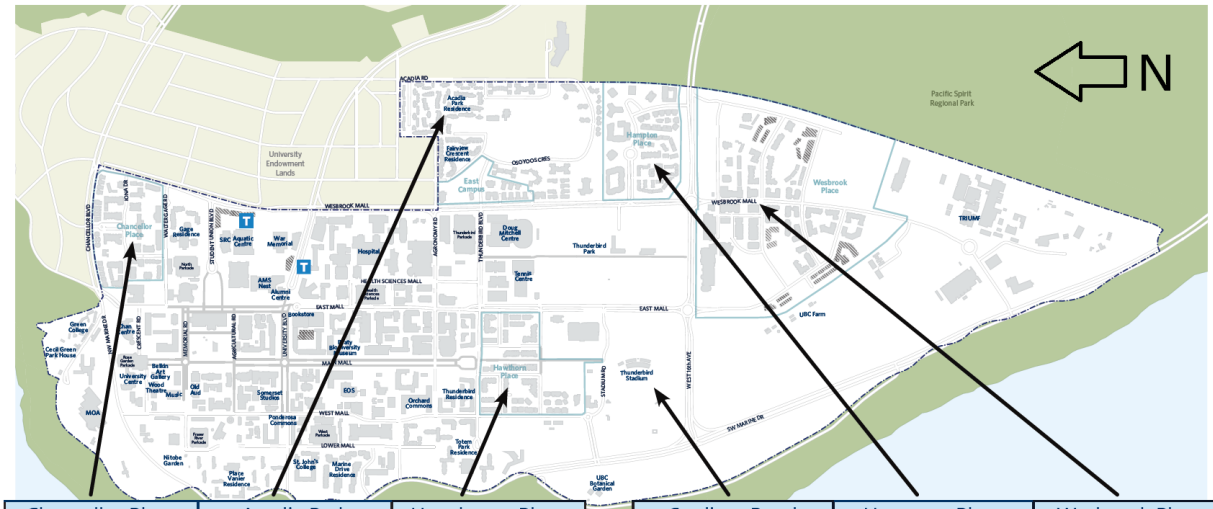
institution with all the associated buildings, programs, research, and infrastructure, it did not revisit the idea of land development for residential use until the 1980s. When Hampton Place was completed in 1989, UBC for the first time stepped into the role of town planner and developer.

Around the same time as the real estate project, UBC made a defining commitment to the principles of sustainable development when it signed the Talloires Declaration, an action plan for incorporating sustainable development into teaching, operations and outreach at a University level (Moore, 2005). Soon after, to bolster its commitment to sustainable development, UBC signed the Halifax Declaration, an agreement between universities, governments, the business community and NGOs from five continents which outlined actions to further sustainable development in teaching and practice (Moore, 2005).

In the intervening years since those two separate events, land use planning, real estate development and sustainable development progressed in remarkable ways. On the planning and development side, two organizations emerged: UBC's Campus and Community Planning office (The CCP) and the UBC Properties Trust (Properties Trust). The CCP developed into an organization responsible for the municipal like planning, permitting and public engagement, while the Properties Trust, the University's subsidiary development arm, became a significant economic driver as the University's master property developer. Since completing Hampton Place in 1989, UBC has worked in conjunction with private developers through its two organizations to plan and develop other neighbourhoods. Table 1 provides details about each neighbourhood development, and Figure 4.6 illustrates where they are located at UBC. *Acadia Park* is a neighbourhood of rental properties for student families. In the years ahead, this area will be redeveloped to accommodate a higher density of residents. *Chancellor Place* provides housing for student, staff and faculty, and is a partnership with the theological colleges located at UBC. Hawthorne is a residential development geared toward faculty and staff members of UBC and their families. *Wesbrook Place* is currently under development. The neighbourhood is a mix of low, medium and high rise residential developments for long term leasing and rent, and is anticipated to be complete by 2025. Wesbrook Place is the largest of the neighbourhoods, which I will expand on in more detail in Chapter 6. *Stadium Road* is UBC's newest neighbourhood and is currently at the planning and design phase of the project. One of the unique characteristics of

Stadium Road is how residential buildings and University institutional buildings will be highly integrated (UBC Campus and Community Planning, 2018).

When UBC was granted regulatory authority over its own land use planning in 2010, it became the only university in Canada with such decision making autonomy. This transfer marked a moment of growth and development for the CCP. For the University to effectively create and implement its own plans, policies and regulations, the Campus and Community



Chancellor Place	Acadia Park	Hawthorne Place
1,700	1,110	1,770
2014	1960-80s	2007

Stadium Road	Hampton Place	Wesbrook Place
2,000 (complete)	2,393	7,000 (current) 12,500 (complete)
Planning + Design	1989	2005- ongoing

Figure 4.6: UBC with Residential Neighbourhoods (Map: UBC Campus & Community Planning, n.d.g; Neighbourhood figures: Sitings, 2018)

Planning Office had to evolve and expand into an organization capable of the task (Interviewee 5).

Since there was a residential community growing in the absence of a municipality, the University Neighbourhood Association (UNA) was established in 2002 to provide municipal-like services on UBC's behalf (UBC Board of Governors, 2015). The UNA represents the interests of the residents from UBC's five neighbourhoods. Its mandate is to promote the development of good neighbourhoods, manage landscaping of public boulevards, parking control, public park maintenance, among others (UBC Board of Governors, 2015).

Sustainable development has steadily become a prominent overarching institutional goal since UBC signed the Talloires and Halifax Declarations. In addition to becoming the first Canadian university to adopt a sustainable development policy by its Board of Governors (1997),

UBC was also the first to open a campus sustainability office (1998) (UBC Sustainability, n.d.d). Since then, the University's sustainability office has developed into the UBC Sustainability Initiative (USI), and promotes and supports the integration of sustainable development across departments and programs. Importantly, as UBC advances with its planning and development activities, the principles of sustainable development have become a prominent part of land use planning as well as the design and construction of real estate developments.

UBC is set apart from other areas of similar scale because it is at once the landowner, policymaker, regulator and master developer. Taken together, the unique assemblage of planning, development, sustainable development and a growing residential community warrants a deeper examination of the roles and responsibilities each organization has. This presents a unique situation for UBC's evolution in becoming an urban planner, developer and growing community. As these roles have matured, new relationships and responsibilities have emerged

4.3.2 Current Governance Structure

As a large and complex institution, UBC has an administrative and governance structure comparable to its diverse sets of needs. The *University Act* sets out the roles and responsibilities of all the different governing bodies at UBC, as well as other universities in British Columbia (UBC Office of the University Counsel, 2017). Accordingly, UBC's governance structure is balanced between key organizational bodies, each embodying a set of responsibilities over the University. Similar to most Canadian universities, UBC's two main governing bodies are the Board of Governors (the Board) and the Senates[9] (UBC Campus & Community Planning, 2018b). The Senates are largely responsible for the academic decision-making at UBC, parts of which they share with the Board of Governors (UBC Board of Governors, n.d.a). The Chancellor serves as ceremonial head of the University and is a member of both the Board of Governors and the Senates. The President oversees University operations, and provides guidance according to the University's strategic framework. They are a sitting member on several important boards and committees, including the Board, so considers input from the various governing bodies in leading the University as a whole (UBC Campus & Community Planning, 2018b).

[9] UBC has two Senates: one for the Vancouver campus and one for the Okanagan campus. Collectively, they meet as the Council of Senates, which itself can act as a Senate on issues pertinent to both campuses.

4.3.3 The Board of Governors

The Board of Governors has a broad set of responsibilities in providing general oversight, as well as managing, administering and controlling all property, revenue and business affairs at UBC (UBC Board of Governors, n.d.d). As the steward of the University, the Board appoints and supports the President, and assists in setting the University's strategic plan and character (UBC Board of Governors, n.d.d). The Board of Governors also reviews and approves the University's vision, mission and values. For example, UBC's *Place and Promise* strategic plan, established in 2012, and the current *Shaping UBC's Next Century* strategic plan, were both reviewed and approved by the Board.

The Board must ensure the University's assets and resources are managed effectively. One critical way it achieves this is by overseeing and monitoring the University's arms-length subsidiaries, such the Properties Trust, which are significant economic generators for the University (UBC Board of Governors, n.d.d). The Board has adopted 131 policies on a number of important areas, which by extension also apply to the University as a whole. Two policies in particular are pertinent to this research project as they address land use planning, development and sustainable development at the University: *Policy 5: Sustainable Development; and Policy 92: Land Use and Permitting*. These will be discussed in more detail below.

Membership of the Board of Governors is distributed between appointed members and elected members. There are 21 members of the Board, which include the Chancellor and the President as permanent members. Eleven of the board members are appointed by the province and tend to come from law, finance, business, real estate or governance backgrounds (UBC Board of Governors, n.d.c). Of the elected members of the Board, three are chosen by students, three by faculty and two by staff.

The Board of Governors has several committees dedicated to different areas of the Board's responsibilities. The committees are meant to assist the Board in conducting its work efficiently and effectively by reviewing, monitoring, and recommending policies and policy alternatives for the Board to consider (UBC Board of Governors, n.d.b). One committee of interest to this research project is the Property Committee.

The Property Committee is responsible for ensuring property development and management is carried out in a manner in keeping with the adopted policies, principles and strategies of UBC. As such, the committee has been delegated the authority of the Board's Policy

5 and Policy 92, as well as a number of relevant agreements, plans, and reports. The committee has a number of responsibilities, which include overseeing the UBC Properties Trust's performance and management in all their development activities. The committee is responsible for reviewing, monitoring, and recommending many areas of planning and development. With respect to planning for example, all campus plans, development agreements, comprehensive community plans, land use plans and neighbourhood plans must be approved by the Property Committee (UBC Board of Governors, n.d.b). Furthermore, on the development side, the committee is responsible for the policies that enhance UBC's property development and management, as well as setting development objectives and managing endowment wealth creation from long-term leasing. In the same way, the Property Committee is responsible for the ongoing development of sustainable, healthy and connected campus communities, which includes transportation-related matters such as vehicular and pedestrian traffic circulation on campus. The committee also advises the Board in areas related to campus neighbourhood engagement, particularly on aspects of municipal and municipal-like governance with respect to development and management of property and infrastructure (UBC Board of Governors, n.d.b). One of the Property Committee's oversight responsibilities, the UBC Properties Trust is discussed below. As will be shown, the Properties Trust does more than develop non-institutional lands at UBC.

4.3.4 The Properties Trust

The UBC Properties Investments Ltd. (UBCPIL) is a subsidiary company wholly-owned by, and for the benefit of, UBC, and was established under the *Business Corporations Act* of British Columbia (UBC Consolidated Financial Statement, 2016: 7). Its sole business is to serve as the trustee of UBC's Properties Trust, which was created to carry out real estate development activities on behalf of the University (Deloitte LLP, 2016, p.8). In 1997, a federal tax-rule change enabled the Properties Trust's predecessor, the UBC Real Estate Corporation, to transform into its current corporate entity (Parry, 2013). Under the *Business Corporations Act*, UBCPIL, and by extension the Properties Trust, are Government Business Enterprises (GBEs), which are described below.

Since UBC is a public-sector organization, its ability to borrow money and engage in market-based activities is restricted. By establishing a subsidiary corporation, UBC and many other public institutions are able to externalize the financial risk of market-based activities while reaping the financial benefits. GBEs conduct for-profit business on behalf of their public sector

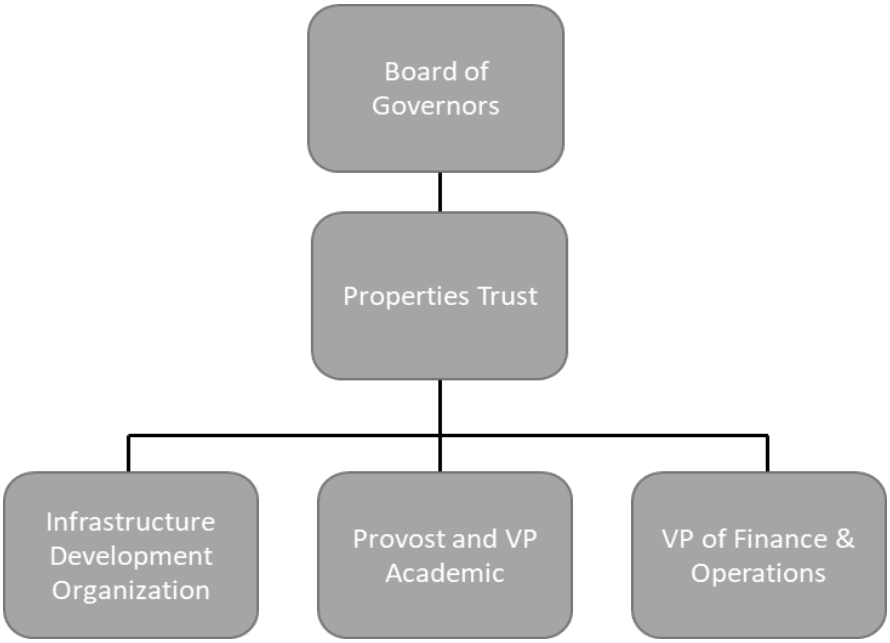


Figure 4.7 Properties Trust Organization Relations

shareholder, like UBC (Financial Reporting & Assurance Standards Canada, 2018). A GBE is still considered a government organization, but it has been delegated the financial and operational authority to carry on a for-profit business. Unlike a regular public sector entity, a GBE can sell goods and services to individuals outside of the government reporting entity as its primary activity, and it can operate to generate revenues from sources outside of the government (Financial Reporting & Assurance Standards Canada, 2018). The benefit for UBC to setting up a separate corporate structure is it doesn't have to pay tax on its revenues. As long as the profits earned by the Properties Trust are transferred to the UBCPIL to endow to the University, they do not have to pay taxes (Interviewee 5). Thus, the Properties Trust functions as UBC's for-profit development company, and has the role of managing development on both UBC's institutional and non-institutional land. Without an organization like the Properties Trust, UBC would not be able to engage in the level of development as it is currently undertaking.

The Trust reports to the Board of Governor's Property Committee, is associated with UBC's Infrastructure Development Organization, the Provost and VP Academic, and has a formal

working relationship with the VP of Finance & Operations, illustrated with Figure 4.7 (UBC Campus & Community Planning, 2018b) The Trust also has its own Board of Directors composed of appointed members from both industry and UBC.

The Properties Trust's stated mission is to assist UBC in achieving the academic and community goals set out in *Place and Promise.* It is guided by two objectives: to earn revenue for the University's endowment fund, and to create sustainable communities (UBC Properties Trust, 2018; UBC Campus & Community Planning, 2018c). The Trust is involved in two broad activities: property development and property management. Its development activities are divided between non-institutional and institutional projects. The Residential Development team and the Institutional Development team are tasked with managing their respective projects. Property management is handled by the Property Management team (Interviewee 5).

For non-institutional development, which includes all the residential and commercial space, the Properties Trust is the only developer that interacts with UBC, and operates as the owner and regulator (Interviewee 5). Since most of the sites for neighbourhood developments are greenfield, part of the Properties Trust's mandate is to service and develop those sites with the necessary infrastructure. Potential third party developers prefer sites with services already included, so marketing and leasing the land is easier (Interviewee 1). These developers also tend to build quite a few of the neighbourhood parks before there is a residential population to use them, which tends to result in a better return on investment from the developers' perspective (Interviewee 5). While the Properties Trust is not directly involved in setting policy, they are in charge of the non-institutional development process from servicing the land, to managing the bidding process, and awarding contracts to third party developers, which puts the Properties Trust in an influential position (Interviewee 4).

The Properties Trust also participates in the development process for major institutional capital projects, which are the projects taking place within the University's core academic area and in conjunction with a given University faculty. Unlike development on UBC's non-institutional land, the Properties Trust works on a "fee-for-service basis", providing project management services, but the University retains control of the project, which is perhaps unique to UBC (Interviewees 1 & 5). Since the Trust has gained extensive experience over nearly three decades of activity, the Properties Trust can deliver projects efficiently, and with effective procurement for on-time and on-budget building delivery (Interviewee 5). Major capital projects

go through an extensive development process divided between executive and board approval phases, and spread over seven stages during which the Properties Trust plays a leading role (UBC Infrastructure Development, 2018).

The Properties Trust also owns and operates a diversified portfolio of residential, mixed-use and commercial properties on behalf of UBC (Deloitte LLP, 2018, p.8). There are two divisions to its rental portfolio: Wesbrook Properties and Village Gate Homes. *Wesbrook Properties* is the market-based rental properties that include both commercial and residential spaces (Wesbrook Properties, n.d.). *Village Gate Homes* focuses on the non-market side of the rental portfolio. These properties are targeted at UBC's full-time, permanent faculty and staff in order to reduce their need to commute (Village Gate Homes, n.d.). These rental properties are structured to be more affordable than the current market rental rates in response to the current affordability challenges in housing in the greater Metro Vancouver area.

The Properties Trust plays a central role in real estate development and property management at UBC and represents UBC growing non-academic side which is more flexible to interact with the free market than any other organization at UBC. As a consequence, the University's faculty and others are critical of the Properties Trust and the Board of Governors, as is elaborated on below. The following section describes the planning and regulatory body responsible for keeping the activities of the Properties Trust and other developers in check.

4.3.5 Campus and Community Planning (CCP)

The Campus and Community Planning office is the entity regulating land use at UBC. In many ways, it functions like a municipal planning and permitting office. The CCP is made up of urban planners, designers, engineers, public consultation professionals, building inspectors and sustainable development experts which reflects the scope of responsibilities the office has at UBC (UBC External Relations, n.d.a). The Planning office is under the responsibility of the VP of External Relations' Office whose Associate VP is also the Head of the CCP (UBC External Relations, n.d.b). The Board of Governors' Policy 92, *Land Use Permitting*, establishes land use and regulatory authority at UBC, and the Board's Property Committee delegates the regulatory authority to the CCP as per Policy 92, but also maintains oversight. The CCP's key responsibilities are in long-range planning for campus land use, administering land use regulations, designing campus landscapes, and providing any licensing and permitting related to

development (UBC Campus & Community Planning, 2018, p. 7). They are also responsible for overseeing programs covering sustainable development initiatives, transportation and community-building activities (UBC Campus & Community Planning, n.d.a).

Land use planning at UBC is guided by its *Strategic Plans, UBC Land Use Plan, Vancouver Campus Plan*, *Public Realm Plan,* and the various neighbourhood plans such as the *Wesbrook Neighbourhood Plan*. These are discussed in more detail in the following chapter. Together these plans form the foundation for how UBC organizes and develops its lands, and how proposed physical changes are evaluated (UBC Campus & Community Planning, n.d.b). The CCP also plays a leading role in developing and reviewing UBC's plans directly addressing land use and development, such as the Land Use Plan, the Vancouver Campus Plan, Neighbourhood Plans, and any other plan impacting the physical planning of the University. In this capacity, the CCP spearheads all community and stakeholder consultations. They work with UBC departments, faculties, students, faculty members and staff when development is being proposed on institutional land (Interviewee 5). On non-institutional lands, in the Neighbourhood Development areas, the CCP works with neighbourhood residents, the University Neighbourhood Association (UNA), governments, the Musqueam First Nation, and Translink (UBC External Relations: CCP, 2018).

In addition to land use planning, the CCP is responsible for transportation planning and incorporating principles of sustainable development in real estate projects. With transportation, the CCP is involved in several related areas, such as traffic management, which is necessary to maintain safe and steady circulation during peak hours (UBC Campus & Community Planning, n.d.c). As evidenced in the Transportation Plans from 2005 and 2014, an ongoing priority in transportation planning at UBC has been to improve cycling and pedestrian infrastructure while also restraining automobile traffic and reducing reliance on automobiles altogether. In regards to transit, CCP works with Translink to provide service throughout the campus. The CCP's efforts to expand transit service may eventually see UBC financially contribute to a future subway extension out to campus (Nguyen & Vescera, 2019).

The ecological, economic and social dimensions of sustainable development are together a common thread throughout this research, and are widely incorporated into UBC's activities. The CCP is responsible for ensuring the three high-level principles of sustainable development are integrated effectively in land use planning decision and property development. The

Sustainability and Engineering team looks after implementing UBC's sustainable development goals into institutional and non-institutional land use and development policies, programs and plans, while also producing reports to track the University's progress (UBC Campus & Community Planning, 2016). Water management and drainage on campus are ongoing concerns due to the amount of precipitation the University gets, typical of the west coast. Energy efficiency programs and GHG emission reductions are important aspects of UBC's sustainable development efforts, and are overseen by CCP's team of professionals. For instance, ensuring the *Residential Environmental Assessment Program* (REAP) and the *Green Building Plan* are implemented in non-institutional development projects are managed by the CCP (UBC Campus & Community Planning, 2016, July 14).

As the campus development regulator, the CCP is responsible for administering development permits, building inspections and business licensing for both institutional and non-institutional projects (UBC Campus & Community Planning, 2016, June 6). A big part of this authority is to verify new construction project meet the health and safety standards of the *BC Building Code* and *BC Fire Code*. The people working in this area of the CCP liaise between the contractors, architects and the various committees involved in the development process.

Public consultation is a critical step in planning at UBC. While there are a number of steps involving internal discussions and approvals from various panels and committees for a project to be finally issued a development permit, a public notice and public open house are two steps paramount to the process (UBC Campus & Community Planning, n.d.d). Public engagement is not limited to the development process, but is also integral to developing new land use and neighbourhood plans, policies, and strategies for UBC. In addition to students, faculty, staff and residents of UBC's neighbourhoods, members of the surrounding communities like the UEL, the City of Vancouver and the Musqueam First Nation as a matter policy. To guide the consultation process for the Stadium Road Neighbourhood planning process, the CCP developed the *Engagement Principles and Guiding Practices*, otherwise known as "The Engagement Charter" (Interviewee 1). The Engagement Charter outlines the necessary steps to effectively engaging stakeholders by first *defining the process*, then *designing* and *implementing the process*, and finally *concluding the process* (UBC Campus & Community Planning, n.d.e). As UBC's overall community population grows, which encompasses both students and residents, the imperative for engagement grows as well (Interviewee 1). The Engagement Charter will

continue to serve as the guiding document for public engagement in future planning processes (Interviewee 1).

The growth in population at UBC will continue to place further demands on the CCP to plan and regulate in the best interest of the University as well as the non-institutional resident population. While there is an absence of a local government to democratically represent UBC's neighbourhood residents, there is a neighbourhood organization serving as an advisory voice to the University on behalf of residents.

4.3.6 University Neighbourhood Association (UNA)

The University Neighbourhood Association represents the interests of residents in UBC's non-institutional residential neighbourhoods (UBC Board of Governors, 2015). The UNA was founded as a society under the *Society Act of BC,* and supports and enhances the University's academic mission through its promotion of a unique "university-town" community (University Neighbourhoods Association, 2016). All the services, amenities and facilities it stewards are for the development and reinforcement of good neighbourhoods.

The UNA occupies a unique place in terms of local representation. The residents of UBC's neighbourhood areas do not have municipal representation since UBC is not a municipality with an elected council. The only elected representative for the local population is the Regional Director for Electoral District A. The UNA is meant to bridge the democratic gap, but there still remains a significant deficit in democratic representation.

The UNA was established in 2002, when it signed the first *Neighbours Agreement* with UBC establishing their relationship, and has been updated twice since then. The UNA is governed by eight directors, five of which are elected by residents, while two are appointed by UBC and one chosen by the Alma Mater Society, UBC's student government (UBC Board of Governors, 2015). The UNA has been operating under its current system for 15 years, and given the growth in the community and increased complexity of the issues its facing, a review of its governance and leadership framework is being pursued (University Neighbourhood Association, 2018).

Under the current governance model, the UNA functions as an advisory board, or according to one Interviewee, like an organization akin to a Parks and Recreation Board (Interviewee 5). Consequently, the UNA cannot make decisions on behalf of its residents, but

can only hope to influence UBC's decisions. And as the neighbourhoods' population grows, so do the needs and concerns of the residents which necessitates regular communication and collaboration between the UNA and UBC. There are a number of ways the UNA can have its voice heard. For example, senior UBC staff and the UNA Board meet quarterly, as well as holding joint UBC-UNA community conversations twice as year (UBC Board of Governors, 2015). The UNA Board also presents to UBC's Board of Governors once a year, and holds a resident seat on the Development Permit Board, which is part of the development process to review development plans for proposed projects in the neighbourhood areas.

Part of the UNA's mandate is to provide *municipal-like* services on behalf of the University. Accordingly, the UNA agrees to be responsible for the operation, regulation, maintenance, repair and replacement of a number of services and infrastructural assets:

- Waste, water & drainage
- Parks & open spaces
- Street lighting, sidewalks, curbs, gutters,
- Roads & landscaping
- Childcare facilities

(UBC Board of Governors, 2015).

Additionally, the UNA is in charge of negotiating with UBC agreements for resident access to UBC facilities. As the residential population continues to increase, so too does the demand on the infrastructure and services the UNA is responsible for, which consequently puts pressure on the UNA's already challenging financial situation.

To provide the municipal-like services, the UNA requires funding. Since it does not have the authority to collect taxes from residents, UBC collects a property tax at the same rate as the City of Vancouver and provides the UNA with funding (UBC Campus & Community Planning, 2012). The collected taxes are divided and distributed into two portions. The first portion amounts to somewhere between 55 and 65 percent of the tax revenue, and goes to the Provincial government as the *Rural Tax*. This portion of the tax pays for the services the province provides like police, schools, BC Assessment Services, provincial roads, and Translink (UBC Campus & Community Planning, 2012). The remaining portion is collected as the *Services Levy*, which is further distributed to a number of different pots. It is called a levy rather than a tax because the

University is located on unincorporated lands, which means it is not a municipality and cannot collect taxes. The majority of the Services Levy is put into the Neighbours' Fund for the UNA to use in their operating budget, while a small portion is put aside into a *Reserve Fund* which is composed of five different funds and is meant for future capital infrastructure replacement projects (UBC Campus & Community Planning, 2012). The money UBC collects as the *General Municipal Services Levy* from rental housing projects in the neighbourhoods, as well as revenue the UNA collects from programming at its community centre are all added to the Neighbours' Fund (UBC Campus & Community Planning, 2012).

In recent years, the revenue collected from property owners and transferred to the UNA has been decreasing, which is the result of an overall reduction in the property tax rate in the City of Vancouver. As the assessed value of a home in Vancouver increases, to collect the same amount of revenue from property taxes, the rate has to decrease. Since the money UBC collects from its residents is tied to the Vancouver rate, the rate at UBC decreases as well. Yet, the amount of Rural Tax remains the same, which translates into an increase in the portion given to the Province. Since the Service Levy is the difference between what is collected and what is given to the province, the overall revenue collected and transferred to the UNA for its operating costs has been decreasing (UBC Board of Governors, 2015, p. 5). To alleviate some of the pressure, the per capita fee the UNA pays to UBC for enhanced access to athletic facilities has been reduced significantly. The fee used to account for nearly half of the UNA's budget, but has been reduced by two-thirds, based on a comparison of the 2016 and 2018 operating budgets (University Neighbourhood Association, 2018, p. 39).

Residents of UBC live under unique conditions because they are without an elected local government. This democratic deficit demands that UBC, through its different organizations such as the CCP, act as a responsible and thoughtful landowner. The resulting relationship between the residents and UBC is evolving which I expand on below.

As a defining characteristic of UBC, sustainable development is fully integrated into its land use planning and development. UBC's approach to sustainable development includes the ecological, the economic and the social dimensions defining sustainable development. As a research university, many of UBC's efforts in sustainable development involve demonstrating new technologies and systems designed to facilitate a shift to a greener, more sustainable society.

4.3.7 University Sustainability Initiative

UBC was the first university in Canada to establish an office of sustainability dedicated to promoting, supporting and implementing sustainable development on campus. As explained earlier, UBC first engaged with sustainable development as a signatory to the Talloires and Halifax Declarations in 1990 (UBC Sustainability, n.d.) The Campus Sustainability Office (CSO) was founded in 1998, following the University's adoption of its sustainable development policy. The *Sustainable Development* policy (Policy 5), adopted by the Board of Governors in 1997, outlines UBC's aspirations and commitments to sustainable development. The policy outlines the values framing CSO's mission and continue to guide the University's activities:

- Reduce air, water and soil pollution;
- Preserve and enhance ecosystems;
- Conserve resources and reduce waste;
- Base decisions on sustainable development principles;
- Ensure long-term economic viability; and
- Enhance capacity to teach, research and practice sustainable development principles.

(UBC Office of the University Counsel, 2018).

Subsequent to Policy 5 being created and the CSO being established, sustainable development started to figure into all corners of the University, from the campus' physical operations and construction to the content of the University's plans and policies. The next chapter expands on the relevant plans guiding UBC's land use and development activities and illustrates how sustainable development became an integral part of the University's planning.

In 2010, the Campus Sustainability Office became the UBC Sustainability Initiative (USI). Its mission is still focused on integrating and expanding sustainable development initiatives as well as implementing UBC's institutional and campus-wide sustainable development plans and policies. The USI also continues to facilitate partnerships and collaborations between the academic disciplines, and between academia and private enterprise in support of UBC's many sustainable development fronts (UBC Sustainability, n.d.d).

UBC has many sustainable development activities to its credit. Greenhouse gas reduction has been a leading goal for UBC. The University has kept a GHG inventory since 2006 to track

its progress in its reduction efforts. The leading approach to greenhouse gas reduction is the use of cleaner sources of energy. There have been several initiatives to achieve the GHG reduction, the first being the *ECOTrek* and *ELECTrek* building retrofits which took place between 2001 and 2008 across the UBC campus, which helped to eliminate $20 million in accumulated deferred maintenance as well (UBC Sustainability, n.d.a; Lankester, 2018). Together, these programs achieved a 20% reduction in heat and power use on campus, and reduced water consumption by 30% (UBC Sustainability, 2009, October 17). As a result, UBC was able to meet its Kyoto targets for academic buildings five years earlier than initially agreed to. Since then, the USI has had a hand in creating the University's *Climate Action Plan*, *20-Year Sustainability Plan*, and the *Green Building Action Plan*, among others, and continues with the ambition of reducing GHG emissions even further.

The USI has a leading role in UBC's transformation toward using its campus to demonstrate new technologies and systems for a successful shift to more sustainable practices. The *Campus as a Living Laboratory* is a prominent strategic direction throughout UBC's planning and policies and has been implemented in several notable ways. As a living laboratory, the University facilitates a wide variety of activities between faculty members, students, private enterprise, public organizations and NGOs (UBC Sustainability, n.d.c). There are four cornerstones to the Living Laboratory initiative:

1. Integrate research and teaching with the University's operations;
2. Create partnerships between the University and private enterprise, public organizations and NGO organizations;
3. Use the University's resources and infrastructure in a financially sound manner; and
4. Transfer knowledge gained through research into practical applications in the greater community.

(UBC Sustainability, n.d.c)

By using the campus' physical infrastructure in combination with its research capacity to study, test, and teach, UBC is able to experiment with new policies and technologies. For example, the *Centre for Interactive Research on Sustainability* (CIRS) is a world renowned facility designed to demonstrate sustainable building design and is managed by USI. CIRS is a prime example of a partnership between the University and private enterprise. It demonstrates

the value of having a well-structured process in arriving at a sustainable outcome. Additionally, the building showcases modular sustainable construction technologies being developed at UBC (Gora, 2014).

The USI is involved in a number of campus sustainable development initiatives aimed to improve the performance of the University's infrastructure and systems, as well as reduce their deleterious impacts on the environment. For example, the *Green Building Action Plan* will direct all new buildings to be built according to high sustainability standards. The ambition set out in this plan is for all buildings to be built or renovated to a higher sustainability standard by 2035, which includes how all buildings emit GHGs, use water and produce waste (Black, 2018). Another program, *UBC Renew,* focusses on buildings by minimizing the financial and environmental impacts of demolition and new construction through renovation. Eligible aging buildings are renovated to a higher sustainability standard rather than tearing them down and there have been notable successes so far in preserving some buildings of historical significance, like the UBC Chemistry Building, the oldest building on campus (UBC Sustainability, n.d.b).

On the renewable and sustainable energy front, USI has 'signature projects', like the Academic District Energy System (ADES), one of UBC's key initiatives in sustainable energy production (UBC Energy & Water Services, n.d.). In this project, the University's aging steam heating infrastructure is replaced with a more efficient hot water heating system, resulting in a reduction in GHG emissions. UBC also produces renewable energy using biomass (wood waste) at the Bioenergy Research and Demonstration Facility. It's responsible for producing 25-32% of the University's total heating and hot water needs on average throughout the year, but jumps to 100% during the summer months (UBC Sustainability, n.d.e).

Building with engineered wood products at UBC is becoming a more common application in construction. There are several innovative product developments UBC has facilitated and serves as a place to demonstrate their use value, notably different types of mass timber products. Mass timber comes in several forms such as cross-laminated timber (CLT), parallel strand lumber (PSL), and glue-laminated timber (glulam). Mass timber has a number of environmental benefits as a building material. First and foremost, the wood used to engineer mass timber products is a renewable and regionally available material that effectively sequesters carbon, and has a smaller carbon footprint than concrete and steel (UBC Sustainability, n.d.f). Mass timber is often used in a prefabricated form in construction which makes building with it

faster, and has the added capability of being relatively simple to de-construct, reuse and recycle (UBC Sustainability, n.d.f). Showcasing these engineered wood technologies is Brock Commons Tallwood House Student Residence, another 'signature project' at UBC. The building was once the tallest free-standing wood structure at 18 storeys and constructed using a combination of engineered wood products. This project not only demonstrated the viability of mass timber as a construction material, but also displayed the value in partnerships. Tallwood was made possible as part of a Natural Resources Canada and Canadian Wood council initiative to demonstrate wood-based solutions to high-rise buildings (UBC Sustainability, n.d.f).

Although all of the sustainable development initiatives described in this section are not necessarily managed or undertaken by USI, they are nonetheless profiled by the USI in its capacity as UBC's sustainability office. However, sustainable development is at the core of UBC's identity, and as one interviewee noted, "it is second nature at the University now, so it figures into all projects from the outset" (Interviewee 1). While UBC's sustainable development initiatives are substantial, they have predominantly focused on environmental projects. Addressing the economic and social elements of sustainable development have been more challenging, although the University has initiated some housing policies aimed at alleviating the unaffordability of living on or close to campus, which will be discussed later in following chapters.

4.4 Summary

UBC has fostered a respectful town-gown relationship with its neighbours, though these relationships are not without their tensions. Internally, UBC has in place the necessary organizations to direct and manage, to varying degrees of effectiveness, the wide array of activities in land use planning and development, community governance, and the implementation of sustainable development. The following chapter outlines the framework of plans and policies in place to guide UBC's activities. Each of the organizations profiled above are guided by the principles, objectives and strategies described in the following chapter, and illustrates UBC's great deal of effort to have consistent and cohesive policy framework.

5. Guiding Plans and Policies

In the following chapter, I present UBC's policy and regulatory context. In many ways, UBC is guided by a framework of regulations, plans and policies comparable in scale and scope to a municipality. The focus of this discussion is the documents relevant to land use planning, property development, and sustainable development. Over the past thirty years, UBC's planning and development practices have evolved considerably because its regulatory authority has expanded, as has its capacity to plan and develop. As sustainable development became a principal part of UBC's identity and mission, it informed and shaped its plans, policies and approaches to development at all levels. During the years of institutional development, the University received significant feedback from Metro Vancouver and the City of Vancouver. Furthermore, UBC benefited from the region and city's guidance and leadership in areas of planning and sustainable development policy.

5.1 UBC's Strategic Plan

UBC articulates its collective values as an institution through its strategic plan. Periodically, it revisits this document to review the vision, purpose, goals, and to establish strategies to achieve the University's objectives. The strategic plan guides UBC and sets the tone for what the it will focus on and how it will conduct itself in all of its endeavours. Each strategic plan is the result of extensive engagement with the UBC community, encompassing students, staff, faculty, alumni and administration. My goal in this section is to illustrate the evolution UBC's strategic plan has undergone over its most recent three iterations. Of particular interest is the emergence of sustainable development and the Campus as a Living Laboratory as strategic goals for the University.

UBC's current strategic plan is called Shaping UBC's Next Century. The plan has a wide range of focuses, and attempts to touch on each of the University's important relationships and roles. Table 5.1 outlines the main features of UBC's current strategic plan. I highlight the area from each section that is relevant to this research project.

Table 5.1 Shaping UBC's Next Century, 2018	
Transformational Potential	Collaborative Clusters Great People Indigenous Engagement Innovative Pedagogy Thriving Campus Communities
Vision	Inspiring people, ideas and action for a better world
Purpose	Pursuing Excellence in Research, Learning, Engagement Foster Global Citizenship Advance A Sustainable and Just Society
Values	Excellence, Integrity, Respect, Academic Freedom, Accountability
Goals	Lead locally & globally: in research, sustainable development and wellbeing; as a place to learn and work; as a model public institution Inspire & enable students through teaching, mentoring, advising, experience Partner with Indigenous communities Build a diverse culture through the strategic themes Achieve agility in academic support and administration
Themes	Innovation, Collaboration, Inclusion
Core Areas	**1. People & Places** **2.** Research Excellence **3.** Transformative Learning **4.** Local & Global Engagement
(UBC, 2018)	

Twenty strategies were created to assist in shaping the University according to the strategic plan. Sustainable development is a common thread throughout this plan, and is one of the characteristics behind of *Core Area 1: People & Places*. As is discussed above, the *Campus as a Living Laboratory* is a common approach throughout UBC's efforts toward sustainable development, and is captured in other plans. It is applied here as well in regard to sustainable development and wellbeing, particularly in *Strategy 3: Thriving Communities*. Housing affordability and transportation are challenges in the Metro Vancouver Region, and the urgency to provide solutions for students, staff and faculty is a highlighted goal of *People & Places.*

The shift to the current strategic plan has been done quietly, but marks a distinct but subtle change in image and branding (Alden, 2018). UBC's previous strategic plan, *Place and Promise,* is still referenced on some institutional websites, notably the UBC Properties Trust.

Given that *Shaping UBC* was only recently unveiled, and the University has a vast array of websites, it is understandable the strategic plan's branding and message haven't been incorporated everywhere yet.

Place and Promise: The UBC Plan was UBC's strategic plan launched in 2009. It was UBC's strategic plan for nearly a decade, and guided most of the University's current plans and policies. It was also in place at the time UBC was granted regulatory authority of its land use planning, and consequently informed the content of the Land Use Plan, discussed below. Table 5.2 outlines the plan's high level subject matter, with the sustainable development commitments in bold.

Table 5.2 Place and Promise: The UBC Plan, 2009	
Vision	UBC creates an exceptional learning environment, fosters global citizenship, advances a civil and sustainable society, supports outstanding research to serve people of BC, Canada and the world.
Values	Academic Freedom Advancing & Sharing Knowledge Excellence, Integrity Mutual Respect & Equity Public Interest
Commitments	Student Learning: 4 goals Research Excellence: 2 goals Community Engagement: 2 goals Aboriginal Engagement: 2 goals Alumni Engagement: 2 goals Intercultural Understanding: 2 goals International Engagement: 2 goals Outstanding Work Environment: 2 goals **Sustainable development**: 3 goals
(UBC, 2009)	

While all of the commitments listed in the plan are valuable, the commitment to sustainable development is especially applicable to planning and development. By the time this strategic plan was adopted, sustainable development was already part of UBC's culture and identity. The sustainable development goals and associated actions are outlined in Table 5.3. *Campus as a Living Laboratory* is again identified as part of UBC's work toward sustainable development. As a goal of sustainable development, it promotes integrating UBC's research,

development and learning into the land use planning and property development in its residential neighbourhoods.

Table 5.3 Sustainable Development Commitment Goals, 2009	
Goals	**Actions**
1. Ensure UBC's **economic sustainable development** by aligning resources with the University vision and deploying them in a sustainable and effective manner	**i.** Strengthen the strategic and financial planning culture at the faculty and unit level **ii.** Provide a solid financial foundation for long-term success through continuous improvement and active revenue management
2. Make UBC a living laboratory in **environmental & social sustainable development** by integrating research, learning, operations, & industrial & community partners	**i.** Demonstrate leading edge solutions by deploying innovative technologies and testing social acceptance; and by leveraging the municipal size of the campus and of UTown@UBC **ii.** Make UBC an agent of change through innovation integration, demonstration and inspiration
3. Create a vibrant and sustainable community of faculty, staff, students and residents	**i.** Meet the social needs of faculty, staff and students, from local and **affordable housing**, to childcare and **transportation** **ii.** Expand the vibrant, sustainable and affordable UTown@UBC Community **iii.** Physically deliver "Place of Mind" throughout the Okanagan and Vancouver campuses by weaving outstanding academic and cultural infrastructure into an inviting and inspiring public realm
(UBC, 2009)	

Although the triple bottom line is not explicitly identified, it clearly frames this set of sustainable development goals. The triple bottom line integrates the economic, environmental and social sides of sustainable development as equal considerations. These goals and actions are the foundation of UBC's planning and development activity on non-institutional lands. Although these are not explicitly identified by the Properties Trust, their stated mission to create revenue to support UBC's academic mission, and to create sustainable communities are both rooted in these goals and proposed actions.

UBC's *TREK 2010* strategic plan was the first to incorporate sustainable development at the forefront of the University's mission. The goals of the plan were based on the triple bottom line and provided a model for *Place and Promise's* sustainable development goals (Lin, 2003).

Table 5.4 TREK 2010, 2005	
Mandate	Promote the values of a civil and sustainable society
Mission	Provide students, faculty, and staff with the best possible resources and conditions for learning and research, and to create a working environment dedicated to excellence, equity and mutual respect
Vision	Educate exceptional global citizens, promote the values of a civil and sustainable society and conduct outstanding research.
Triple Bottom Line Goals	
Social	**i.** Improve Human Health and Safety **ii.** Make UBC a Model Sustainable Community **iii.** Increase Understanding of Sustainable Development Inside and Outside the University
Economic	**i.** Ensure Ongoing Economic Viability **ii.** Maintain and Enhance the Asset Base **iii.** Maintain and Maximize the Utilization of the Physical Infrastructure
Environment	**i.** Reduce Pollution **ii.** Conserve Resources **iii.** Protect Biodiversity
(UBC, 2006)	

5.2 UBC's Land Use Plan

The purpose of *UBC's Land Use Plan* is to establish the land use and transportation objectives of UBC, especially on its non-institutional land. The plan is meant to guide all future land use and development to support UBC's main academic mission and responsibilities as an educational institution. Importantly, the plan provides direction for the development of an integrated community in an environmentally sound manner to build endowment for the University (UBC Campus & Community Planning, 2015, p.4). Many of the objectives in the land use plan are based on Metro Vancouver's *Livable Region Strategic Plan* from 1999 (UBC Campus & Community Planning, 2015: 1). The regional plan has five fundamental goals that UBC's *Land Use Plan* is consistent with:

- Create a compact urban area
- Support a sustainable economy
- Protect the environment and respond to climate change impacts

- Develop complete communities
- Support sustainable transportation choices

UBC's plan also aligns with the Region's urban containment boundary and frequent transit development area.

5.2.1 Land Use Plan Content

According to the Land Use Plan, it is designed to lead all land use decisions to support the growth of a special university community (UBC Campus & Community Planning, 2015: 6). It has a broad vision blending aspects of community, university and environment, outlined in Table 5.5.

Table 5.5 UBC Land Use Plan Vision
1. The community is a place of **living, working and learning**
2. The community will **harmonize** with its surroundings by planning and designing with **respect** for the land and its natural, cultural and historic **patterns**
3. The community evolves through **creativity**, **innovation** and **renewal**
4. The community is **stimulating** and **interactive** to create a **healthy** environment
5. The community provides opportunities to **demonstrate ideas** and innovations generated within the University and support its **leadership** in these areas
(UBC Campus & Community Planning, 2015)

In line with the sustainable development goals of the Strategic Plans, the Land Use Plan also applies the same three fundamental elements of sustainable development. Each of the Plan's sections addresses ecology, economics and community.

Table 5.6 Sustainable Development Goals in the Land Use Plan
Goals of a Responsible Community
Ecology: ensure the maintenance of healthy ecosystems, minimize adverse impacts
Economy: use land resources for responsible development to build endowment
Community: develop high quality, compact, complete community integrated with university
Neighbourliness Objectives
Ecology: manage inter-related land use and transportation systems to mitigate adverse impacts
Economy: provide education, regional employment, facilities & amenities for surrounding areas
Community: new commercial activity will support local activities, mix of housing will minimize impact on neighbouring areas; development of community services will complement neighbouring areas and serve local needs
(UBC Campus & Community Planning, 2015)

Land use guidelines are also framed by the principles of ecological, economic and communal wellbeing. These physical planning directions address the primary types of areas in the neighbourhood developments, while also considering access as well as the staging of development over the short to long terms.

Table 5.7 Sustainable Development Goals in Land Use Guidelines
Ecology: development will take place in a manner that respects and protects natural systems; detailed planning will be developed for ecological protection
Economy: optimize the return for UBC from its land development; housing will be significant component and provide broad range of housing types; potential for University activities will be accommodated
Community: diverse uses and services will be available; the public realm will incorporate mix of uses: gathering places, shops, services; housing will be market and non-market, variety of forms, multi-generational, mix with university community; human scaled medium density and compact, green areas and public space with an emphasis on safety.
(UBC Campus & Community Planning, 2015)

There are three land use designations in the Land Use Plan. Broadly, they are categorized as the green, the academic, and the residential, each with their own subcategories. Figure 5.1

illustrates how the land use designations are distributed throughout UBC's campus. A number of policy statements are made to guide activities within each land use. For instance, *Campus as a Living Laboratory* projects are dealt with as an integrated part of the Academic land use designation. Table 5.8 indicates which areas of the campus are in which land use designated area.

5.8 Land Use Designations and Accompanying Areas of Campus
Green Areas & Green Academic: Pacific Spirit Park; green academic; greenway; tree guideline areas; tree management plan; green edges
Academic: North Campus; Village Centre Academic
Residential Community: residential objectives; neighbourhood housing areas; commercial; usable neighbourhood open space; community centres; schools; daycare; Chancellor Place; institutional uses
(UBC Campus & Community Planning, 2015)

Some targets are provided in relation to building specifications and housing allocation, as well as for transportation, and populations, outlined in Table 5.9.

Table 5.9 Land Use Plan Targets
Not less than 25% housing will be for undergraduate students;
Aspire to accommodate 50% of 2010's number of full-time student population in housing;
Not less than 50% of new market housing to serve households with at least person attending, or work at UBC;
20% new residential dwellings will be rental housing;
Maximum average FSR of 2.5 net, with a single floor maximum of 3.5 net area;
6-storey housing in general, with a maximum height of 53m; potential for 65m heights for certain sites and projects;
Individual developments will not exceed 150 units;
Reduce single occupant vehicle travel from 1996 levels by 20%; and
Anticipated 2021 population of about 22,500 residents with 10,000 students campus
(UBC Campus & Community Planning, 2015)

Flowing from the Land Use Plan are the *neighbourhood plans* outlining and guiding how development is done in each of the residential neighbourhoods on the non-institutional land. Wesbrook Place Neighbourhood plan is discussed in detail in a section below.

In recognition that land use and transportation are fundamentally linked to one another, the Land Use Plan provides guidelines for transportation in the Access to the university section, outlined in Table 5.10. According to the Land Use Plan, the university is the second largest destination in the region, and as such is a major consideration in transportation because of how it impacts UBC as well as surrounding communities.

Table 5.10 Land Use Plan Guidelines for Campus Access
Ecology: decisions will support transit, and active transportation options, reducing pollution
Economy: policies will restrain automobiles; transit will be supported; higher density development will be located close to transit service
Community: Transit will be planned in conjunction with land use for access between and throughout academic and residential areas of campus; traffic calming principles will be used; policies will support a reduced need for commuting
(UBC Campus & Community Planning, 2015)

Metro Vancouver and UBC have a common interest in transportation, which compels them, along with other communities like the City of Vancouver, to coordinate on transportation initiatives. UBC will continue to grow as a destination because of the ongoing increase in student population and residential population, which will require transportation options commensurate to its needs. The Land Use Plan also stipulates that Metro Vancouver and UBC will need to support the expansion of higher capacity transit service to the campus, which at the time of this research project, is beginning to materialize as the Broadway Corridor Subway (UBC Campus & Community Planning, 2015, p.19). The Broadway Subway issue is identified as a policy direction in *UBC's Transportation Plan* below.

5.2.2 Land Use Background

Before UBC gained jurisdiction over its land use planning, Metro Vancouver was responsible for planning and development control on its campus. The UBC Official Community Plan (OCP) was adopted by Metro Vancouver in 1997, and contains land use designations and policies that preserve the academic core for University uses, and develop non-institutional lands for real estate property sales. The OCP made provisions for 50% of new housing to serve UBC related households, as well as reducing single occupant vehicle travel by 20%, which are two

targets preserved in the Land Use Plan (Vancouver City Council, 1997, p.2). In 2000, UBC created its Comprehensive Community Plan (CCP) which interprets the policies and objectives stated in the OCP in local area planning (Metro Vancouver, 2009, p.17)[10]. A Memorandum of Understanding (MOU) between UBC and the City of Vancouver signed in 2000 assisted in establishing a process for how UBC would manage land use planning as well as for how to implement the review/approval process in planning (Metro Vancouver, 2009, p.17).

In 2009, Metro Vancouver moved to institute a Zoning Bylaw for UBC. The reason behind the bylaw was an attempt at addressing the growing concern around UBC's development practices, and concern for the future of the UBC Farm planning (Metro Vancouver, 2009, p.15). UBC acted as the landowner, developer, and land use/development regulator, and since it was not subject to any zoning bylaw or any type of development controls, such as development permit areas, land use and development could be unpredictable. However, when Metro Vancouver made this attempt, UBC was able to lobby the provincial government to transfer land use planning authority to the University under the authority of the Minister of Community and Regional Development, in consultation with the Minister of Advanced Education and Labour Market Development.

5.3 UBC Vancouver Campus Plan

While UBC's *Land Use Plan* covers land use and development on the non-institutional lands, the UBC *Vancouver Campus Plan* deals with the institutional lands of the academic core. Although the two plans are complimentary and mirror one another's approach to land use, this research project is focused on the non-institutional lands, so I provide only a brief overview of the Campus Plan, outlined in Table 5.11. UBC's *Place and Promise* is still relevant here, as it is the guiding high-level strategic plan referenced by the Campus PlanIts policies are organized into six categories and cover 44 policies. Sustainable development is again a defining policy, and *Campus as a Living Laboratory* is integrated as one of the plan's desired sustainable outcomes.

The other outcomes are:

- More student housing

[10] Electoral Area Committee Meeting Date: October 23, 2009

- Public realm designed with nature
- Greener buildings and infrastructure
- Compact campus
- Vibrant campus life

Each sustainable development outcome touches on each of the other Campus Plan policies, demonstrating how the principles of sustainable development are foundational to UBC's planning.

Table 5.11 Vancouver Campus Plan
1. **Sustainable development**
2. **Campus Land Use:** student housing, recreation & childcare, mixed-uses & hubs
3. **Public Realm and Open Space**: universal accessibility
4. **Movement and Circulation**: pedestrian and cyclist friendly campus
5. **Infrastructure and Utilities**: existing infrastructure, sustainable practices,
6. Campus Character: design strategies & guidelines, heritage conservation, outdoor public art
(UBC Campus & Community Planning, 2014)

5.4 UBC Transportation Plan

Transportation is a primary consideration in land use planning. Both the *Land Use Plan* and the *Vancouver Campus Plan* address how transportation plays a role in deciding how land should be used as well as how development should take place. The *UBC Transportation Plan* supports both land use plans, the neighbourhood plans, and provides a focused set of objectives and strategies for all modes of transportation as they apply to UBC. Like the Campus Plan, UBC's *Place and Promise* strategic plan provides direction for the Transportation Plan.

UBC's population continues to grow, on both the institutional side – students, staff, faculty – and the residential side – those people living in the campus neighbourhood developments. According to UBC data, in 2017 there was a combined population of 25,343 people living in the campus neighbourhoods and UBC residences, and is projected to increase by

as much as 10,000 residents in the next decade (Sitings, 2018). In terms of how people access

Table 5.12 UBC Transportation Plan Targets
1. Sustainable Travel: At least 2/3 of all trips as walking, cycling or transit by 2040
2. Single Occupant Vehicles: Reduce by 20% from 1996 levels
3. Daily Private Automobile Traffic: Maintain private automobile traffic less than 1997 levels
(UBC Campus & Community Planning, 2018)

UBC, the transportation mode share has seen a notable shift to transit use since 1997, having increased by 286% by 2017 (UBC Sustainability, 2018, p. 36). As this population continues to grow, the use of sustainable modes of transportation is all the more important to reduce traffic and greenhouse gas emissions.

The plan has set targets, outlined in Table 5.12, for transportation to and from UBC as a way to guide decision making. The target to reduce single occupant traffic by 20% from 1996 levels has been a goal common throughout UBC's planning, and continues in the Transportation Plan.

Table 5.13 Transportation Plan's Policies and Actions	
Policy	**Actions**
1. Walking	**i.** Walking Network**; ii.** Public Realm
2. Cycling	**i.** Cycling Network**; ii.** Cycling Facilities**; iii.** Cycling Access
3. Transit	**i.** Transit Network**; ii.** Transit Facilities and Impacts
4. Driving	**i.** Road Network**; ii.** Parking**; iii.** Car Sharing & Electric Vehicles
5. Accessibility	**i.** Universal Design**; ii.** Accessible Parking
(UBC Campus & Community Planning, 2018)	

In the plan, there are also goals and actions established to fulfill these targets, outlined in Table 5.13. In keeping with the commitment to sustainable development, the plan prioritizes walking, cycling and transit use, while recognizing that accessibility through universal design is

also an important aspect to mobility. How people choose to get around, especially when it comes to walking and cycling, is strongly influenced by how the public realm is designed, and what supportive infrastructure is present. As a result, attention to the public realm and facilities are integrated into the plan's actions. One thing to note, the Transit policy mentions support for a rapid transit extension to UBC. This will likely be the extension of the Millennium Line Skytrain line along Broadway all the way to UBC.

5.5 UBC Housing Action Plan

UBC's *Housing Action Plan* is a tool intended to recruit and retain faculty, staff and students. The plan provides direction to strategically use its land base to support housing needs in the challenging housing affordability conditions in Metro Vancouver. This is in keeping with UBC's efforts in the sustainable development of its community. By providing housing on campus for students, the plan aims to enhance student academic success rates, their experience of campus life, as well as to improve their quality of life by eliminating the need for long hours commuting. Housing is also treated as a source of revenue for the University, so using its land for real estate developments will contribute to the University's endowment, and will as a result help fund academic programs and research (UBC Human Resources, 2012, p.2).

Table 5.14 Housing Action Plan Policies
1. Housing to Support Faculty and Staff: Policies 1-8 i. Restricted home ownership for faculty ii. Extended financial assistance program for faculty iii. Non-profit rental for staff iv. Taxable benefit
2. Housing to Support Student: Policies 9-15 i. Expand supply and diversity of housing
3. Plan Monitoring: Policies 16-19 i. Annual monitoring and reporting ii. Five-year comprehensive review
(UBC Human Resources, 2014)

The Housing Action Plan's policies outline strategies to providing housing to University stakeholders in several ways. In UBC's view, being able to recruit top faculty and students is part

of being a top university, and affordable housing needs to be available either on or close to campus. Table 5.14 highlights some of the 19 policies contained in the Housing Action Plan.

In 2018, as part of the five-year comprehensive review, Policies 1 and 5 were reviewed. Policy 1 supports UBC's goal of recruiting and retaining faculty through a home ownership program. One tool created to assist with the policy is the *Prescribed Interest Rate Loan* (PIRL), which has been effective in supporting some faculty in purchasing a home (UBC Human Resources, 2018, p.2). Policy 5 addresses the challenges faced by employees in a lower income bracket access housing on campus. UBC began piloting a *Rent Geared-to-Income* (RGI) project in early 2018 and has seen some uptake, but the application process is quite onerous deterring some from applying (UBC Human Resources, 2018, p.2).

There are a number of pre-existing housing programs intended to make housing more accessible for faculty and staff. For example, the University's Financial Housing Assistance Program assists some faculty and staff in purchasing a principal residence in Metro Vancouver through a forgivable or interest-free loan of up to $50,000. However, when an employee receives a benefit from their employer, the Canadian Revenue Agency (CRA) considers it a taxable benefit, which Policy 8 indicates is the responsibility of the UBC employee. Thus, even though UBC as an employer is making efforts to alleviate the challenges of finding affordable housing close to campus, the CRA rules will negate some of the financial benefit in its current structure.

5.6 Sustainable Development Plans

As made apparent so far, sustainable development is at the heart of UBC's identity. It is conceptually and structurally a common thread throughout its planning and development activities. When UBC committed to integrating sustainable development into its operations in 1997 through the Board of Governors Sustainable Development Policy, the University agreed to, "develop environmentally responsible campus communities that are economically viable and reflect the values of the member of the campus communities" (UBC Office of the University Counsel, 2018, p.1). One of the purposes of the policy is to ensure the ecological, economic and social consideration central to sustainable development are all incorporated into the strategic planning and operations of UBC (UBC Office of the University Counsel, 2018, p.1). Stemming from this policy are all the sustainable development related strategies and actions plans adopted

by UBC. In this section, I focus on the documents currently relevant, referring to important but out-of-date documents when necessary.

5.6.1 UBC 20-Year Sustainability Strategy

The *20-Year Sustainability Strategy* takes the view that sustainable development consists of more than reducing damage and living within the ecological limits of the environment, which is articulated in the strategy's vision:

> "By 2035, such a regenerative sustainable development is embedded across the University throughout teaching, learning, research, partnerships, operations and infrastructure, and the UBC community"
>
> (UBC Campus & Community Planning, 2014, p.1).

Table 5.15 The 20-Year Sustainability Strategy's Scope and Goals

Scope	Goals
1. Teaching, learning and research	Provide each student, regardless of degree program with access to sustainable development education
2. Operation and infrastructure	**i.** Apply sustainable development lens to operational decisions **ii.** Integrate campus-scale energy, water, waste and food systems **iii.** Improve sustainable development practices through community/stakeholder engagement **iv.** The built environment demonstrated regenerative design and operation throughout UBC **v.** Use strategic partnerships for development and application of solutions to challenges in sustainable development
3. UBC community	**i.** Provide capacity to house up to **50%** of full-time students **ii.** Build up to **30%** of all new housing on campus as rental subject to market demand **iii.** Enable for affordable and a more diverse housing stock for faculty, staff and students **iv.** Incorporate universal design and auto-restrained conditions to make support alternative modes of transportation

(UBC Sustainability, 2014)

Sustainable development is about simultaneously improving human and environmental conditions. A regenerative sustainable development seeks to have a net positive effect on the environment, and human wellbeing (Robinson, 2012). The negative impacts of human activity on the environment would be more than reduced, it would be reversed. Common to many other plans discussed above, *Campus as a Living Laboratory* is a key approach to integrating sustainable development into the University's physical campus, operations and academic activities, and the Sustainable Development Strategy continues to incorporate it. Scope 2 in Table 5.15 identifies demonstrating applications in sustainable development in UBC's developments.

The strategy tackles how sustainable development will continue to be an important element in all of UBC's dimensions. The three components of the strategy cover a broad range of the University's activities. Of the three scopes of the strategy, scopes 2 and 3 apply directly to UBC's non-institutional development activities since they speak to operations, infrastructure, and the social dimension of housing. The targets for student housing and rental units are in line with those in other plans.

5.6.2 Sustainability Strategy Background

In another first for a Canadian university regarding sustainable development, UBC published its first comprehensive campus-wide sustainable development strategy in 2006. Entitled *Inspirations and Aspirations,* the strategy's goals follow the Board of Governors' Sustainable Development Policy 5 directives to address sustainable development from the social, economic and ecological perspectives concurrently.

In the early days of UBC's growth in sustainable practices, the UBC Farm was the embodiment of the tension that existed between the University's development ambitions on its non-institutional land and its sustainable development goals. The Farm was once slated for real estate development, which was strongly opposed by students, faculty members, and external stakeholders like Metro Vancouver (Metro Vancouver, 2008). UBC eventually committed to protecting the Farm, and an academic plan was created by the Faculty of Land and Food Systems, and was called *Cultivating Place* in 2010 (UBC Farm: Centre for Sustainable Food Systems, n.d.). It was in this plan that the concept of the *Campus as a Living Laboratory* was first advanced.

5.6.3 UBC Climate Action Plan 2020 (CAP 2020)

The purpose of the CAP 2020 is to guide UBC toward zero emissions. UBC committed to reducing its greenhouse gas emission to 67% below 2007 levels by 2020 (UBC CAP 2020, 2018: 1). According to UBC's Annual Sustainable Development Report for 2016-17, GHG emissions had been reduced by 34% on campus since 2007 (p.2). The majority of the GHG emissions at UBC come from its operations, which include buildings and vehicles. As a result, the CAP 2020 identifies six broad areas where strategies to reduce GHGs at UBC can be achieved, indicated in Table 5.16.

Table 5.16 UBC Climate Action Plan 2020 GHG Reduction Targets by Area

Category	Goals	Target CO2e
1. Existing Buildings	**i.** Energy retrofits **ii.** Connect to district energy **iii.** Work with Properties Trust on their building portfolio	**5,000 tons**
2. New Buildings	**i.** Develop new Green Building Plan **ii.** Develop Net Positive Building Pathways **iii.** Enhance UBC Technical Guidelines	**340 tons**
3. Energy Supply	Incorporate additional low-carbon energy supply, i.e. wood waste biomass	**16,600 tons**
4. Behaviour Change	Strengthen Green Labs program, the behaviour change program	**300 tons**
5. Fleet	**i.** Increase efficiency of UBC's fleet **ii.** Centralize procurement and management of more UBC vehicles **iii.** Enhance bicycle and e-bike share programs	**260 tons**
6. Complimentary Opportunities	**i.** Continue to implement Zero Waste Action Plan **ii.** Explore use of apps to facilitate car sharing & mode shift	**N/A**

(UBC Campus & Community Planning, 2016)

Making strides to reducing GHG emissions on campus is also driven by economic reason. In the province of British Columbia, the carbon tax may increase, which mean if carbon emissions are not reduced, GHGs will cost UBC more in the long run (UBC CAP 2020, 2015: 3).

5.6.4 UBC Green Building Action Plan: Pathway to a Net Positive Campus

The majority of greenhouse gas emissions at UBC (97%) is from heating buildings and water on campus (UBC Sustainability, 2018, p.2). UBC's *Green Building Action Plan,* (GBAP) provides a variety of strategies to enhance the performance of buildings, both institutional and non-institutional. The GBAP is structured based on the different components involved in the operational life of a building. For each component, a list of actions is proposed to support ongoing efforts toward sustainable development. Buildings' demand for water and energy are high, and the resulting GHG emissions are relative to their level of consumption, and finding ways of reducing their utility demand will reduce emissions. This is valuable in terms of the environment as well as the financial cost. The efficiencies that the GBAP offers are meant to improve a building's performance, as well as to mitigate the impacts of climate change on its operations through adaptive measures (UBC Sustainability, 2018, p.2). Both institutional and non-institutional (neighbourhood residential) buildings are covered in the GBAP. There are nine component areas the GBAP focuses on, with several accompanying directions intended to lead to a net positive campus (UBC Sustainability, 2018, p.2).

UBC has developed a building performance rating system complementing the GBAP. The *Residential Environmental Assessment Program* (REAP) is a framework designed for mandating and measuring sustainable building practices (UBC Campus & Community Planning, 2014). REAP was developed through the collaboration between Campus and Community Planning, the Properties Trust, and UBC Architecture Professor Dr. Ray Cole and his students (Girling et. al, 2015, p.41). The program is designed to address issues of sustainable development in non-institutional market-based developments, as well as for student, faculty and staff housing developments located in the neighbourhood development areas (UBC Campus & Community Planning, 2014). REAP is similar to LEED (Leadership in Energy and Environmental Design) as it is a rating system which awards buildings a performance level based on a point system. Points are awarded for many of the component areas addressed in the GBAP,

as well as others related to the choice of HVAC systems (UBC Campus & Community Planning, 2018b).

Table 5.17 Green Building Action Plan's Areas of Focus	
Component	**Directions**
1. Energy	**i.** Use less energy by aligning REAP with the BC Energy Step Code **ii.** Design measures to maintain thermal comfort **iii.** Reduce GHGs across the spectrum at lowest cost to ownership
2. Water	**i.** Focus on water metering and benchmarking strategies **ii.** Develop landscape & irrigation design standards **iii.** Improve rainwater management at building scale using low impact design (LID)
3. Materials & Resources	**i.** Reduce environmental footprint through material choices **ii.** Require building material content transparency **iii.** Identify and reduce the use of material harmful to health
4. Biodiversity	**i.** Develop principles and guidelines for landscapes and green roofs **ii.** Address identified ecological assets in building design **iii.** Improve bird-friendly design guidelines
5. Health & Wellbeing	**i.** Guide building and landscape design to nurture social wellbeing **ii.** Coordinate wellbeing principles, objectives and metrics to landscape and building requirements
6. Quality	**i.** Ensure a quality commensurate to the cost of ownership **ii.** Improve REAP branding **iii.** Provide high quality housing for faculty, staff and students
7. Climate Adaptation	**i.** Use up-to-date date data to inform building designs **ii.** Ongoing review of best practices for building climate adaptation
8. Place & Experience	Promote architectural designs and landscapes of environmental and social sustainable development
9. Process	**i.** Ensure existing sustainable development objective inform development **ii**. Make green building requirements accessible **iii.** measure neighbourhood performance, learn from data to improve policies
(UBC Campus & Community Planning, 2018b)	

5.7 Summary

UBC has a rich diversity of plans and policies guiding its land use planning and activities in sustainable development. This chapter illustrates how UBC effectively integrates the three principles of sustainable development into the plans and policies governing land use the University. Its efforts over the years have consistently incorporated the ecological, economic and social dimensions of sustainable development, demonstrating how sustainable development is an integral part of the University.

In the next chapter, I discuss how land use planning and development became prominent activities at UBC. I also discuss how sustainable development became a defining objective, and helped to shape the content of land use plans, as well as the approach to property development. I pay particular attention to the influences from outside the University, the important events, and the leading personalities throughout the process.

6. Background Discussion

In the preceding chapters, I presented the communities and jurisdictions surrounding UBC to illustrate the University's unique context. I also outlined the internal organizations and policies guiding and governing UBC's planning, property development and sustainable development efforts to demonstrate the progress UBC has made in those areas over the course of several years. What is made clear in this chapter is how UBC 's current state of affairs emerged as a result of several internal and external factors, and perhaps most importantly the influential people motivated to bring about beneficial changes to shape the institution's planning, development and sustainable development landscape.

The following chapter is divided into three parts. The first part focuses on the origins and motivations of UBC's real estate development as well as the University's approach to sustainable development. The evolution of the Properties Trust, Campus and Community Planning Office are discussed as is how sustainable development came to be a defining feature of planning and development. UBC's leadership, policies, public engagement and several pivotal milestone events have led the University to plan and develop in the manner it does today. As a result, UBC has grown into a distinct university town.

The second part addresses the residential community at UBC. As it continues to grow, the University's relationship with the people living on its non-institutional land has evolved. In the absence of an elected local government to represent the residents, UBC's responsibilities take on characteristics of a municipal government. The University Neighbourhood Association (UNA) plays a complimentary role in delivering municipal-like services and provides a voice on behalf of residents. Moreover, as a point of supporting its faculty and staff in the face of a severely unaffordable housing market, UBC has programs designed to assist them in living on or close to campus. Given the housing conditions in the Metro Vancouver region, this is a necessary step in order to be competitive in attracting and retaining faculty, staff and students; yet the effort does not work as well as it is intended.

Part three provides an examination of Wesbrook Place Neighbourhood to illustrate how UBC's sustainability policies have been implemented in planning and development at a neighbourhood level. Wesbrook is noteworthy for how sustainable development is incorporated into its urban design, infrastructure and building design and construction. However, the cost of

housing in the neighbourhood is reflective of the unaffordability characterizing the entire Metro Vancouver Region, and is an ongoing challenge for students, staff and faculty members alike. While the University has made efforts to address housing unaffordability and create a more socially sustainable campus, it has also been criticized for not doing enough given the housing crisis.

6.1 Foundations of Development

There were a number of contributing factors and key figures involved in catalyzing and guiding UBC's evolution as a university engaged in land development, planning and implementing sustainable development on its campus. The following sections elaborate on these events and individuals. A visual timeline of UBC's history is available in Appendix J.

6.1.1 Constrained Funding

In the early 1970s, the Canadian economy began to experience a historic downturn, an experience shared by most developed economies and ushered in by the OPEC oil crisis of 1973 (Di Matteo, 2017, p.55). As a result, public revenue and spending began to decline, which consequently constrained funding for Canadian universities from both federal and provincial governments. In the 1980s, interaction between leaders of businesses, universities and governments became more frequent, and had the effect of influencing change at universities (Metcalfe, 2010, p.493). While these new ties between the public and private sectors brought private funding opportunities to universities for research and development initiatives, it also introduced a new entrepreneurial mindset to University leaders. At UBC, several key figures played instrumental roles in the University's shift toward entrepreneurial, market based activities on its non-institutional land.

6.1.2 Early Key Figures

In 1984, Robert "Bob" Lee, a graduate of UBC, was appointed to the University's Board of Governors. As the president and founder of Prospero Realty, a Vancouver based company engaged in property management, sales and leasing, Lee brought with him the ethos of a builder and businessman which had not been present on the Board before (Rosenfeld, 2015). He had already been a big supporter and donor to the University, presumably the reason why he found

himself a member of the Board (Interviewee 1). As a Board member, he played a leading role in promoting the vision of UBC using some of its land for housing developments, as was envisioned in the early days of UBC (Interviewee 1). By 1988, Bob Lee had convinced the Board of Governors to establish the UBC Real Estate Corporation to oversee development on parts of UBC's Endowment Land (Parry, 2013, p.2). The first project the Real Estate Corporation undertook was the 947-unit Hampton Place development on 28 acres of campus land designated for private housing (Parry, 2013, p.2; Rosenfeld, 2015, p.3). These housing developments were intended to support the University's endowment, and as Interviewee 1 explained, "you can say the conversation of the time was largely driven by the need for revenue for the academic mission. Having Bob Lee in place was a big factor, that's someone who's familiar with that world and could understand what it would mean for the University to venture into this kind of development". On the encouragement of Lee, Hong Kong construction mogul George Tso bid on and was awarded the project (Parry, 2013, p.2). The Hampton Place development was a veritable success that provided a net gain of $81 million (UBC Properties Trust, n.d.a). Recognizing the opportunity for further development, the Board of Governors earmarked another 200 acres of non-institutional land for residential developments. A list of developments is provided in Appendix F.

Lee was a strong advocate for the approach UBC decided to take with its residential land development. Instead of selling the land to developers, the UBC Real Estate Corporation would facilitate 99-year lease agreements with developers for the rights to develop the land, while UBC would retain ownership (Interviewee 1; UBC Campus & Community Planning, 2012). The reasoning behind leasing rather than selling the land goes back to the fact that UBC's land is an endowment with the vision of providing intergenerational benefits and equity to the University. In making its decision, UBC was planning on a much longer time frame than most other communities typically do.

To lead the UBC Real Estate Corporation, Bob Lee enlisted Al Poettcker, another experienced and savvy real estate developer who graduated from UBC (Parry, 2013). He had spent his entire career in development, and by all accounts brought with him a strong grasp of how development impacts institutions and the broader community (Mitham, 2015, p.4). Poettcker understood the mandate for development on UBC's endowment lands was twofold: to create, "an intergenerational endowment for the University while building a community. Doing

one without the other would have been considered a failure", he said in an interview (Parry, 2013, p.2). As President and CEO, Poettcker led the organization through its transformation into the UBC Properties Trust, a Government Business Enterprise (GBE) wholly owned by UBC. The recommendation to make the change came from Randy Zien, who was the chairman of the Properties Trust Board of Directors. When Zien transitioned into his current role as Deputy Chairman of the Board of Directors, the Properties Trust was doing $250 million in annual business (Parry, 2013). The current President and CEO of the Properties Trust is Aubrey Kelley, who previously occupied the same position with the Surrey City Development Corporation.

6.1.3 The Properties Trust's Board of Directors

The Properties Trust's Board of Directors is the organization's internal governing body. There are typically twelve or thirteen Board members, however, at the time of this project there were fifteen members (Interviewee 5). The Board is composed mostly of individuals who have been active in the development industry in Vancouver for several years, and who hold leading positions at their respective firms (UBC Properties Trust, n.d.b). There are also representatives of the University on the Board. According to Interviewee 5, typically sitting on the Board of Directors are UBC's President (Santa Ono), the VP Academic, the Provost or someone from their office, the VP of Finance, and the VP of External Relations. Although the Properties Trust website only indicates three University representatives, the Provost and VP Academic positions are held by the same individual, Professor Andrew Szeri (UBC Properties Trust, n.d.b). When development sites are chosen, developers are invited to submit a development proposal, and the Board of Directors is responsible for choosing the best submission (Interviewee 5). Having representatives from the University on the Board is meant to ensure the interests of the University and its academic mission are more directly considered during the decision making process for development projects on campus (Interviewee 5).

6.1.4 Key Leaders

While Robert Lee is usually heralded as the initial spark and driving force behind UBC's move into development on its non-institutional lands, there were other influential supporters from within UBC's leadership as well. When David Strangway was president of the University (1985-1997), he brought with him the view that universities exist within the context of a free

market and provide a tremendous amount of free enquiry that can then be exploited by for-profit enterprise (Rosenfeld, 2015, p.6). Initially, one of his primary focusses was to line up funding from various benefactors for campus initiatives (Boddy, 2005, p.3). As explained above in the introduction, government funding for universities had been declining as a matter of course for some time, and British Columbia was funding its universities at the lowest per-capita rate in Canada. Consequently, UBC was hard at work courting private donors, many of whom gave generously and become eponymous benefactors of buildings, like the Chan Centre for the Performing Arts and the Liu Centre for International Research (Boddy, 2005, p.3). However, this source of funding began to dwindle and the imperative to find alternative sources of revenue for the University continued to grow. Strangway supported the creation of the UBC Real Estate Corporation and later aligned with other proponents of real estate development, such as Harold Kalke. He was a member of the Board of Governors as well as the owner and president of Kalico Developments Ltd., a real estate development and investment company based in Vancouver. He has sometimes been called Vancouver's first green developer (UBC News, 1998). He advocated in the 1990s for UBC to more boldly use its land for real estate developments, and he presented some persuasive financial arguments in support of this (Boddy, 2005).

Martha Piper became UBC's president following David Strangway, and between the two tenures, construction at the University had gained tremendous momentum. During her first stint as University president (1997-2006), Dennis Pavlich the VP of External Affairs emerged as another proponent of development at UBC (UBC News, 2001). He saw the opportunity presented by UBC's land, and enthusiastically helped to steer the University towards becoming one of the region's largest urban development sites, second only to the Olympic Village in False Creek. Pavlich was an academic in law specializing in property law and was the author of a book on condominium law (Boddy, 2005). He promoted real estate development on all areas of UBC's campus. His most controversial proposal was to bring a market condo development to University Boulevard, which was strictly for institutional use and received emphatic opposition from both academics and students.

6.1.5 UBC's Early Planning Efforts

The primary impetus to develop UBC's non-institutional land has always been to create revenue to grow the University's endowment fund. There has never been a shortage of support

from UBC's leadership for property development, notably because many in those key influential positions were from the development and investment industry. However, UBC's development projects had to embody more than a revenue generating rationale because of vocal criticism from students, the Greater Vancouver Regional District (GVRD), and the City of Vancouver. Development needed to include careful community planning on the part of UBC, and to take into consideration the needs of its existing and future community. Yet, in the early days of property development, the campus planning office was a small organization concerned primarily with development activities on institutional lands. Before the 2000s, campus planning only had one planner, a planning assistant, a campus architect and a few support staff (Interviewee 5). Community planning needed to improve if property development was going to continue without opposition from the GVRD, which was already concerned they had no oversight during the construction of Hampton Place, a sentiment shared by the City of Vancouver (Rosenfeld, 2015, p.8).

In response, UBC created an Official Community Plan (OCP) as a part of the broader Electoral Area A's OCP. When the GVRD Board reviewed the draft OCP, they recommended changes that would respond to issues raised by the City of Vancouver and other speakers at the public hearing (Vancouver City Council, 1997). The changes included provisions related to housing, transportation, and access to open space and community facilities (Vancouver City Council, 1997)[11]. As part of the implementation of the OCP, UBC prepared a Comprehensive Community Plan (CCP) for the areas of non-institutional development. The content of the CCP comprised mainly of general planning principles for development, sketch plans, and brief descriptions of building types (Vancouver City Council, 2000). In reviewing the CCP, the City of Vancouver pointed out the absence of zoning or design guidelines, and requested more information and analyses be included in the CCP[12].

In 1996, the GVRD Board of Directors adopted the *Livable Region Strategic Plan* and was designed to articulate the region's approach to managing growth. The Strategic Plan centred on four fundamental objectives: protect the Green Zone; build complete communities; achieve a compact metropolitan region; and increase transportation choice (Greater Vancouver Regional

[11] The stipulated provisions would later inform UBC's Strategic Plans, Land Use Plan, Housing Strategies and Transportation Plans: 50% of new housing dedicated to UBC students, staff and faculty; reduce single occupant vehicle travel by 20%; expanding the availability of open spaces and access to community facilities would become a major part UBC's relationship with the UNA.

[12] Information and analyses requested include proposed number of housing units, types, tenures, development phasing, a housing needs study, a transportation impact study, among others.

District, 1999, p.9). Each of these objectives underlined the GVRD's feedback on UBC's OCP. The *Livable Region Strategic Plan* came to fundamentally influence UBC's early planning efforts and would have a lasting impact. While generating revenue for the endowment fund was of the utmost importance, property development was also about creating a vibrant university town and a model sustainable community (Lin, 2003). To achieve these desired outcomes for development, the University would need to attract the kind of services that would make people stay on campus 16 to 18 hours a day, as Al Poettcker articulated (Rosenfeld, 2015, p.8). For that to happen, a critical mass of resident needed to be achieved.

In the year 2000, UBC finalized its OCP, establishing the objectives for a diverse range of housing types and tenures focused around the south campus village commercial centre, the area later called Wesbrook Village (Metro Vancouver, 2007 December 5). The recommended goals for housing and transportation were incorporated into the OCP, notably housing for students, 50% of new residential housing dedicated to students, staff and faculty. UBC's *Place and Promise* strategic plan echoed these goals in its *Commitment to Sustainability*, specifically *Goal 3: Create a vibrant and sustainable community of faculty, staff and student residents* (UBC, 2009).

6.1.6 Foundations of Sustainable development

As UBC's approach to community planning was developing in response the GVRD and the City of Vancouver's influence, the University's broad internal shift toward sustainable development also provided direction. "The culture of the institution really prizes sustainable development as a really key strategic priority" (Interviewee 1). UBC's road to sustainable development started with its signing of the Talloires Agreement in 1990, as well as its affirmation of the Halifax Declaration, but it was the personalities at the University at the time who were instrumental in institutionalizing sustainable development. "You know there were a few very vocal academics in place in the 90s in particular at a time when Kyoto (the Kyoto Protocol) was being negotiated (Interviewee 1)[13]. As signatories to the two declarations, UBC had access to action plans and a network of universities committed to implementing sustainable development in their institutional activities (Moore, 2005, p.182). The University's President

[13] For example, William Rees who created the concept of the ecological footprint and wrote widely about sustainability was based at UBC.

David Strangway led the way as the signing authority for UBC, and subsequently formed a committee to discuss sustainable development at the University called the Sustainable Development Research Institute (SDRI) (Moore, 2005, p.182). The purpose of the SDRI was to engage faculty members and others who had already been working toward sustainable development to create a sustainable development policy for UBC. The SDRI successfully lobbied the Board of Governors to adopt its Sustainable Development Policy No. 5 in 1997, a defining moment for sustainable development at the University. It mandated the University to adhere to sustainable practices, and indicated all students attending UBC should be educated about the principles of sustainable development (Moore, 2005, p.183).

"Then there were a couple of physical projects that really pushed [sustainability forward]" (Interviewee 1). The C.K. Choi Building was opened in 1996 and set a precedent for UBC as its first green building. Freda Pagani led the project when she was working at the Project Development Office (Chan, 2006). She decided the next big project coming out of that office would be as ecologically friendly as possible and would demonstrate green building technology. The C.K. Choi Building now serves as a model for sustainable design and construction, and it vaulted Pagani into a position of leadership in the sustainable development movement at UBC.

With a Ph.D. in Resource Management and Environmental Studies, Freda Pagani's experience with spearheading the design and construction of the C.K. Choi Building shifted her mindset toward sustainable development. In 1998, UBC created Canada's first Campus Sustainability Office (CSO) in direct response to UBC's Board of Governors adoption of a sustainable development policy and Pagani was at its helm. The mandate of the CSO aimed at developing an economically viable and environmentally responsible campus, focusing on the ecological, economic and social issues in the University's planning, design and operations (Forgacs, 1996). The approach to achieving these ends would involve a combination of technology and behavioral changes and would touch on everything flowing through the University including electricity, paper, sewage and water.

6.1.7 Early Efforts in Sustainable Development

When the CSO was established, there were no funds available from the University to support the office. Nonetheless, Pagani and her colleagues, notably Geoff Atkins the Associate VP of Land & Building Services, believed they could run the organization exclusively from

financial savings made through energy efficiency initiatives and sustainable development practices across campus (Interviewee 3; Goodmurphy, 2008). The goal was to reduce UBC's energy and water use by 20% over five years through a comprehensive energy and water management program developed by Jorge Marques, the CSO's energy manager (Sustainability Now, 2002). These initial efforts saved UBC almost $2 million (Abramson: UBC Reports, 2002). As a follow up, two other similar initiatives emerged and were dedicated to making upgrades to building and campus infrastructure. ELECTrek was a lighting retrofit in buildings where systems were completely upgraded to longer lasting, energy efficient modern alternatives (Sustainability Now, 2002). ECOTrek was a $35 million program to make mechanical and electrical upgrades to University buildings that would amount to a 30% reduction in energy use, and was anticipated to generate $3 million in annual savings (Abramson, 2002). ECOTrek was also designed to address water use and CO_2 emission reductions. Adding to the success of the retrofit initiatives were other early successful initiatives, such as the compost and recycling program (in partnership with the UBC Farm), and the U-Pass bus pass for students (in partnership with the AMS) (UBC News, 2006).

On the behavioral side, the CSO initiated the SEEDS program (Social, Environmental, Economic Development Studies) in 2000 as an extension of the now discontinued Greening the Campus Program (Moore et.al, 2005, p.70). The SEEDS program continues to this day and has been dedicated to disseminating the principles of sustainable development throughout the University, as well as to connect students, faculty and University staff to support the University's efforts to advance sustainable development in its strategic and operational planning (Pajalic et.al, 2015, p.3). The program is embedded in the Campus and Community Planning office which provides a venue for the integration of academic and operational work on sustainable development and is in keeping with *campus as a living laboratory* (Pajalic et.al, 2015, p.2).

By the time Freda Pagani retired in 2007, UBC had successfully reduced its CO_2 emissions 6% below 1990 levels, which met Canada's 2012 Kyoto Protocol targets (Waugh, 2007). This was achieved largely through the completed building retrofits described above. These efforts demonstrate the strides UBC had been taking to honour its dedication to sustainable development. However, when the British Columbia's provincial government announced in its 2007 throne speech the intention for public institutions to becomes carbon

neutral, there was suddenly a business case and provincial policy pushing the University to rise to a new challenge (Interviewee 3).

6.1.8 Provincial Support for Sustainable Development

The *British Columbia Climate Action Plan* established how the province was intending to reduce greenhouse gases (GHGs) and transition to a low-carbon society. Among other things, the policy set GHG reduction targets and several pieces of legislation focused on reducing GHGs from different sources, like fuel types, vehicles and landfills (Gora, 2014). Famously, the Carbon Tax was one of the legislative tools used to reduce GHG emissions. The action plan required all public institutions to be carbon neutral by 2010, which meant UBC had to mitigate its emissions further through several initiatives such as the campus-wide district energy heating system (Yonson, 2010). The plan also supported creating green communities by introducing a new green building code and a $14 billion provincial transit plan (Gora, 2014). While the Climate Action Plan introduced a lot of new regulations targeting GHG emissions, it also provided funding to support research and education (Interviewee 3). The clean energy fund and bioenergy network received $50 million in funding, and the Pacific Institute for Climate Solutions received $100 million in funding (Gora, 2014).

As a result of recommendations from the GVRD and the City of Vancouver, sustainable development practices were already being incorporated into UBC's urban planning when the Climate Action Plan was announced. For example, the Campus and Community Planning office was responsible for crafting the *Hawthorn Mid Campus* and *East Campus* plans, both of which incorporate sustainable development features. The strategies include guidelines for diversity of housing types and tenures as well as inter-generational community composition. Other guidelines address concepts of compact and complete community, transportation and landscape (UBC, 2004). Nonetheless, BC's Climate Action Plan, "pushed the CCP to start looking at GHGs and to start thinking about building energy efficiency and what kind of strategies they're going to take on" (Interviewee 3). It was around this time the Residential Environmental Assessment Program (REAP), UBC's LEED-like building rating system was taking shape as well. REAP would outline the performance requirements for new residential buildings built at UBC.

6.1.9 Leadership from the Faculty

Even though UBC was leading the way in all the areas it had been applying sustainable development, John Robinson was a force pushing the University to do more. As the head of the Sustainable Development Institute and later as UBC Associate Provost Sustainability, he wanted UBC to be a major source of innovation for sustainable development education and application in all areas of the physical university (Interviewee 3). In keeping with the concept of the university as a living laboratory, Robinson wanted to demonstrate how buildings could be designed and built using the best techniques, materials and systems to achieve sustainable development goals, as well as to showcase UBC's research and development strengths.

The realization of these aspirations came in the form of the Centre for Interactive Research on Sustainability, known as CIRS, which was completed in 2011. The building was designed to be net-positive in seven ways, four of which are environmentally based: energy use, operational carbon, structural carbon, and water quality (Erhardt, 2015). The other three are focused on human well-being: human health, productivity and happiness (Erhardt, 2015). CIRS was the result of a remarkable series of partnerships between the university, industry and not-for-profit organizations. The project also represents the confluence of several complimentary goals at UBC. For example, it was a way to exercise the campus as a living laboratory to test and demonstrate new technologies that would eventually be employed in the construction of some residential buildings in UBC's UTown (Gora, 2014). Many of the technologies utilized were developed at UBC, namely the use of recycled lumber and engineered lumber products like Cross Laminated Lumber, as well as the use of biomass and bio-energy which is mostly wood by-product (Gora, 2014).

6.1.10 A Pivotal Shift in Authority

When Stephen Toope became UBC's President in 2006, sustainable development was being incorporated, to one degree or another, into most areas of the University's research, education, planning, operations and development. Nonetheless, Toope's leadership was instrumental in further promoting sustainable development as a larger platform at UBC (Interviewee 3). In areas like the University's strategic plan, *Place and Promise*, sustainable development figured prominently as did the concept of the campus as a living laboratory.

However, Toope presided over the pivotal transition of planning and development authority from Metro Vancouver Regional District (formerly the GVRD) to UBC itself, effectively giving the University its own municipal powers to regulate land use. The *Municipalities Enabling and Validating Act*, or MEVA brought about significant change for the Campus and Community Planning office as they were given more authority and responsibility under the Act.

Figure 6.1 Proposed UBC OCP with Future Housing Reserves (Metro Vancouver, 2008 April 16, p.73)

In the preceding years, Metro Vancouver had expressed several concerns with UBC's approach to planning and property development. For example, UBC's OCP had not been updated to be consistent with its Vancouver Campus Plan or to speak to the Neighbourhood Plans that had been created since it was drafted (Metro Vancouver, 2009). It lacked certain provisions that had become the norm for OCPs, namely Development Permit Areas and Guidelines (Metro Vancouver, 2009). There was also widespread concern the UBC Farm located in the South Campus would be replaced with residential development because the 24-hectare farm was designated as Future Housing Reserve (FHR) in the OCP, as illustrates in Figure 6.1.

6.1.11 Protecting the UBC Farm

As an integral research facility run by the UBC Centre for Sustainable Food Systems, the UBC Farm was highly valued by University stakeholders (Metro Vancouver, 2008 April 16). Numerous learning and research facilities were integrated with the farm, and utilized site-wide ecological stewardship approaches which made it an important wildlife habitat. While the farm provided locally grown food for the student and campus residents, it was also one of the

best examples of how the campus was being used as a living laboratory. In December 2008, the Board of Governors requested an academically rigorous strategic plan focused on sustainable development for the UBC Farm be developed (UBC South Campus Academic Planning Committee, 2009, p.3). *Cultivating Place* was the resulting document that outlines the operations and programming for the farm.

Even though UBC appeared to be addressing the uncertainty surrounding the UBC Farm, it was an issue that continued to concern Metro Vancouver. There were also other issues about UBC's development activities that did not meet Metro Vancouver's standards. Some of these concerns included the heights and views of towers being built along Marine Drive, the amount of trees being cut, as well as geotechnical and stormwater management concerns (Metro Vancouver, 2009, p.5). Furthermore, UBC's OCP was put in place when the residential population was much smaller than the 8,400 people residing there in 2009. In Metro Vancouver's opinion, this necessitated a more appropriate governance structure for UBC (Metro Vancouver, 2009, p.5).

The question of governance of UBC's residential areas had long been recognized as democratically deficient. Since UBC was essentially the landowner, developer and regulator of all institutional and non-institutional lands, it was seen to be in a conflict of interest in terms of land use decisions (Metro Vancouver, 2009, p.2). The decision-making body of the University, the Board of Governors, was an appointed body that superseded all democratic input from residents. The GVRD initiated a governance study in response to these concerns and considered three options for UBC and the neighbouring UEL: incorporation of a new municipality with either a standard or special municipal structure, or the inclusion of UBC and the UEL in the City of Vancouver (Vancouver City Council, 1997, p.2). One of the main drivers for a change in governance in Metro Vancouver's opinion was to add an enforceable development control system to the area of UBC.

6.1.12 Metro Vancouver Imposes Land Use Policy

UBC had not expressed openness to the idea of any development regulations, like a Zoning Bylaw, being applied by Metro Vancouver, believing instead that the processes and policies in place were sufficient (Metro Vancouver, 2009, p.2). For example, the University's Development Handbook was structured in a way similar to a zoning bylaw with definitions,

development and land use guidelines and land use maps (Metro Vancouver, 2009, p.3). Yet, the Development Handbook only provided guidance to developers on the development review and approval process for non-institutional developments, and did not have any statutory authority. Thus, in October 2009, Metro Vancouver introduced land use development provisions for UBC, specifically a proposed Zoning Bylaw. Since UBC was part of Electoral Area A, Metro Vancouver had jurisdiction over UBC land use planning so long it enacts the necessary bylaws, i.e. a Zoning Bylaw and Development Permit Areas (Metro Vancouver, 2009, p.7). The draft was shared with the University in the hopes of advancing the discussion for a joint process to proceed.

Unsurprisingly, UBC was not sympathetic to the draft bylaw. Since the proposed bylaw covered both the institutional and non-institutional land, the University took the proposal as a threat to its independence. The University's president, Stephen Toope argued it was critical for UBC to continue to fully govern its academic land use, saying, "the freedom to learn is fundamental to why universities exist, and that freedom must be underpinned by autonomy to decide what, where, and how to study. World-changing learning and research requires cutting edge facilities, and the infrastructure to attract leading thinkers" (Smith, 2009, November 17, p.2). Toope equated the Metro Vancouver crafted bylaw as heavy-handed and an infringement on the University's academic freedom. He described the potential impact on the University as costly and restrictive, and would create a muddled regulatory environment (Smith, 2009 November 17, p.2).

6.1.13 UBC Lobbies the Provincial Government

Echoing Toope's opposition was Stephen Owen, the University's Vice President for External, Legal and Community Relations. He labelled the proposed bylaw as a needlessly complicated and excessive, and was harsher than bylaws governing other universities in Canada (Smith, 2010 May 12, p.3). As a former politician in both the Federal Liberal Party and the Provincial Liberal Party, he had strong connections with the ruling Liberal provincial government of the time (Interviewee 4). Interestingly, the Premier of the day, Gordon Campbell, was the MLA (member of legislative assembly) for the Vancouver-Point Grey riding, which includes UBC's main campus, but it is not clear if this played a role in the government's next move (Smith, 2010 May 12, p.3). Less than 6 months after Metro Vancouver had proposed the

Zoning Bylaw for UBC, the University was successful in lobbying the Province to introduce legislations removing the regional district's legal authority to make decisions on UBC's land use planning.

Naturally, there were concerns from Metro Vancouver about there being sufficient checks and balances around UBC's planning authority. Metro Vancouver was particularly interested in gaining greater clarity on the impacts to regional transit networks and other public infrastructure from future commuters to and residents on campus (Smith, 2010 October 27, p.2). At the time, the regional district was in the midst of drafting an updated regional growth strategy, *Metro Vancouver 2040: Shaping Our Future*, and it wanted to ensure the regional growth strategy would still apply to the UBC campus (Smith, 2010 October 3, p.2). Ben Stewart, the Minister of Community and Rural Development who was the minister responsible for the new Municipalities Enabling and Validating Act, assured Metro Vancouver that UBC would be required to create a regional context statement for the region's review before a land use plan would be approved by the provincial government.

6.1.14 The Municipalities Enabling and Validating Act (MEVA)

When Bill 20 was approved by the Legislature and granted royal assent to become the *Municipalities Enabling and Validating Act (2010)*, the authority to approve official community plans, zoning bylaws, development permit areas, and all other development and land use planning related matters were transferred to UBC's Board of Governors, with ultimate approvals coming from the responsible minister (Smith, 2010 May 12, p.3). UBC's new land use planning, public engagement and permitting responsibilities gained through MEVA would be dealt with by the Campus and Community Planning office. While the CCP had been steadily growing in capacity over the years, MEVA necessitated a further expansion in organizational capacity to manage its expanded role (Interviewee 5).

Following the statutory transfer of authority, UBC proceeded to replace its OCP — which contained land use planning provisions — with a new Land Use Plan. In keeping with its commitment to sustainable development, the Land Use Plan incorporates the triple bottom line (ecological, economic and social considerations) to organize how its objectives will be achieved. Some of the major takeaways from the updated Land Use Plan are as follows (Vancouver City Council, 2010 May 26):

1. UBC committed to increasing housing choices and improve housing affordability for faculty, staff and students; provide housing capacity for 50% of their students; have 50% of market and non-market units occupied by UBC faculty, staff or students;
2. For the UBC Farm, the University changed the land use designation from 'future housing reserve' to 'green academic' in recognition of the valuable contribution the farm provides. Housing density from the farm was reallocated to the Wesbrook Place Neighbourhood, illustrated
3. In support of a sustainable community, UBC committed to providing a robust and integrated system of parks, community centres, schools and childcare facilities;
4. UBC would continue its approach to transportation demand management as the University is one of the region's largest destinations. Ongoing provisions include providing students with the U-Pass in partnership with Translink; continued reduction of parking supply coupled with increased parking cost.

Figure 6.2: UBC Land Use Designation Map (UBC Campus & Community Planning, 2015, p.26)

The City of Vancouver supported UBC's approach to land use planning, especially in the areas of community engagement, sustainable development, and climate change which the city and University shared as interests (Smith, 2010 May 12, p.2). At the time, the City of Vancouver was developing its *Greenest City Action Plan* which aligned closely with UBC's sustainable development goals expressed in its new Land Use Plan and the Place and Promise Strategic Plan. This prompted the two to sign a new *Memorandum of Understanding* (MOU), setting out the principles of enhanced coordination and collaboration related to areas of mutual interest (Vancouver City Council, 2010 May 26, p.5).

The Minister indicated some requirements as part of UBC's new land use planning authority. One of the mandated requirements of *Ministerial Order M229* was to provide a regional context statement when developing and amending its Land Use Plan (British Columbia Minister of Community and Rural Development, 2010). Thus, UBC specifically cites Metro Vancouver's *Livable Region* regional plan in its land use plan. The University's land use plan aligned with the regional plan in a number of areas, as outlined in Chapter 5. The Livable Region plan has since been replaced with an updated regional plan, *Metro Vancouver 2040: Shaping Our Future*, yet it is not referenced in the updated version of UBC's Land Use Plan from 2015. Nonetheless, they both share many of the same objectives, such as environmental, economic, and social sustainable development. In the years following MEVA, UBC and Metro Vancouver had a sporadic relationship with little formal communication or collaboration. In an effort to repair the relationship, in 2015 UBC and Metro Vancouver signed a MOU to collaborate more often in areas of mutual interest and benefit (UBC Board of Governors, 2015 December 3).

6.2 The University Community

UBC's relationship with its neighbourhood residents is unlike any other university because the University is at once the landowner, the developer and the regulator. While they function like a local government, the University is not an elected body by local residents which creates a democratic vacuum. Nonetheless, UBC has obligations to engage residents and has made strides to include and inform them in decision-making.

6.2.1 Engaging Neighbourhood Residents

Another condition of UBC's land use authority required by the Ministerial Order was the duty of the University to consult with the relevant stakeholders on issues of land use planning and development. Consultation plans and public involvement in the drafting of plans would meet or exceed the standards required for municipalities and regional districts in the *Local Government Act*, according to the minister Ben Stewart (Smith, 2010 October 3, p.2). Of particular importance was ensuring the University and its associated organizations (i.e. Properties Trust) would consult with the residential population. Of equal importance was the requirement to collaborate and communicate with the University Neighbourhood Association

(UNA) on a consistent basis. Both these relationships are indicative of UBC's evolving relationship with the residential population. With more authority comes more responsibility, and as the residential population grows, so too do the needs of residents.

During each major institutional and non-institutional project at UBC, a public open house is held to consult neighbourhood residents as well as other stakeholders like the Musqueam community members and neighbouring areas of Vancouver. Campus and Community Planning has public engagement professionals on their team to manage consultation efforts. Guiding consultation efforts is CCP's Engagement Charter (Engagement Principles and Guiding Practices) which outlines a set of principles for defining, designing, implementing, and concluding public engagement for planning processes at UBC (UBC Campus & Community Planning, 2016). UBC is the 3rd largest employer in the Metro Vancouver Region, and in combination with the residential population on and off campus, public engagement is crucial to a legitimized planning process.[14]

As discussed in Background and Context, the UNA was established in 2002 under the *Society Act* of British Columbia. One of its key purposes is to advocate for the well-being of residents as it relates to health, safety, education, culture, recreation, comfort and convenience (Emergency Response Management Consulting, 2012, p.4). The UNA does not wield any formal authority because it is not a jurisdictional body, although it provides representation and some services to residents much like a municipality. UBC is the sole land use planning and permitting authority on its institutional and non-institutional land as a result of MEVA, a situation likened to a company town (McElroy, 2018 October 2). The underlying legal relationship between UBC and the resident leaseholders in UBC's neighbourhoods is one of tenant and landlord rather than between a local government and citizens (University Neighbourhood Association, 2018 March 13, p.13).

6.2.2 Obligations and Relations with UNA

UBC and UNA's relationship is established through the *Neighbours Agreement* which also outlines the municipal-like services the UNA delivers on behalf of UBC. The Agreement has been updated twice since 2002 to reflect the evolving relationship between UBC and

[14] Fraser Health and Coastal Health Authorities the 1st and 2nd largest employers: Business Council of British Columbia, 2016)

residents. In the 2015 update of the agreement, more collaboration and communication between the UNA, UBC staff and the Board of Governors were incorporated. For example, quarterly meetings between the UNA Board and senior UBC staff were established; the Chair of the UNA has the opportunity to present to the Board of Governors annually; UBC and UNA hold an open house called 'Community Conversations' twice a year to engage the neighbourhood residents; and one seat on UBC's Development Permit Board is reserved for a neighbourhood resident (UBC Board of Governors, 2015, p.2).

The population of the residential neighbourhoods has been steadily growing, with roughly 11,000 residents in 2017 representing a doubling in population over a decade (UBC Campus & Community Planning, 2017, p.18). Considering the governance situation at UBC, the UNA represents the largest population of people without democratic representation at a local level. While establishing a new municipality or amalgamating with an existing one such as the City of Vancouver are unlikely, several initiatives to address some of the more pressing issues facing the neighbourhood areas in the absence of an elected governing body have been pursued. For example, the UNA undertook an Operation and Staffing Needs Analysis. In the analysis, the staffing levels, administrative structure and work processes were examined and opportunities to strengthen the effectiveness and efficiency of the organization's service delivery were identified (University Neighbourhood Association, 2018 March 13, p.28). The final report offered nine recommendations focusing on rationalizing positions in the organization, reorganizing responsibilities in an effort to find efficiencies and shifting how and where some services would be delivered.

The UNA was originally founded as a non-profit organization run by resident volunteers. "Because the UNA was developed in an ad hoc manner, nobody thought about how the organization would look in five or ten years into the future" (Interviewee 2). As a result, a business plan or a strategic plan had never been created for the UNA, which meant the organization needed to professionalize some of its operations and positions. For some positions, an executive hiring firm was enlisted to assist with identifying appropriate professional candidates for the leadership positions at the UNA. "Instead of bringing in non-profit people, I brought in people who have a background in municipal government so we can bring in municipal principles" (Interviewee 2).

Another initiative undertaken to improve the UNA's effectiveness as an organization representing residents is the creation of the Liaison Committee. Its purpose is to provide an additional forum for the UNA, residents and UBC to communicate and collaborate on issues more openly (University Neighbourhood Association, 2018 March 13, p.13). One of the main concerns is the financial stability of the UNA as its revenues have been consistently declining since 2011 (Vann Struth Consulting Group, 2016). As explained in Chapter 4, the UNA provides many of the functions and services of a municipality to the residents it represents, but does not have direct financial control over its situation. The money collected from UBC neighbourhood residents is called the *Neighbours Levy* and it is composed of the *BC Rural Tax* and the *Services Levy*. The Neighbours Levy is always equivalent to the City of Vancouver's Residential Tax Rate, as set out in the Neighbours Agreement, and is determined independently by the City of Vancouver. Furthermore, the Rural Tax portion of the Neighbours Levy, which is collected by the Province, is determined independently by the Province. The Service Levy rate is then set to make up the difference between the Rural Tax and the City of Vancouver's Residential Tax rate (Vann Struth Consulting Group, 2016). As Vancouver's Residential Tax rate declined due to dramatic property value increases, the Province's Rural Tax was steadily increasing, which has resulted in a lower Service Levy rate. Consequently, the UNA's budget has been under pressure due to the reduced revenue and the growing service needs of the community (UBC Board of Governors, 2015, p.5).

In an effort to manage these pressures, the UNA and UBC created a joint financial task force. A five-year financial plan was created to ensure the long term financial health of the UNA, which was guided by the principles of maintaining consistent levy rates while maintaining the same service levels (UBC Board of Governors Report, 2016-12-06). One of the recommendations made by the task force was for UBC and the Properties Trust to financially support the UNA's budget by up to $800k.

6.2.3 Impacts of Metro Vancouver's Housing Crisis

The UNA's budgetary pressures are the product of an overheated housing market in the Metro Vancouver region, which is particularly pronounced in the City Vancouver. To provide some context, the average price of a single-family detached home in Metro Vancouver at the end of 2018 was just over $1.5 million, and in the City of Vancouver it was $2.0 million (Graham,

2018 September 12). Furthermore, the average price for a condo in Metro Vancouver was $668k, while in Vancouver it was $868K (Financial Post, 2018 December 4; Zolo, 2019). To put this in terms of household affordability, the annual income needed to purchase the average priced home in Vancouver would be $331,000, yet the median household income is actually $65,327, which is an income gap $265,673 (Graham, 2018 September 12). Such unaffordability extends to the rental market as well, impacting the majority of people attending and working at UBC.

Metro Vancouver's housing market makes it a challenge for faculty and staff to secure housing close to campus, who are otherwise forced to commute long distances (Zhou, 2016 July 25). While UBC's Land Use Plan addresses housing, such as the provision for 50% of new market housing to serve households with at least one person attending our working at the University, as well as 10% reserved as non-market rental, the challenges remain (Interviewee 1). As a result, attracting and retaining faculty and staff have become concerns for the University's administration. Several building projects throughout campus are targeted at providing housing for faculty and staff. Village Gate homes, a subsidiary of the Properties Trust was established to manage the housing stock for faculty and staff (Village Gate Homes, n.d.). In an effort to alleviate some of the financial burden, UBC has developed several housing assistance programs for faculty and staff.[15] In support of the faculty housing programs, the Board of Governors approved the creation of the Faculty Housing Assistance Financing Endowment (FHAFE) which will allocate $10 million annually from the proceeds the University receives from the Properties Trust (UBC Board of Governors, 2017 February 14). However, an ongoing challenge with the UBC providing housing assistance to its staff and faculty are the Canadian Revenue Agency's rules regarding taxable benefits. By providing housing exclusively to its employees at a reduced rate, or by providing financial assistance would result in a taxable benefit to employees (Interviewee 1). Therefore, the University is reluctant to institute more generous measures for affordable housing.

Much of the focus on UBC's development activities and tension over housing affordability have centred on Wesbrook Place Neighbourhood. In spite of the controversies, Wesbrook Place Neighbourhood demonstrates how UBC has been making strides to incorporate sustainable development into planning and property development, notably on the environmental

[15] The most recent program is the Prescribed Interest Rate Loan (PIRL) program, which has been criticized as the wrong mechanism to support faculty housing.

side. In the following section, I discuss how the neighbourhood reflects UBC's commitment to sustainable development in its neighbourhood plan and design guidelines and illustrates how guidance from the larger and more experienced Metro Vancouver and City of Vancouver planning offices provided valuable input to Wesbrook's land use planning and development. Sustainable measures figure prominently in the neighbourhood's urban design, transportation, buildings and infrastructure.

6.3 Wesbrook Neighbourhood

As UBC's largest residential neighbourhood development, Wesbrook Place has been the focal point of UBC's development and planning efforts. How this area of UBC's campus would be planned and developed has also been the source of disagreement that ultimately led to UBC gain land use and permitting authority. Aside from these details of its history, Wesbrook is

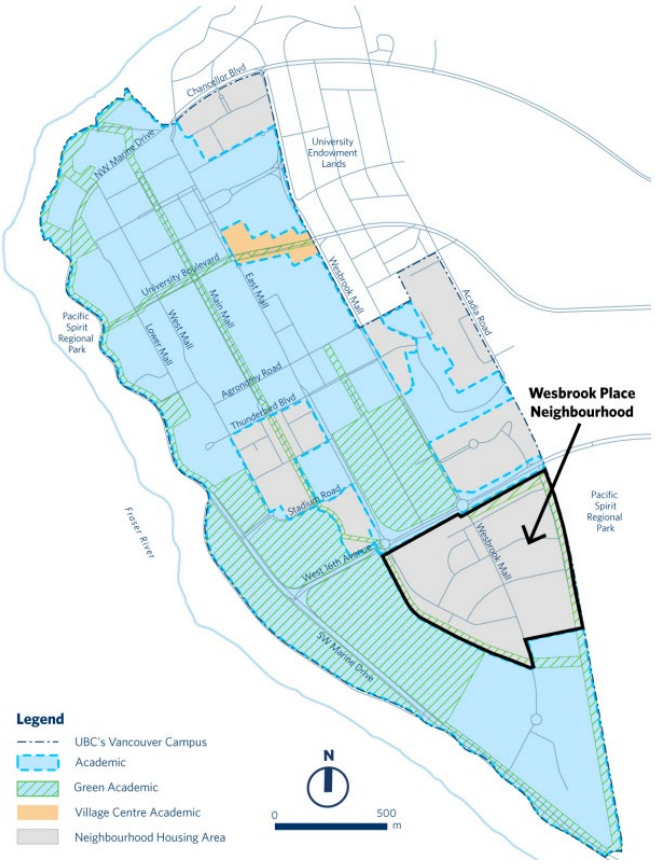


Figure 6.3 Location of Wesbrook Place Neighbourhood at UBC (UBC Campus & Community Planning, 2016, p.52)

6.3.1 Local Context

Wesbrook is UBC's largest residential neighbourhood covering approximately 44.5 hectares (115 acres) in the south end of the Vancouver Campus, indicated in Figure 6.3. Pacific Spirit Regional Park is situated along the neighbourhood's eastern edge, with 16th Avenue to its north and the UBC Farm to its south (Girling et. al, 2015, p.15). Other University affiliated facilities in the vicinity include TRIUMPH, the Library PARC Project (storage facility), the Centre for Comparative Medicine and UBC's

Research Ponds. Before it was named in honour of UBC's first president Frank F. Wesbrook, Wesbrook Village was referred to as the South Campus area. Since the Wesbrook

Figure 6.4 Illustration of Wesbrook at full build out (UBC Campus & Community Planning, 2016, p.62)

Neighbourhood Plan was adopted in 2005, the neighbourhood has grown into a community of approximately 5,000 people (Sitings, 2018). Upon completion of all development phases, the population at Wesbrook is expected to reach 12,500 (Sitings, 2018). Figure 6.4 provides a bird's eye view of the neighbourhood once it has reach full build out.

From the outset of planning the Wesbrook Neighbourhood, the intent has been to create a complete and sustainable community that emphasizes active travel and access to transit. In support of UBC's sustainable development goals, Wesbrook has several sustainable features incorporated into its planning and design in areas such as urban design, transportation and circulation, buildings and energy use, forest and habitats and water. The neighbourhood features a variety of housing types, mixed use areas, commercial and community amenities, and parks. It also has provisions for protecting natural habitat and water features as well as sustainable waste management practices and energy use.

6.3.2 Wesbrook's Development Background

The Wesbrook Neighbourhood was first envisioned in the University's Official Community Plan of 1997. The South Campus area was identified as an area for significant residential and commercial development including parks and open spaces, greenways, a community centre and a neighbourhood school (Pottinger Gaherty, 2004, p.3). An important consideration of the early neighbourhood plan was to determine how the future development would interface with the neighbouring Pacific Spirt Regional Park to respect the park's conservation and recreation objectives. As I have described in a previous section, consideration for the UBC Farm was missing from early South Campus neighbourhood planning efforts, an oversight that would develop into a point of contention.

Although the neighbourhood was intended to be a sustainable community from the beginning, input and review from both the City of Vancouver and Metro Vancouver were instrumental in shaping of Wesbrook. During its review of UBC's Comprehensive Community Plan in 2000, and still several years before a Wesbrook Neighbourhood Planning process began, the City of Vancouver expressed interest in how the South Campus would be designed and how it would function. Specifically, the City was interested in ensuring that a significant proportion of the envisioned residential and commercial developments would serve UBC students and employees. Another City of Vancouver concern was the impact a South Campus neighbourhood development would have surrounding neighbourhood transportation flow and volumes (Vancouver City Council, 2000, p.5).

In 2007 after the Wesbrook Neighbourhood Plan was first adopted by the Board of Governors, the GVRD/UBC Joint Committee noted how provisions for housing size and density in the Neighbourhood Plan in combination with the OCP's density provisions were too restrictive. Instead of supporting the development of more affordable housing units, the provisions were seen to encourage more expensive larger units (Metro Vancouver, 2007 December 5). To evaluate the potential impacts of adding residential and commercial density to Wesbrook Neighbourhood, several background studies were undertaken. Additionally, other Metro Vancouver neighbourhoods were used as benchmarks against which Wesbrook was compared, the East Fraser Lands neighbourhood in particular was used, currently known as River District (Metro Vancouver, 2007 December 5).

The background studies and benchmarking were effective in demonstrating the viability of adding density to Wesbrook, but no changes were made as a result. However, in response to calls to protect the UBC Farm, the farm was redesignated Green Academic from Future Housing Reserve which was reflected in UBC's Land Use Plan after the Provincial government passed MEVA. The residential space originally intended for the farm could be reallocated to the Wesbrook Neighbourhood, which resulted in an increase in maximum floor space ratio (FSR)[16]. When the Wesbrook Neighbourhood Plan was adopted in 2005, the maximum residential FSR was 1.2, but by 2011 it had been increased to 2.5. While the excess residential floor space could have been distributed to other areas of the campus, the rationale for adding all of it to Wesbrook was to promote a population density that would support the viability of a complete community where commercial and community amenities as well as transit services are in close proximity to where people live (UBC Board of Governors, 2011).

6.3.3 Wesbrook's Development Features

The first version of the *Wesbrook Neighbourhood Plan* was adopted by the Board of Governors in December 2005 and was amended in 2011 and 2016 (Metro Vancouver, 2007 December 5, p.18)[17]. The purpose of the Neighbourhood Plan is to apply the policies set out in UBC's Land Use Plan to the Wesbrook Neighbourhood area, and provides direction for land use, design guidelines, development controls, transportation strategies, and servicing strategies all of which are in keeping with the University's Land Use Plan (UBC Campus & Community Planning, 2016b, p.2).

The underlying objective driving the development of Wesbrook was to create a sustainable community on campus to help shift UBC away from being a commuter campus and to provide opportunities for students, staff and faculty to live, work, study and play on campus. More full time residents on campus would support a wider variety of activities to exist on campus for longer periods of time throughout each day. Wesbrook would also support UBC's sustainable development goals on all three fronts. For social sustainable development, more people living on campus would make the development of a complete community possible. On the environmental side, the walkable design of Wesbrook Neighbourhood would facilitate more

[16] Floor Space Ratio, also known as Floor Area Ratio (FAR) is the gross floor area of a building divided by the site's total surface area.
[17] The plan was originally referred to as the South Campus Neighbourhood Plan.

active travel among its residents. Wesbrook's planning and design consciously respect the surrounding natural environment in several ways described below. As is the case with any property development project, the economic benefits gained from the Wesbrook Neighbourhood development would add to UBC's growing endowment for continued support of the University's financial and academic goals.

Figure 6.5 Norman MacKenzie Square in the Heart of Wesbrook (Sitings, n.d.)

The Wesbrook Neighbourhood Plan outlines several strategies to ensure the neighbourhood is a compact and complete community upon its completion. Provisions to support a range of housing types and tenures are provided to encourage a diversity of residents. In keeping with the Land Use Plan, 20% of housing is reserved as rental units, half of which will be non-market housing. When the neighbourhood reaches its anticipated population capacity of 12,500, the average population density throughout the neighbourhood will be 281 people per hectare and 140 housing units per hectare (Girling et. al, 2015, p.15). Building heights will vary from a minimum of 6 storeys to a maximum of 22 storeys with a maximum average floor space ratio of 2.5 (UBC Campus & Community Planning, 2016, p.11). The locations of towers include a variety of setback depths and the building orientation to streets are not parallel to increase the variety of views (Ramsay Worden Architects, 2016, p.8).

Much of the mixed-use commercial community infrastructure and amenities are clustered around the Wesbrook's Village Centre. Among the many commercial services available at the Village Centre to serve the daily needs of residents are a grocery store, a pharmacy, cafes, liquor store, a bank, and restaurants, as well as health and wellness shops (Girling et. al, 2015, p.17). A community centre and high school are also located in close proximity to the Village Centre. The community centre provides a number of services to local residents and includes childcare and multipurpose areas for social gathering. Given the concentration of amenities and services, there is a significant social component to the Village Centre. To create a more inviting place for social interaction, the two outdoor public plazas have seating areas for people to gather and linger.

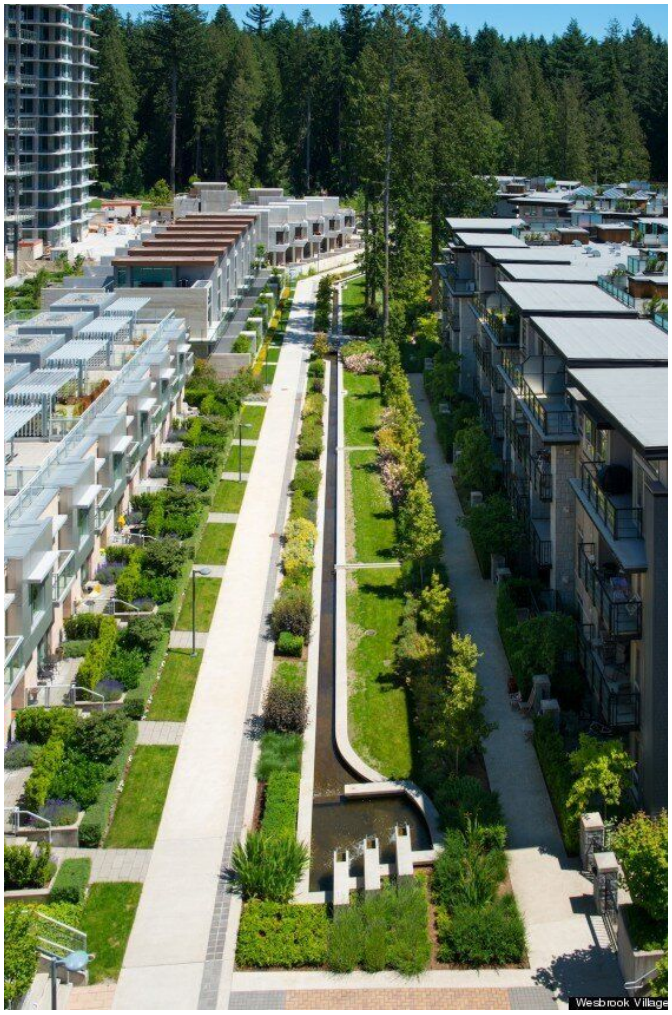


Figure 6.6 Pedestrian Greenway (Bauman, 2014)

To optimize livability, the neighbourhood's design incorporates a defined human scale resulting in a highly walkable environment (Ramsay Worden, 2016, p.7). As a result, most residents are able to walk to the Village Centre in an average of 5 minutes and no longer than 10 minutes for those living at the farthest reaches of the neighbourhood (UBC Campus & Community Planning, 2016b, p.55). While streets are designed to accommodate multimodal travel, the neighbourhood greenways are exclusive to non-vehicular travel. This network ofpathways is throughout the entire neighbourhood and integrates with this pedestrian focused circulation system serving the entire campus (UBC Campus & Community Planning, 2016b, p.14).

In keeping with the goal of creating an urban village in the woods, one of the defining characteristics of Wesbrook is the prevalence of greenspace in the throughout the neighbourhood. Aside from the greenways there are also several parks both completed and planned that amount to approximately a third (34%) of the entire Wesbrook Neighbourhood area resulting in every resident being within a 5-minute walking to a park (Girling et. al, 2015, p.22). Addition usable green space is available along the green edges of the neighbourhood. Where Wesbrook borders Pacific Spirit Regional Park,16th Avenue, and UBC Farm is a 30-metre buffer of natural vegetation intended to preserve wildlife habitat.

The Wesbrook Neighbourhood includes four classification of roads. Collector roads are routes that provide access to the arterial roads outside of the neighbourhood and accommodate public transit routes. Local roads facilitate internal circulation of people on foot, bicycle and automobile. The green streets and greenways are intended for non-motorized travel differ in theirsize. Unlike conventional residential developments, Wesbrook's transportation infrastructure prioritizes active travel such as walking and cycling within the neighbourhood. The fine-grained pattern of streets and paths encourage walking and cycling, as do the ubiquitous bicycle facilities and traffic calming features throughout the neighbourhood. While personal vehicles are accommodated, they are not the focus. One of the transportation objectives of the Wesbrook Neighbourhood Plan is to reduce automobile travel and increase the use of other modes of transportation including public transit. Nonetheless, to integrate seamlessly with the road network on campus, Wesbrook's road network is designed to provide consistency with the rest of the University's network.

The long term strategy for Wesbrook's energy supply is to connect to a neighbourhood district energy system. District energy systems are commonly used to heat University campuses as well as other large single owner developments like medical and military complexes. To heat high-density, mixed use urban developments with multiple owners, district energy systems are a growing strategy because of the flexibility for integrating alternative technologies not typically economically viable a building scale (Compass Resource Management, 2012, p.i). The source of heat will come from TRIUMPH, the national particle and nuclear physics laboratory located adjacent to the neighbourhood. The laboratory accounts for nearly a quarter of all energy use in Point Grey and the amount of waste heat created as a result of its activities will be harnessed and circulated using a district energy system (Girling et. al, 2015, p.40). While the district energy

system is not ready for use until 2024, the Neighbourhood Plan requires buildings install heating systems that can be easily converted to a district energy system (UBC Campus & Community Planning, 2016b, p.35).

Requiring the application of UBC's Residential Environmental Assessment Program (REAP) to all new buildings in Wesbrook ensures sustainable design features are incorporated. REAP addresses several buildings features such energy and water use conservation. These considerations influence the type of building materials chosen during construction as well as the type of windows, toilets and heating systems installed. All residential buildings are required to achieve a REAP Gold rating or better, however only 19 of the 27 (70%) catalogued residential buildings have attained a Gold rating or better. A list of Wesbrook buildings and their ratings is located in Appendix H.

Hydrology and drainage in Wesbrook are part of a broader UBC Campus-wide approach. The Integrated Stormwater Management Plan (ISMP) outlines how to manage stormwater more sustainably and within the campus boundaries (Girling et. al, 2015, p.54). Several water features designed to divert and retain rainfall from small and large rain events have been incorporated in Wesbrook. For example, grass swales, open channels, retention ponds, permeable pavement, and a subterranean detention storage tanks are all prominent water infrastructure found throughout the neighbourhood.

While there is a commitment to making Wesbrook a socially sustainable community, the neighbourhood still faces the same challenges as surrounding communities with regard to housing affordability. As previously indicated, the cost of housing and incomes in the Metro Vancouver Region as a whole do not coincide with each other. Rental costs and condo prices in Wesbrook reflect that trend as well. Based on an internet search on PadMapper.com and Wesbrook Properties, there were eight rental properties available on July 5th, 2019. The average rental suite has 2 bedrooms and 2 bathrooms, was 1,048 ft^2 and cost $3,410 per month. On the same date, the real estate website REW.ca had 112 listings in the Wesbrook Place Neighbourhood. Using 25 of the listing, the average condo had 2 bedrooms and 2 bathrooms, was 1,035 ft^2 and was listed for $1.102 million. Although UBC's Land Use Plan calls for no less than 50 percent of new housing to serve households where one or more members work or attend UBC Vancouver campus, these prices make housing for students, staff and most faculty members unattainable in Wesbrook.

6.4 Conclusion

In this chapter, I have outlined how property development and sustainable development became defining characteristics at UBC. A major part of the discussion included the influential people who championed property development and sustainable development. How campus and community planning as a practice emerged was largely in response to increased property development at UBC. As planning developed, the University's commitments to sustainable development helped to shape its approach to planning. Even though UBC disagreed with Metro Vancouver and the City of Vancouver on matters of planning and development, eventually leading to the University gaining authority over its land use, UBC benefited greatly from their valuable guidance in strategic planning and sustainable development through their reviews and recommendations. In spite of the disagreements of the past, UBC now has an agreeable relationship with Metro Vancouver and the City of Vancouver, exemplified by their respective MOUs.

UBC's relationship with the residents of its neighbourhood areas has evolved as the University's authority and responsibilities have evolved. UBC has grown into much more than and educational institution and organizations like the CCP and Properties Trust are indicative of the University's shift into more entrepreneurial activities. With the development of the Wesbrook Place Neighbourhood, all the expertise in planning, development and sustainable development UBC has gained over the decades are being put into practice. Yet, the challenge of balancing the needs of its stakeholders with the economic realities of an unaffordable housing market remains a contentious issue at the University. Resolving it will likely require UBC to invest in more non-market housing dedicated to its staff and faculty and forego the financial gains made through market valued real estate development and sales.

The following chapter will build on the findings of this chapter by applying the lens of the conceptual framework outlined in Chapter 2. The conceptual framework will assist in examining the most important features of UBC's development, planning and sustainability activities.

7. Conceptual Analysis and Discussion

In the following chapter, I examine the findings of my research using the conceptual framework as outlined in the Literature Review. The four bodies of research employed for the analysis are the work of Perry and Wiewel (2005) on university developments, Burton Clark's Pathways to Entrepreneurialism (2004), Logan and Molotch's work on Growth Coalitions (1976), and the approaches to Implementing Sustainable Development. Since there is considerable overlap in substance between the four bodies of research, the common themes are discussed together throughout this chapter.

7.1 Leadership and Steering Core

UBC emerged as a university actively engaged in planning and developing on both its institutional and non-institutional land while effectively integrating sustainable development. Perry and Wiewel identified leadership as a key feature to university developments. UBC has been fortunate to have had leaders with long term visions and who championed transformative initiatives. Early on, University President Dr. David Strangway was instrumental in establishing UBC's course toward property development and sustainable development in several ways. He supported the creation of the UBC Real Estate Corporation to lead property development on UBC's non-institutional land and he committed to sustainable development by signing the Halifax and the Talloires Declarations as well as spearheading the Board of Governors adoption of its Policy on Sustainable Development. His leadership exemplifies the strong and direct leadership style which Perry and Wiewel identify in their three types of leadership. Subsequent University presidents such as Martha Piper and Stephen Toope were equally committed to UBC's planning, development and commitment to sustainable development as they became more institutionally entrenched. By virtue of circumstances, Stephen Toope was a leading figure in advocating for the transfer of land use governance from Metro Vancouver to the University, taking on a strong and direct leadership style that was consequential to the future of planning at UBC.

Similarly, both in the works of Zenchanka and Malchenka (2017) and Pavlova-Gillham and Swinford (2017), leadership is highlighted as a key feature to successfully incorporating sustainable development at a university. At UBC, the strong internal leadership of Freda Pagani

and John Robinson was necessary for sustainable development to eventually become a defining feature of the University. While Pagani was committed to incorporating sustainable practices into UBC's operations as both a demonstration of their value and viability, Robinson was committed to establishing UBC as one of the foremost innovators and leaders in sustainable development processes and technologies. They both believed in the necessity of demonstrating how sustainable development could work in a practical and applicable sense. Their efforts were focused on reducing the University's impact on the environment by managing issues like carbon emissions, energy use, and water and solid wastes. Zenchanka and Malchenka (2017) and Katiliute et. al (2017) refer to these activities collectively as greening initiatives

While it may be hypothetical to imagine, in the absence of Strangway, Pagani and Robinson each championing sustainable development as a worthy institutional goal, it is hard to believe sustainability would have become as institutionally embedded at UBC as it is today. Now that sustainable development is a universally supported priority at UBC, it appears the implementation of sustainable development initiatives is no longer as reliant on individual champions. As discussed in Chapter 5, sustainable development is integrated across the spectrum of UBC's planning and strategic policies. From UBC's high-level institutional plan to its land use and range of secondary plans, a sustainable development lens is applied to the policy directives within each policy document. Zenchanka and Malchenka's (2017) suggest that using systems designed to focus on initiatives for environmental protection are effective tools to implementing sustainable development. To ensure sufficient direction is provided on sustainable development issues, the University has developed a suite of strategies and action plans, including the 20-year Sustainability Plan, Climate Action Plan, and a Green Building Action. To further ensure physical development is being done sustainably both on the University's institutional and non-institutional lands, UBC's Residential Environmental Assessment Program (REAP) framework provides effective and implementable guidelines to professionals involved in the design and construction of buildings. This is in keeping with Pavlova-Gillham and Swinford's (2017) observed usefulness in utilizing an integrated framework, like UBC's REAP framework. Collectively, UBC's policies are also indicative of the institutions highly developed internal capacity, discussed further below.

As much as the leadership from the individuals discussed above has played a critical role in providing direction for UBC's planning, development and efforts toward sustainable

development, leadership from governments has been equally impactful. Both Metro Vancouver and the City of Vancouver were instrumental in providing advice and guidance to UBC early planning work. Similarly, when the Province of British Columbia enacted its Climate Action Plan in 2008, all public institutions including UBC were provided direction and a mandate for how sustainable development should be incorporated into their operations.

Complimenting the leadership factor discussed above is the strengthened steering core identified by Burton Clark in regard to a university's shift toward entrepreneurialism. UBC exhibits the characteristics of an entrepreneurial university because many of its activities are intended to support self-reliance. Leadership is a critical part of the steering core. In addition to leadership from UBC's presidents, the early proponents of UBC's property development activities, like Bob Lee, along with the key members of UBC's administration, Board of Governors and the Properties Trust's first president Al Poettcker all represent a strong steering core for property development.

One of the primary characteristics of a strong steering core is how decision making is distributed across a variety of stakeholders. The presence of a strong steering core for property development is exemplified by the interconnectedness of the Properties Trust within UBC's administration, as outlined in Chapter 4. The Properties Trust reports to the Board of Directors' Property Committee which in turn provides direction to the Trust to ensure its activities are in keeping with UBC's policies. Furthermore, the Trust's association with UBC's Infrastructure Development Organization, the Provost and VP Academic as well as the VP of Finance and Operations point to the depth of the steering core in solidifying a stronger self-reliance internally for institutional development projects.

One of the ongoing challenges faced by entrepreneurial universities is maintaining balance in decision making across stakeholder groups. The network of interorganizational relationships with the Properties Trust appears to illustrate the multifaceted nature of decision making typifying an entrepreneurial university. However, it is not clear how much influence each of the various administrative arms of the University exert on the Properties Trust. While the Properties Trust's Board of Directors includes members of the University's faculty, they do not necessarily hold a perspective of development representative of the whole faculty.

7.2 Internal Capacity

As Perry and Wiewel argue, the internal structure of a university is a critical feature in determining how effective it will be in carrying out planning and development. Throughout this research project, I have demonstrated that UBC has evolved into a university with the necessary capacity and expertise to carry out planning and develop projects through its Campus and Community Planning office and the Properties Trust. Consequently, UBC's initiatives have evolved beyond the academically focused, which points to UBC's shift toward entrepreneurialism.

The Campus and Community office's scope of expertise undoubtedly expanded in response to the increase in development taking place on UBC's institutional and non-institutional land as well as to the Municipal Enabling and Validating Act (MEVA). As outlined in Chapter 4, the CCP has several responsibilities such as all the planning and permitting at the University, transportation management, implementing sustainable development initiatives, administering the Residential Environmental Assessment Program (REAP), public engagement as well as liaising with University Neighbourhood Association and local governments, Translink and the Musqueam First Nation. While I was not able to determine to what extent the CCP expanded its internal capabilities over the years, the planning office currently has 56 people on staff whereas in the early 2000s there were anecdotally only a handful of staff (UBC Campus & Community Planning, n.d.f; Interviewee 5).

Comparably, the Properties Trust's ability to project manage institutional and non-institutional developments as well as manage rental properties at UBC has grown substantially since it was established. The portfolio of University-owned properties it is responsible for managing is quite extensive, which is outlined in Appendix F. Additionally, the Properties Trust's and the CCP's involvement in undertaking and managing major projects are extensive and can be seen in the Major Projects Chart in Appendix G. As outlined above, the Properties Trust is a remarkably integrated with several of UBC's administrative departments which is indicative of its importance to development at the University as well as its capacity to undertake and manage projects.

The University has gone a long way to incorporate the triple bottom line of sustainable development into its core strategic and land use planning policies, especially with regard to the environmental performance of its land use and physical developments. In terms of economic

sustainability of the University, UBC's endowment fund has grown substantially since the 1990s, which revenues from the University's property developments have contributed considerably. An enlargened endowment fund enables UBC to expand its academic programming as well as to provide finance lending for various projects such as on campus student housing. However, UBC has struggled to effectively implement policies for social sustainability, particularly as it relates to housing affordability. Yet, the University has made strides to improve its focus on the neighbourhood stakeholders, in keeping with principle 1 as identified by Zenchanka and Malchenka (2017). Engagement with the University Neighbourhoods Association has increased in recent years and measures have been taken to provide more opportunities for communication with them, such as through the creation of the Liaison Committee. The UNA has been equally striving to expand its capacity to advocate for the needs and interests of residents. As discussed in Chapter 4, the UNA has been maturing as an organization by incorporating more professional positions to its administration. With the creation of the Engagement Charter, the Campus and Community Planning office has established a standardized approach to engaging residents in its residential neighbourhoods as well as with neighbouring residents, including the Musqueam, residents of Vancouver neighbourhoods bordering the University and residents of the University Endowment Lands.

Nonetheless, University Neighbourhood residents do not have a formal, political mechanism to democratically air their grievances. The University has the means and capacity to plan and develop on its land with seemingly little oversight or accountability to the Province. Yet, residents do not have any recourse to voice their complaints or displeasure through an elected representative. The Ministerial Order that accompanied MEVA, which requires community engagement to occur as part of the planning and development processes, is the only provincial policy that speaks to consideration for residents of UBC's neighbourhoods. Even though UBC and the UNA are making strides to ameliorate resident representation and engagement, the lack of a local level democratic institution means residents will continue to be without political representation.

According to Zenchanka and Malchenka (2017), all sectors of a University must share an internalized sense of responsibility to achieving sustainable development for it to be successful. One UBC's unique capacities is its ability to facilitate connections across the University's faculty, staff and students to collectively work toward a common sustainable development goal.

The SEEDS program, described in Chapter 6, provides avenues for these three groups to engage in innovative projects in sustainable development at UBC and is delivered by Campus and Community Planning. Through faculty research projects and University initiatives, students are given the opportunity to develop solutions to sustainable development challenges. At the time of this research project, there were 400 faculty investigating sustainable development-related topics at UBC. Of that long list of researchers, sixteen were focused on a research topic related to community and regional planning (UBC Sustainability website, 2019). Furthermore, the UBC Sustainability Initiative has curated a list of 600 undergraduate and graduate courses that touch on one or all dimensions (environmental, social and economic) of sustainable development.

7.3 Economic Impetus and the Growth Coalition

Similar to leadership and the steering core, the growth coalition has been dedicated to enabling property development on UBC's non-institutional lands explicitly for creating a new stream of revenue for the University. Although the concept of a growth coalition was originally intended to describe urban development within a city, the concept is appropriate for UBC's context as well. Universities were once limited to playing a supporting role in urban development growth coalitions. However, a group of dedicated development boosters formed to actively attract and promote investment in property develop at UBC, making it one of Metro Vancouver's major development sites.

The purpose of the Properties Trust and its trustee UBC Properties Investments Ltd. is to enable the University to profit from the development of its non-institutional land, which it has done very effectively. Since the late 1990s, UBC's endowment has grown substantially, swelling to over $2.1 billion in 2018 from $121 million in 1989, more than a seventeen fold increase in 30 years. To manage its portfolio of endowment fund investments, UBC established another GBE called IMANT (UBC Investment Management Trust). Through IMANT, UBC's Endowment Fund has diversified into several different investment funds, two in particular are in keeping with its commitment to sustainable development. The Sustainable Futures Fund invests in best-in-class companies that lower carbon emissions, minimize water, soil and air pollution and demonstrate sound social and governance practices (Dickson, 2016). Additionally, the Faculty Housing Assistance Financing Endowment is dedicated to supporting faculty with their housing needs (UBC Board of Governors, 2017).

UBC's growth coalition began with leadership figures Bob Lee, Dr. David Strangway, Al Poettcker. The development they promoted and facilitated through the commodification of UBC's non-institutional land was the University's initial shift toward entrepreneurialism. In other words, they guided UBC to engage in property development to create a new stream of revenue to support its various initiatives, a hallmark of entrepreneurial self-reliance. As a land developer, Bob Lee promoted conceptualizing UBC's endowed non-institutional land as a resource with the potential to create revenue for the University through residential and commercial development.

The coalition expanded to include the Campus and Community Planning office as it grew in capacity and expertise. The CCP plays a key role in regulating land use and development and acts as the intermediary between the University, developers and university stakeholders. Despite disagreements between UBC and Metro Vancouver in the past, the current town-gown relationship is cooperative, evidenced by UBC's MOUs with both Metro Vancouver and the City of Vancouver. Their planning and development activities are fundamentally aligned and have influenced those of UBC throughout its history. Alignment has taken place through overlap in personnel as well. Joe Stott, former Director of Campus Planning was a planner for the GVRD (Metro Vancouver) in the years before he joined the University. Likewise, Michael White, who is currently in charge of the CCP used to work for the City of Vancouver (UBC, n.d.).

The provincial government has also demonstrated its support for UBC's planning and development activities, most notably when it granted the University authority over its land use and development. When Metro Vancouver moved to create a zoning bylaw for UBC's campus, it threatened to curtail development on UBC's campus. Stephen Toope, University president of the day, invoked the protection of academic freedom when he lobbied the provincial government to intervene. The former politician Stephen Owen was likely the lynch pin in moving the issue forward with the BC Liberal government of the time through use of social capital with his connections. Social capital is an important factor to achieving an end goal when it relies on the cooperation and participation of a diversity of people. This applies as much to planning and development at UBC as it does to implementing sustainable development. Strong interpersonal relationships between the current leaders of the CCP, Michael White and the Properties Trust, Aubrey Kelly have set the tone of cooperation in areas of planning and development which trickle down to the rest of each organization (Interviewee 1, 2, 5).

Logan and Molotch indicate a tactic to create a broad consensus in support of development is by linking development to a sentiment that has broad appeal, like civic pride. In a similar way, development at UBC is often framed in terms of creating a vibrant campus community. Stephen Toope likened UBC's freedom to develop its lands to the University's academic freedom, which was an effective approach to garnering support from the provincial government.

Members of the growth coalition, referred to by Logan and Molotch as place entrepreneurs, are keen to identify new opportunities to capitalize on the value of land. Two characteristics of an entrepreneurial university complimenting this inclination are an expanded development periphery and a diversified funding base. UBC exhibits these features which account for its ongoing motivation to identify new opportunities to leverage its land and resources for new projects. A few examples of potential future projects include the anticipated redevelopment of the Acadia Park student housing complex for families into high rise developments and the establishment of a new GBE to provide student housing (UBC Student Residence, n.d.). A future trust would subsume all responsibilities, assets and debts in UBC's existing Student Housing, Food Services and Conferences and Accommodation organizations (UBC Student Residence, n.d.). A trust would allow for a higher borrowing limit to finance projects while also enabling the University to profit from the combined activities of the three organizations, including student housing which would certainly be a contentious issue at the University. UBC has also indicated interest in partnering with other investors to help finance the extension of the future Broadway Rapid Transit line from Arbutus out to the University, which is a stark departure from UBC's core academic activities and current development projects.

For both land development and sustainability, UBC benefits from coalitions champions and supporters who have advocated for both throughout their evolution. The University's entrepreneurialism is a function of its growth coalition and sustainability coalition because both are examples of how the University's culture and environment have been permissive enough to allow for the development and sustainability ambitions to be pursued. As a university, UBC's is motivated by more than financial gain, and making decisions that are in its best interest cover a broad set of reasons. While financial gain was a leading impetus for land development, creating a more sustainable and full-time campus community eventually began to enter the narrative. Both

financial and sustainable arguments for development demonstrate the multifaceted entrepreneurial character of the University.

7.4 Criticism of UBC's Development

UBC's property development has been economically beneficial to the University, but has also drawn criticism. While Government Business Enterprises, notably the Properties Trust have been instrumental to UBC's ability to generate new sources of revenue, they are also problematic because they are not subject to the same accountability as public institutions are even though the University is the sole shareholder and benefiter. For example, a request for information was made under the Freedom of Information and Protection of Privacy Act (FIPPA) for meeting minutes, annual reports and salary records for three of UBC's GBEs: the Properties Trust, the UBC Investment Management Trust (IMANT) and UBC Research Enterprises Inc. (Tromp, 2012). Even though these enterprises are wholly-owned by the UBC which is the sole shareholder of each, the request was denied. In refusing the request, the Board of Governors said that it did not have control over these enterprises, and they were therefore not subject to FIPPA, which only applies to public entities. Initially, an adjudicator from the Office of Information and Privacy Commissioner ruled against UBC, pointing out the fact the University is the sole shareholder in these enterprises and does indeed have control. However, a BC Supreme Court ruling overturned that decision saying the enterprises were not in fact covered by FIPPA, and the corporate veil must not be pierced (Tromp, 2012).

UBC's development activities have been criticized for focusing too heavily on facilitating more development for what appears to be an offshore market rather than easing the financial burden of students, staff and faculty members (Interviewee 2 and 4). Given the unaffordability of housing in Metro Vancouver and the challenges faced by students, staff and faculty, UBC could be approaching housing as more of a social venture as opposed to a uniquely market driven enterprise. However, this would result in a lower rate of return on investment which could be perceived as a breach of the fiduciary duties of the Board of Governors and Properties Trust, a strictly capitalist point of view (Interviewee 4). And the University continues with investment plans to add more housing through new greenfield developments like Stadium Road and future higher density redevelopment areas like Acadia Park. Part of UBC's enthusiasm for and potential financial contribution to an extension of a large scale mass transit line out to its campus is that it

would facilitate the ongoing densification of housing on campus. An investment of $300 million in the transit line would be easily recouped through housing sales (Interviewee 4).

While UBC continues to justify its development activities and growing the endowment fund as supporting its academic mission, critics point out there isn't a need to continue growing the fund as it is already quite large to support the University's academic endeavors. Furthermore, as the endowment continues to grow, investment appears to be focused on enhancing students' experiences rather than invest in better conditions for education at the University (Interviewee 4).

7.5 Conclusion

Throughout my examination, the feature that emerges as the single most important to UBC achieving its sophisticated level of planning, development and sustainable development is leadership. Granted, UBC has been presented with a unique set of circumstances enabling its evolution to the city-like institution it is today. However, it is difficult to imagine that the University would have developed into the same institution in the absence of the transformative leadership figures discussed in this research project. Similarly, the expansion of UBC's internal capacity to productively undertake planning, development and sustainable development initiatives has been a product of strong leadership, an investment in staff and an eventual institutionalization of knowledge and expertise. Even though property development doesn't enjoy the same near universal support from the UBC community as sustainable development, it is firmly entrenched at the University. The economic incentives for UBC are too compelling for it to put an end to its development activities.

While UBC has taken measures to bridge the democratic gap that exists for its neighbourhood residents, the fact remains that residents don't have the same politically representative bodies in place as municipalities, which in turn means they don't have mechanism to effectuate any change in leadership when they are displeased with decision-making. When considering the pace and scale of change taking place at UBC, one can't help but wonder if the lack of any democratic bodies has enabled the development of new neighbourhoods as well as the implementation of effective sustainability policies.

8. Conclusion

The purpose of this research project was to investigate land use planning, property development and sustainable development at the University of British Columbia on its Vancouver Campus. The research has focused on the roles that UBC's Campus and Community Planning office and the Properties Trust play in planning and property development at UBC, as well as how sustainable development is integrated into these activities. To produce a clear understanding of how UBC arrived at its current state of affairs, this research project has also delved into the foundations of UBC's planning, property development and sustainable development. Through extensive document research using a wide variety of sources and semi-structured interviews with five interviewees knowledgeable about UBC's activities, valuable information pertaining to the background, the organizations, the influential individuals and the procedures relevant to this project was gathered. By bringing all of these elements together, a comprehensive understanding of land use planning, property development and sustainable development at UBC has been created.

In this final chapter, the research questions guiding this case study are revisited, the key findings are summarized, and recommendations are outlined for other universities with respect to planning, property development and meaningful incorporating sustainable development into operations and design.

8.1 Revisiting the Research Questions

In the introductory chapter, I proposed four (Q1-Q4) research questions to guide the inquiry. Each is repeated and answered in summary below.

Q1. What are the key features of land use planning and property development at UBC?

Paramount to land use planning and property development at UBC are the two responsible organizations which are Campus and Community Planning office and UBC's Properties Trust. The Campus & Community Planning (CCP) office acts, among other things, as the planning, regulatory and permitting authority at UBC. The CCP has developed organizational capacity commensurate to managing all land use planning, transportation, engineering, public engagement, and the related administrative responsibilities related to property development on UBC's institutional and non-institutional lands. Land use is guided by UBC's Land Use Plan, a

number of neighbourhood plans, such as the Wesbrook Place Neighbourhood Plan, and other secondary plans such as UBC's Transportation Plan, Housing Action Plan and Engagement Charter.

The Properties Trust is UBC's arm's length master developer responsible for project tendering and managing all non-institutional property development at UBC, and project manages institutional projects in conjunction Faculties and UBC's Capital Planning Department. The Properties Trust is a Government Benefit Enterprise (GBE) and is wholly-owned by UBC. As a GBE, the Properties Trust can engage in for-profit activities and borrow funds in a manner UBC is unable to as a public institution. The Properties Trust is also is insulated from FIPPA requests since it is legally considered a separate corporate entity which has proven to be one of its contentious characteristics. The CCP and Properties Trust work together to deliver property development projects at the University.

UBC's Board of Governors fully supports the planning and development activities on the University's land and provides direction through its policies, particularly Policy 92: Land Use and Permitting. Through its Property Committee, it is responsible for overseeing the Properties Trust.

The Municipal Enabling and Validating Act of 2010 transferred authority to UBC for all land use decisions on its institutional and non-institutional lands. Based on my research, no other university in Canada has such absolute control over land use on their campus. This is an exceptional feature of planning and property development at UBC.

Q1a. What are the underlying conditions and motivations that led to UBC planning and developing its land?

The primary motivating factor for property development on UBC's non-institutional lands has been to create a source of revenue to support the academic mission of the University. In this regard, UBC has been very successful. Property development has not been the only contributing factor to UBC's increasing revenue streams, as student enrollment increases have also contributed. Nonetheless, property development accounts for a significant portion of Endowment Fund growth. Figure 8.1 illustrates the growth of the Endowment Fund since 1989

to 2018, which grew from $121 million to approximately $2.2 billion, marginally more than a seventeen fold increase in 30 years (Figure 8.1).

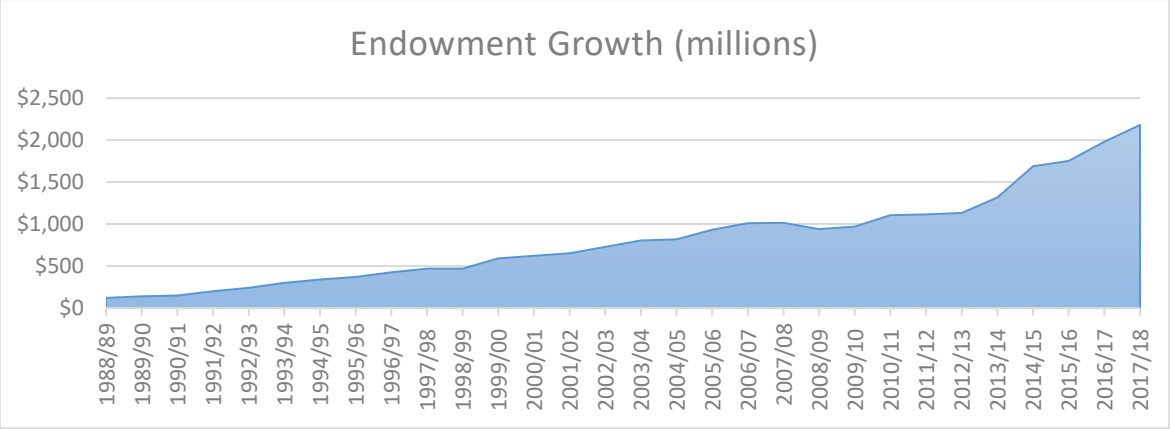


Figure 8.1 Growth of UBC's Endowment Fund 1989-2018 (UBC Annual Reports, 1998-2018)

Building a complete and sustainable campus community with amenities to support a full time residential population became part of the reasoning for property development. UBC had the goal of shifting away from being a commuter campus to becoming a university town able to support students, staff and faculty. Creating the university town has facilitated the growth of the of the student body, staff and faculty and increased the residential population to 19,000.

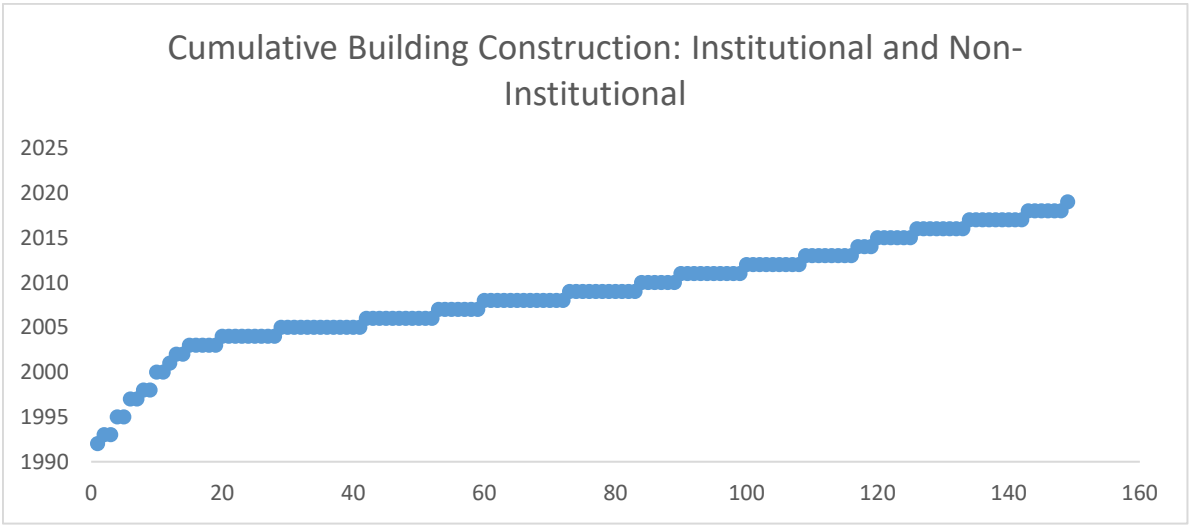


Figure 8.2 Institutional and Non-institutional Buildings Completed and Under Construction 1992-2019 (UBC Properties Trust, n.d.)

Over the same time period, the number of institutional and non-institutional buildings built at UBC increased by 148 structures, shown in Figure 8.2. Since 2007, 43 of the new buildings have been certified under REAP or LEED programs which accounts for 29% of the buildings represented in Figure 8.2. UBC requires all new buildings to be certified under either

program, which means there still remains a gap in meeting that requirement. However, many buildings are registered and are seeking certification (UBC Sustainability Performance Chart, 2018).

Q2. What were the contributing factors that led to sustainable development becoming a leading objective at UBC?

Key members of UBC's leadership and faculty strongly believed the ongoing environmental degradation had to be counteracted. UBC President Dr. David Strangway was instrumental to initiating UBC's commitment to sustainable development by signing the Talloires Declaration and the Halifax Declaration in the early 1990s. In 1997, the Board of Governors instituted Canada's first sustainable development policy at a university to provide direction and allocate responsibility with Policy 5: Sustainable Development. Champions of sustainable development Freda Pagani and John Robinson were also major factors in raising its profile. Pagani established the Campus Sustainability Office and tackled several sustainable development initiatives on campus, catalyzing broader action. Robinson launched the campus as a living laboratory initiative and was central to establishing the Centre for Interactive Research on Sustainability.

The Province of British Columbia was later a major agent for institutionalizing sustainable development actions through its 2008 Climate Action Act. By mandating all public institutions to strive for carbon neutrality, UBC began to more aggressively incorporate sustainable development into its institutional planning.

Q2a. In what ways is sustainable development incorporated into land use planning and land development?

Initially, UBC began to replace much of its infrastructure and either replace or retrofit many of its buildings to perform more sustainably. UBC's sustainability plans, climate action plans, and transportation plans have helped mitigate the University's GHG emissions despite UBC's physical growth. Figure 8.3 illustrates the decrease in UBC's GHG emission between 2006 when the University began collecting data to 2017. By 2017, CO_2e emissions had declined by 30% relative to 2007 emission levels, yet the University had increased its physical footprint by 21% over the same time period. The number of people coming to campus jumped as well, up

30% in student enrolment and a 19% increase in staff and faculty members (Sustain UBC: Performance Data, 2018).

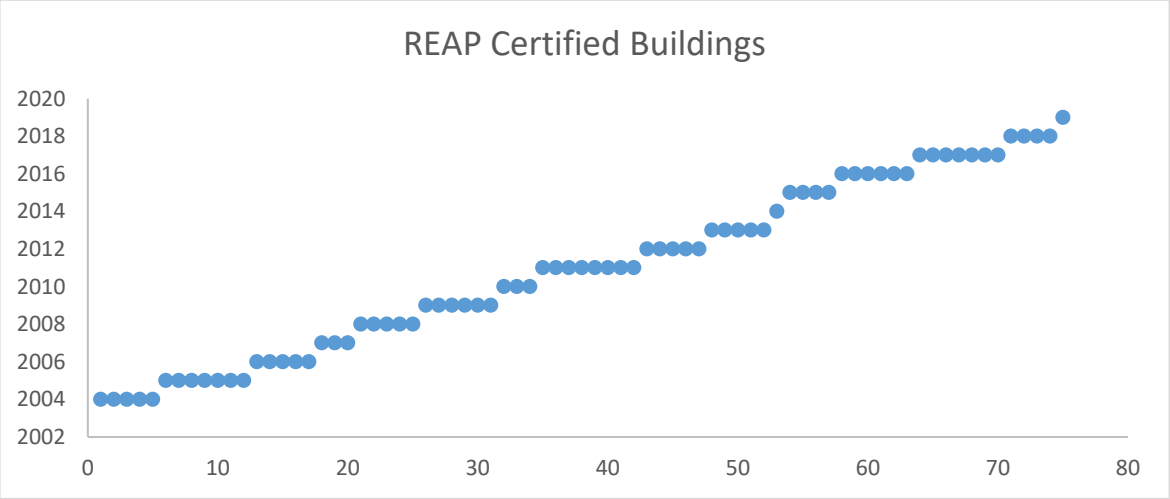


Figure 8.4 Since the REAP rating system was created, 75 buildings at UBC have been certified (UBC Properties Trust Project Portfolio, 2019)

The creation of the Residential Environmental Assessment Program (REAP) rating system has resulted in the retrofitting and construction of buildings that perform better in terms of resource and energy use. Figure 8.4 illustrates the 75 buildings certified under REAP since 2004. The University has also created new building technologies like engineered lumber that are being used in construction projects around its campus, and have been successfully marketized.

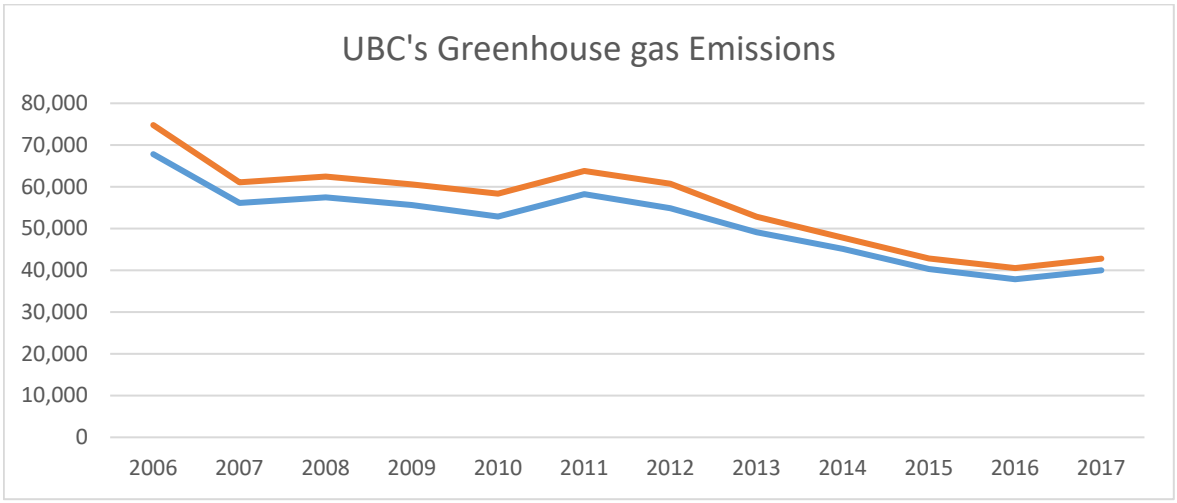


Figure 8.3 UBC's greenhouse gas emissions between 2006 and 2017. The blue line indicates the UBC's direct GHG emissions and the orange line indicates the combination of direct and GHG emissions from off-campus electricity production (UBC Sustainability, 2006-2017)

All of UBC's planning incorporates sustainable development, from the University's high level strategic plan, its Land Use Plan, to its neighbourhood plans. Wesbrook Place Neighbourhood Plan, for instance, demonstrates how sustainable practices have been incorporated into the planning and design at a neighbourhood scale. While alternative energy and environmentally friendly materials are important components to developing more sustainably, designing an urban environment that provides more mobility options and is conscious of how the built environment interfaces with the surrounding natural environment are equally essential.

Q3. In what ways has land development created new relationships and responsibilities for UBC?

UBC's relationship with residents living on its non-institutional lands has evolved as the size of the population has grown. While the University Neighbourhood Association is responsible for providing some municipal-like services to the residential neighbourhoods, the organization also represents the interests of residents in the absence of democratic representation. The CCP is responsible for liaising with the UNA on matters concerning residents. Recognizing the increased importance community consultation with university residents as well as other neighbouring resident stakeholders, the CCP created the Engagement Charter to articulate the guiding principles it would follow when engaging all stakeholders. To better represent residents and provide services, the UNA has undergone an organizational review to identify in what ways it can change and improve in response to the needs of growing residential population that requires more robust representation and increased service delivery. The creation of the Liaison Committee is one measure taken to provide more opportunities for communication with the UNA as well. In addition to improved avenues for communication and engagement, UBC and the Properties Trust are providing financial support to the UNA to offset the budgetary constraints from a decline in revenue from the Service Levy.

With the creation of the UBC Real Estate Corporation, the Properties Trust predecessor, the University's relationship with its land changed to leverage it for financial gains. Consequently, the University interfaces with the market economy in ways it had not done before. For some members of UBC's Faculty, using the University's land to generate revenue strays from the University's academic mission and prioritizes wealth creation over providing the necessary housing and services for its faculty, staff and students. Although UBC does provide housing, the cost is still prohibitively high for many faculty, staff and students.

UBC's relationship with Metro Vancouver and the City of Vancouver has shifted as a result of the Municipalities Enabling and Validating Act (MEVA) in 2010, putting the University on a similar land use regulatory footing as the two local governments. Although the town-gown relationship has experienced tension in the past, UBC's relationships with the city and regional district are now collaborative, exemplified by the Memorandum of Understandings that exist between UBC and both local governments.

With more development and a growing on campus population comes an increased need for public transportation. UBC is among a group of proponents pushing for rapid transit expansion out to UBC, whether that takes the form of light rail or subway is yet to be decided. Some would argue the motivating factor for expanding rapid transit is driven by desire to facilitate more people living at UBC as there are new developments currently being planned as well as existing areas of campus slated for redevelopment.

UBC's relationship with developers was not explored in detail in this research, it nonetheless remains an important relationship worth exploring in more depth. Prominent developers have been instrumental in promoting the value of property development at UBC.

Q4. What lessons can other universities, such as the University of Manitoba draw from UBC's experiences?

While UBC is a unique case, this study identifies several lessons that other universities could apply regardless of its size or sophistication.

Everything UBC has accomplished fundamentally stems from strong and decisive leadership. True visionary leadership is contextual and develops organically, so it was fortuitous for UBC to have a confluence of the right individuals as champions. Whether it concerns property development or sustainable development, a university requires strong leadership with a clear vision of what the institutional goals are and how the university's activities will work toward achieving them. Support and commitment must come from the university's administration as well as its faculty for property development and sustainable development to be successfully undertaken and integrated. As best as possible, either of these endeavours should be linked to the university's academic mission which will help to focus efforts. University faculty and staff should be engaged to provide support and enabled to act boldly, particularly for sustainable development to be effectively incorporated into a university's operations. UBC's early retrofits illustrate the wisdom of leadership in providing an opportunity to demonstrate the

value of sustainable development practices for reducing costs and improving environmental performance. As a direct result, sustainable development measures were subsequently incorporate into long-term planning and development efforts.

For sustainable development to be successfully incorporated into planning and development, and for it to have a measurable impact on the university's efforts, it has to be an institutional policy with clear implementation strategies. Sustainable development should be recognized as a means of cost savings as much as an approach to using resources more efficiently. At UBC, faculty members were critical players in championing sustainable development. A university should welcome and enable the faculty to assist in guiding its sustainable development, design, engineering and planning efforts.

The reasons for undertaking property development need to be clearly articulated and should be supportive of academic goals otherwise the university will run the risk of missing an opportunity to enhance its core academic mission. Clearly linking academic goals with land development will also help to engender support from the university community. If housing for the university community, including housing for foreign students or visiting scholars, is neglected, this would be a missed opportunity for the university from both a community and financial perspective. Additionally, a university could lack the support from the university community if their needs are not addressed as part of a project.

Consulting the university community should be a cornerstone to any property development initiative to accurately gauge what their needs and desires are as well as to foster buy-in. A university developing its land should be mindful that its extended community includes the neighbouring residents who should also be part of the consultation process. The cautionary tale from UBC's experience is when the university failed to engage the community on how the UBC Farm should have been designated, leading to protests, push-back from a diversity of stakeholders and the near imposition of a zoning bylaw from Metro Vancouver.

To effectively develop its land, a university should pursue medium or higher-density developments which will do much better to accommodate a variety of people, and should include housing for students, staff and faculty. Higher densities of residents can support commercial services and community amenities. Incorporating commercial development would help to create a university community where people aren't required to leave the university for basic shopping

or leisure after classes have ended. Taken together, these factors would enable the creation of a more robust and diversified university community.

A university should not sell its land. Instead, it should make it available for development through long-term leases. Whether or not local developers are unaccustomed to developing on leased land should not deter a university from maintaining long term fee simple ownership. Since the university has a responsibility to its current and future stakeholders, decision-making with regard to property development should be done with long-term objectives in mind.

The internal planning capacity at a university is a valuable asset and should be invested in to ensure its institutional goals are reflected in its land use planning policies. If managed correctly, a campus planning office with the necessary capacity and expertise will be capable of planning for campus developments to ensure the existing campus is properly integrated with new developments and the surrounding communities. A campus planning office can more effectively coordinate with municipal planners, proponents and navigate contentious issues.

Government Business Enterprises are valuable tools to facilitate a university's development initiatives for generating new streams of revenue. GBEs should have members of the university, faculty or staff on its board of directors to ensure a diversity of perspectives from the university are represented during decision-making. Based on legal precedents, a GBE won't be accountable to the public the way a university is, however, it should guard against appearing to lack transparency. Inclusivity and effective communication with the university community would go a long way to mitigating suspicion and opposition.

A university is in a unique position to develop its land in a manner that is better than conventional approaches and can use this as an opportunity to demonstrate new and innovative approaches to sustainable planning and property development. Leveraging institutional expertise and knowledge could also be a way to showcase the university's intellectual assets and to build internal capacity and support.

8.2 Retrospect

Initially, the project proposed several more interviews with people familiar with UBC's activities as well as with people from the University of Manitoba (UofM) and the City of Winnipeg. The purpose would have been to add more detail to the case study, and to gauge the value of the case study's content to provide recommendations to the UofM's future Southwood Lands development. However, the decision was made to limit the number of interviewees to five as a result of time constraints and the limited scope of the project. Perhaps with a broader scope and more time, additional interviews could have been conducted with a representative from the City of Vancouver, Metro Vancouver, and the Province of British Columbia as well.

In retrospect, this project could have been done differently in two ways. The first way would have involved choosing a university more closely aligned with the UofM's context rather than UBC. With a closer study of the UofM's context, this type of project could have made more direct comparisons and recommendations. The second way would have involved focusing more on each theme covered in this research project. For instance, land development and planning could have investigated separately from sustainable development. Both of those topics would be independently worthy of deeper study.

8.3 Direction for Future Inquiry

Throughout the research and writing of this study, several topics beyond the scope of this project emerged as deserving of future investigation. Outlined below are four such topics.

While this case study of UBC illustrates the University's uniqueness and provides, further study into land development, planning and sustainable development at other Canadian universities would be beneficial to drawing more general conclusions regarding these topics at universities. Most Canadian universities are subject to municipal land use planning and permitting regulations, so how they navigate these regulatory landscapes while maintain working relations with their neighbouring communities would be of interest. Subsequently, more contextually appropriate recommendations could be made to the University of Manitoba and other universities in a similar situation.

Given a broader scope, this study could have benefited from a closer examination of the financial impetus for development and the establishment of a Government Business Enterprise

(GBE). Both warrant a more in depth study of GBEs and would provide valuable insight into the mechanisms involved in financing and development at a university. GBEs appear to be useful tools for government funded entities like universities to use to generate revenue and manage assets, yet they are not without controversy because they do not have to report in the same fashion as public organizations.

During this study, UBC was regularly referred to as a single monolith making decisions and taking action. However, the University is composed of several decision-making bodies, mostly notably the Board of Governors. The direction in which UBC moves is fundamentally decided by the people sitting on this board and understanding their perspective would go a long way to understanding the how and why the University is evolving and investing in the way it is. Research into the membership composition of the Board of Directors would be valuable. As was demonstrated in this research project, a member Chair of the Board of Governors Bob Lee was instrumental in UBC land development history.

This study made clear that UBC's approach to implementing sustainable develop practices into its policies, operations and developments is exceptional. Further research into sustainability initiatives at other Canadian universities would be beneficial to understanding the variety of projects that are possible. Such a study could provide other universities, such as the University of Manitoba, with inspiration and direction in implementing their own initiatives.

8.4 Closing Remarks

This case study presents UBC's evolution into a planning and property development force in the Metro Vancouver region. Remarkably, UBC's commitment to implementing sustainable development practices throughout its campus fundamentally influences all areas of planning and development. From the outset, the common denominator at UBC was strong leadership from university administrators and faculty members. Both property development and sustainable development have had champions to advocate for their value to the University. Land development in particular benefited from the support of a growth coalition made up of university administrators, faculty members, university governors and politicians. With the advent of the Municipalities Enabling and Validating Act, UBC gained unprecedented statutory authority over its land use which spurred the growth of its planning office to manage the University's new land use responsibilities which also includes addressing the needs of university neighbourhood

residents. Taken together, UBC's activities collectively describe an entrepreneurial university, one that has acted and advocated in for its own best interest. While critics point to how UBC has prioritized economic considerations through property development over the needs of its students, staff and faculty, land use planning, land development and sustainable development are all worthy of praise and emulation. Granted, this UBC case study discusses the University's unique set of circumstances, this study nevertheless demonstrates how university-based planning and property development can effectively integrate sustainable development practices to create an exemplary urban environment.

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Appendix A: Interview Questions for Semi-Structured Interview

The questions below are intended for interviewees from UBC. They are meant to gather information on urban development at UBC generally, and about Wesbrook Village specifically.

1. What have been the leading factors driving urban development on UBC's surplus land?

    1.1 How have they changed?

    1.2 Who have been the key players, both people and organizations?

    1.3 What are their interests and priorities?

    1.4 What are the working relationships between key players?

    1.5 What have been the challenges? How have they been overcome?

2. How were UBC's planning and development goals decided?

    2.1 Who influenced them? What interests are being served?

    2.2 How have they changed?

    2.3 In what ways has sustainability been put into practice in planning and development?

    2.4 Has policy been influenced by factors outside of UBC?

    2.5 Where do you see the need for policy to change moving forward?

3. How has your organization (C+CP, UPT, UBC Sustainability, UBC Neighbourhoods Association, etc.) OR group (Faculty, Students, Media) been instrumental or influential in developing policy and planning of urban development at UBC?

    3.1 What is your organization's interest in planning and development? Do you have any guiding principles?

    3.2 What have been some valuable partnerships?

    3.3 What have been some of the challenges or conflicts your organization has faced?

    3.4 Is the organizational structure and its operations correct? (I will show each interviewee and draft organizational chart for reference.)

4. Through what process has your organization developed into its current form?

    4.1 Who were some instrumental people?

    4.2 What precedents were considered?

    4.3 Did other university organizations play a role?

    (These questions only apply to individuals from an organization, and not unaffiliated individuals)

Appendix B: Participant Recruitment Email/Phone Script – For Prospective Interviewee from UBC

[Salutation],

My name is Mike Wakely, and I am a student in the Master of City Planning program at the University of Manitoba. I am currently completing my Master's Practicum which is investigating how the University of British Columbia plan and develop their lands. I will focus on the university organizations that are instrumental in the process of planning and facilitating urban developments at the University of British Columbia. I want to know how the different organizations collaborate, compromise, and help shape the planning and develop of UBC's land. I am also interested in how the university implements its stated planning goals in its developments.

Broadly speaking, universities can be innovative sites of urban development. Unlike conventional developers, they have a long-term self-interest in the kinds and quality of developments they pursue on their often-large tracts of land. As a result, some university developments are neighbourhood sized, mixed-use communities that are incorporating leading design practices, and innovative applications of sustainability principles. While it is important to know what kinds of developments universities are doing, it is essential to understand how they are doing it. Attached is a "Project Background Information Sheet" which will provide you with more information about this project.

My intention is for some best practices and recommendations to emerge from the UBC case study that can be offered to the University of Manitoba's Southwood Lands planning and development processes.

I would appreciate your participation in an interview in-person, or by telephone if it is more convenient for you, related to this research. The interview will take approximately 45 minutes to an hour to complete and can take place at a time and location of your choosing.

If you would like additional information, please feel free to contact me at *******@**********.ca, or call me at ***-***-****.

Thank you for your time and consideration,

Best Regards,

Mike Wakely

Master of City Planning Candidate

University of Manitoba

Appendix C: Project Information for Prospective Interview Participants

The proposed research will explore the urban development activity of the University of British Columbia, which is arguably the best example of university urban development in Canada. It has a campus planning office responsible for enacting a university's vision in the areas of land-use, transportation, and community planning. In order to implement large capital projects, real estate developments and manage university properties, the university established a properties trust, which is an arms-length non-profit subsidiary of the university. There is also an office of sustainability that creates related policies and initiatives, and provides guidance to UBC planning and development activities.

My intent is to produce a research project that examines how urban developments are planned and carried out by UBC on its land, while also effectively implementing their stated planning goals, such as sustainability. I am particularly interested in examining the working relationships between key university organizations involved, such as the properties trust and planning office. I intend for this research project to provide some recommendations to the University of Manitoba as they plan Southwood Lands. I will identify features from UBC that can serve as examples of best practices, and cautionary tales in preparation for development on Southwood Land. This case study will be exploratory and descriptive, but will also have an instrumental quality, which is to say I intend for it to provide some insight into how Southwood Land could be developed (Gray, 2014).

In this practicum, I will outline UBC's overall planning and development structure, and identify the vision and goals from the high level plans. I will assess how consistent UBC's goals are incorporated into the neighbourhood plans, and then determine how effectively they are implemented into neighbourhood developments. While I intend to direct my investigation to Wesbrook Village for a more focused view of governance, planning and development in action at UBC, I will also consider the older neighbourhoods for how they have helped to inform the more recent developments at Wesbrook Village. To this end, I will examine how the high level plans are incorporated into the university's neighbourhood plans. A neighbourhood plan is analogous to a secondary plan to the UBC Land Use Plan, and I will pay particular attention to the Wesbrook Neighbourhood Plan. Building on this work, I will then examine the implementation of the stated goals, such as sustainability, in the neighbourhood developments to determine if the plans were effective in guiding development.

I will also create an organizational chart that will reflect my understanding of the bureaucratic structure involved in planning and development. My aim is to gain insight into how the different organizations interact, collaborate, and compromise throughout the planning and development processes. I will identify the key actors involved in shaping and implementing the university's vision and goals. I'm especially interested in understanding each organizations' relationship to the university's stated goals, their interests, the challenges they encountered, and the compromises they made.

Data will be collected in a couple of ways. The first involve the content analysis of various documents relevant to the developments from the universities, such as policy and project documents, development plans, reports and media articles. The second approach will be through semi-structured interviews of key informants from UBC. I am interested in speaking to planners, members of the Properties Trust university sustainability professionals, designers, and community stakeholders. I will also interview a representative from each of the organizations currently involved in planning and development of the University of Manitoba's Southwood Lands in order to collect feedback on the value of the research to the university's project. I will create a project brief summarizing the findings from the first phase of the research, and distribute it to each interviewee in advance of the interview to inform them of the project's findings.

The goal of this research project is to answer two key main questions:

1. How can a university develop its surplus land in an innovative and sustainable manner for the long-term benefit and well-being of its community?

2. What lessons can be learned from the University of British Columbia that may be applicable to the University of Manitoba's planning and developing of Southwood Lands?

The following questions will steer this inquiry:

1. What are the key features of planning and development at UBC?
    - 1.1 How well have the stated goals of UBC been implemented in its urban developments?
    - 1.2 How were the planning and development goals decided?
    - 1.3 How has their implementation been influenced by different interests?
2. How instrumental have the different university organizations been to the planning and development process?
    - 2.1 What internal players have been central to planning and development?
    - 2.2 What challenges have there been? What compromises have been made?
    - 2.3 What have been their interests or priorities?
    - 2.4 What design and financial considerations have been made?

Appendix D: Research Participant Information and Consent Form

Research Project:	"Collaboration and Construction under the Gown: A Case Study of Urban Development at the University of British Columbia"
Principal Investigator:	Mike Wakely, Graduate Student, Master of City Planning, Faculty of Architecture, University of Manitoba
Advisory Committee:	Supervisor: David van Vliet, Associate Professor, Department of City Planning, Faculty of Architecture, University of Manitoba
	Internal Advisor: Richard Milgrom, Head and Associate Professor, Department of City Planning, Faculty of Architecture, University of Manitoba
	External Advisor: Jonathan Hildebrand, Campus Planner, University of Manitoba

Introduction

You are invited to take part in a research study. This consent form, a copy of which you can keep for your records, is intended to ensure you have consented willingly and with all necessary information. It should explain what is involved in the research and what is expected of you as a participant.

Please take time to read, understand, and review the consent form and information about the research. If you would like more information, please feel free to ask me (the Principal Investigator).

Purpose of the study

The purpose of this study is to build a case study of how the University of British Columbia plans and develops its lands. I hope this research will add to existing knowledge of how developments are planned and carried out by universities, while effectively implementing their planning goals, such as sustainability. I also hope the outcome of this research project will provide relevant recommendations to the University of Manitoba's Southwood Lands planning and development process.

This research project is a requirement of the two-year Master of City Planning program at the University of Manitoba.

Study procedures

If you participate in this study, you will be asked a series of questions about urban planning, development, and professional relationships. You can refuse to answer any question, and may end the interview at any time up to the time of the I submit the final research document to the Faculty of Graduate Studies. With your consent, the interview will be audio recorded, and transcribed. You will be given the transcription of the interview by email for your review prior to the publication of this project. If you do not consent to the interview being audio recorded, then I will take notes throughout the interview instead, and we will review the content of my notes at the end of the interview to ensure accuracy. If we do not have time to review at the end of the interview, I will provide my notes for your review by email within one day of the interview. The interview will be approximately 45 minutes to one-hour long.

Participant Risks, Benefits & Costs

There are minimal risks related to taking part in this project. I will retain your professional information to convey your expertise and background. However, we shall negotiate how you would like to be identified in the research. Since the research will be conducted at UBC where the planning and development communities are small, this does not eliminate all risk of being identified, so I will also give you the opportunity to review interview transcripts to make sure you are comfortable with your comments being public.

As a participant, you will benefit by contributing your expertise to an improved understanding of how UBC plans and develops its land, and effectively implements its planning goals. I intend for this project to provide some insights for the future organizational structures and functions at the University of Manitoba as they will relate to planning, urban development, and sustainability for the overall benefit to the university's community.

Audiotaping & Confidentiality

With your permission, the interviews will be audio recorded and transcribed later to ensure accuracy. If you do not agree to being audio taped, I will then take detailed notes during the interview. In order to ensure accuracy, I will review my notes with you once the interview has come to an end.

Participants in the study will be involved in planning and development at UBC, or will be a stakeholder such as a community member. I expect to find differences in opinion across professions, so it is important for me to keep participants' position and organizational information. How I refer to you in my research will be decided by you and the level of anonymity you would like to have. In every case, I will remove identifiers such as names and employer information from transcripts. You will have the opportunity to review transcripts within five weeks of the interview.

Data, including audio files and transcripts, will be stored in an encrypted file folder and on a password protected computer to which only I will have access. According to Graduate Studies rules and the Advisor – Student Guidelines, my research supervisor will have the right to examine the data. Other committee members will not have access to the raw data. All audio files, transcripts, consent forms and other related data will be destroyed within one year of graduation, and no later than April 2021, which is the latest I have to complete this research project.

With your permission, in the event you decline to participate as an interviewee, but recommend someone else, I will request that you ask the person you recommend to contact me by email. I will then introduce myself and explain my research project.

Feedback & Debriefing

I will send you a transcript via email within five weeks of the completed interview. This gives you the opportunity to review the data for accuracy and modify comments, or indicate comments you feel should not be made public. I will provide you with a brief, non-technical summary outlining the results of my completed research. If you wish, you may request a copy of the completed research project, which I expect to be available in digital format by April 2019 at the earliest, but no later than April 2021.

Dissemination of Results

I will disseminate study findings as a hardcopy in the University of Manitoba Architecture/Fine Arts library, as a publicly accessible digital copy on University of Manitoba's thesis database (https://mspace.lib.umanitoba.ca/), and as a presentation at my oral defense. You may choose to receive a digital copy once finalized.

Although I don't currently anticipate presenting my findings at a conference or publishing in a journal, there is a possibility I will pursue an opportunity if it presents itself, or if one of my committee members encourages me to seek out opportunities.

Voluntary Participation & Withdrawal from Study

Your decision to take part in this study is voluntary. If you decide to participate, you have the right to refuse to answer any question or to refuse participation in any activity, at any time. You are able to refuse participation or to withdraw from the research study at any time until 10/2018.

Statement of Consent

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Joint-Faculty Research Ethics Board (JFREB). If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Coordinator (HEC), Pinar Eskicioglu at 204-474-7122 or by email at humanethics@umanitoba.ca . A copy of this consent form has been given to you to keep for your records and reference.

If you agree or disagree to each of the following statements, please place a check mark in the appropriate box:

I have read or it has been read to me the details of this consent form. ( ) Yes ( ) No

My questions have been addressed. ( ) Yes ( ) No

I, (print name), agree to participate in this study. ( ) Yes ( ) No

I agree to have the interview audio-recorded and transcribed. ( ) Yes ( ) No

I agree to be contacted by phone or e-mail if further information is required after the interview ( ) Yes ( ) No

I agree to have the findings (which may include quotations) from this project published or presented in a manner that does not reveal my identity. ( ) Yes ( ) No

I understand that because the planning and development community at UBC is small, my identity may be deduced based on the use of the content of my interview, in spite of the researcher's best efforts to obfuscate my identity.

( ) Yes

( ) No

I agree that if I wish to withdraw from participating in this research project, I must do so before 10/2018.

( ) Yes

( ) No

Do you wish to receive a summary of the findings? ( ) Yes

( ) No

How do you wish to receive the summary? ( ) Email

( ) Mail

Address:

Participant's Signature _____ Date _____

Appendix E: Panel of Research Ethics: TCPS 2: Core Certificate of Completion

PANEL ON RESEARCH ETHICS

Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Michael Wakely

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: **21 April, 2017**

Appendix F: Ethics Approval and Renewal

UNIVERSITY OF MANITOBA | Research Ethics and Compliance

Human Ethics
208-194 Dafoe Road
Winnipeg, MB
Canada R3T 2N2
Phone +204-474-7122
Email: humanethics@umanitoba.ca

PROTOCOL APPROVAL

TO: **Michael Wakely** **(Advisor: David van Vliet)**
Principal Investigator

FROM: **Julia Witt, Chair**
Joint-Faculty Research Ethics Board (JFREB)

Re: **Protocol J2018:051 (HS22014)**
Collaboration and Construction under the Gown: A Case Study of Urban Development at the University of British Columbia

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Effective: August 2, 2018 **Expiry:** August 2, 2019

Joint-Faculty Research Ethics Board (JFREB) has reviewed and approved the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Approval is granted only for the research and purposes described in the application.
2. Any modification to the research must be submitted to JFREB for approval before implementation.
3. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
4. This approval is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
5. A Study Closure form must be submitted to JFREB when the research is complete or terminated.
6. The University of Manitoba may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans*.

Funded Protocols:
- **Please mail/e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.**

UNIVERSITY OF MANITOBA | Research Ethics and Compliance

Human Ethics
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RENEWAL APPROVAL

Date: July 18, 2019 **New Expiry: August 2, 2020**

TO: **Michael Wakely** **(Advisor: David van Vliet)**
Principal Investigator

FROM: **Julia Witt, Chair**
Joint-Faculty Research Ethics Board (JFREB)

Protocol #J2018:051 (HS22014)
"Collaboration and Construction under the Gown: A Case Study of Urban Development at the University of British Columbia"

Joint-Faculty Research Ethics Board (JFREB) has reviewed and renewed the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Any modification to the research must be submitted to JFREB for approval before implementation.
2. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
3. This renewal is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
4. A Study Closure form must be submitted to JFREB when the research is complete or terminated.

Funded Protocols:

- **Please e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer at researchgrants@umanitoba.ca**

Appendix G: List of Developments at UBC

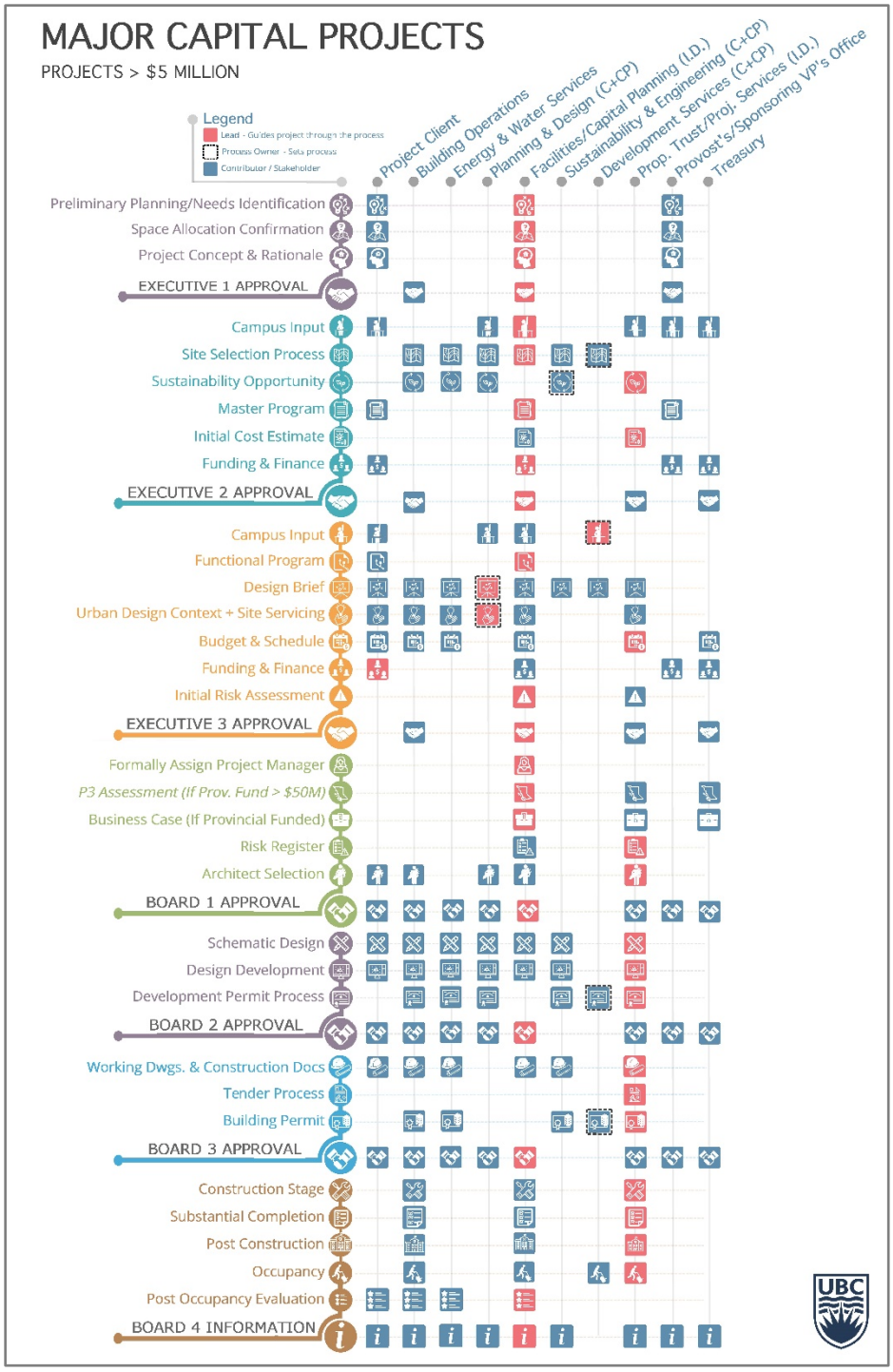
Building Name	Type	Status	Year	Certification	Developer
Hawthorn Green	Residential	Complete	2004	Standard	Bastion
Institute for Computing, Information and Cognitive Systems	Institutional	Complete	2004	Silver	Fairmont
Journey	Residential	Complete	2004	Standard	
Multi-User Facility for Functional Proteomics	Institutional	Complete	2004	silver	
Westchester	Residential	Complete	2004	Standard	
Chemical & Biological Engineering Building; Clean Energy Research Centre	Institutional	Complete	2005	silver	
Food, Nutrition & Health	Institutional	Complete	2005	LEED gold	Wesbrook Projects Ltd.
Logan Lane Townhouses	Residential	Complete	2005	Standard	
Michael Smith Laboratories	Institutional	Complete	2005	silver	UBCPT
Promontory	Residential	Complete	2005	Standard	UBCPT
Reflections	Residential	Complete	2005	Standard	UBCPT
Somerset	Residential	Complete	2005	Standard	UBCPT
Aquatic Ecosystems Research Laboratory	Institutional	Complete	2006	gold	UBCPT
Clements Green	Residential	Complete	2006	silver	UBCPT
David Strangway Building	Institutional	Complete	2006	silver	Intracorp
Faculty & Staff Housing - Tamarack House	Residential	Complete	2006	silver	
Fraser Hall	Residential	Complete	2006	Standard	Polygon
Greenwood Commons	Residential	Complete	2007	Standard	UBCPT
Legacy	Residential	Complete	2007	Silver	
Nine on the Park	Residential	Complete	2007	Standard	
Doug Mitchell Thunderbird Sports Centre	Athletic	Complete	2008	silver	
Irving K. Barber Learning Centre	Institutional	Complete	2008	Silver	Adera
Keenleyside	Residential	Complete	2008	Bronze	UBCPT
Life Sciences Centre	Institutional	Complete	2008	gold	
Pathways	Residential	Complete	2008	gold	
Crescent West	Residential	Complete	2009	silver	UBCPT
Faculty & Staff Housing - Larkspur House	Residential	Complete	2009	silver	UBCPT
Granite Terrace	Residential	Complete	2009	gold	
MBA House	Residential	Complete	2009	silver	
The Wesbrook	Residential	Complete	2009	silver	

Wesbrook Village Supermarket & Commercial/Office Building	Commercial	Complete	2009	gold	
Pacific	Residential	Complete	2010	gold	
Spirit	Residential	Complete	2010	gold	
Tapestry	Residential	Complete	2010	silver	
Allard Hall	Institutional	Complete	2011	gold	UBCPT
Centre for Interactive Research on Sustainability (CIRS)	Institutional	Complete	2011	platinum	Adera
Henry Angus	Institutional	Complete	2011	Silver	Pemberley Cascadia
Mews	Commercial	Complete	2011	gold	
Sage	Residential	Complete	2011	silver	Adera
Totem In-Fill Student Housing Project	Residential	Complete	2011	gold	Polygon
Ultima	Residential	Complete	2011	gold	
Wayne & William White Engineering Design Centre	Institutional	Complete	2011	gold	Kenstone Properties
Faculty & Staff Housing - Magnolia House & Dahlia House	Residential	Complete	2012	gold	
Pharmaceutical Sciences & Centre for Drug Research and Development	Institutional	Complete	2012	gold	
Sitka	Residential	Complete	2012	gold	Ledingham McAllister
Wesbrook Professional Centre	Commercial	Complete	2012	silver	Polygon
Yu at Wesbrook Place	Residential	Complete	2012	gold	
Academy	Residential	Complete	2013	gold	
Djavad Mowafaghian Centre for Brain Health	Institutional	Complete	2013	gold	Intracorp
Gerald McGavin UBC Rugby Centre	Athletic	Complete	2013	gold	Concert Properties
Sail	Residential	Complete	2013	platinum	
Vista Point	Residential	Complete	2013	gold	Paul Y Construction Ltd.
Student Union Building (The Nest)	Institutional	Complete	2014	platinum	Millennium Development
Engineering Student Centre	Institutional	Complete	2015	gold	Polygon
Faculty & Staff Housing - Nobel House	Residential	Complete	2015	gold	

The Robert H. Lee Alumni Centre	Institutional	Complete	2015	gold	Redekop Properties
Wesbrook Community Centre	Infrastructure	Complete	2015	gold	ASPAC
Aquatic Centre	Athletic	Complete	2016	gold	
Binning Tower	Residential	Complete	2016	gold	
Orchard Commons Mixed-Use Student Housing Development/Vantage College	Residential	Complete	2016	gold	
Ponderosa Housing Hubs - Phase 1 & 2	Residential	Complete	2016	gold	
Prodigy	Residential	Complete	2016	gold	
The Laureates	Residential	Complete	2016	gold	
Central	Residential	Complete	2017	gold	
Chan Gunn Pavilion	Institutional	Complete	2017	gold	
Faculty & Staff Housing - Webber House	Residential	Complete	2017	gold	
Library PARC (Preservation and Archives)	Institutional	Complete	2017	gold	
National Soccer Development Centre UBC Athletics and Vancouver Whitecaps Football Club Soccer Training Facility	Athletic	Complete	2017	gold	
Totem In-Fill Student Housing Project Ph.2	Residential	Complete	2017	gold	Adera
Village Square	Commercial	Complete	2017	gold	
Eton	Residential	Complete	2018	gold	
Faculty & Staff Housing - Cypress House	Residential	Complete	2018	gold	Adera
Faculty & Staff Housing - Pine House	Residential	Complete	2018	gold	UBCPT
Virtuoso	Residential	Construction	2018	gold	
Exchange Residence at Gage South	Residential	Construction	2019	gold	

(UBC Properties Trust, n.d.)

Appendix H: Major Projects Chart



(UBC Infrastructural Development, 2019)

Appendix I: Wesbrook Buildings and REAP Ratings

Development	Type	Status	Year	REAP	Developer
Sail	Residential	Complete	2013	Platinum	Adera
Pathways	Residential	Complete	2008	Gold	Adera
Granite Terrace	Residential	Complete	2009	Gold	UBCPT
Wesbrook Village Supermarket & Commercial/Office Building	Commercial	Complete	2009	Gold	
Pacific	Residential	Complete	2010	Gold	Adera
Spirit	Residential	Complete	2010	Gold	Adera
Mews	Commercial	Complete	2011	Gold	UBCPT
Ultima	Residential	Complete	2011	Gold	Adera
Faculty & Staff Housing - Magnolia House & Dahlia House	Residential	Complete	2012	Gold	UBCPT
Yu at Wesbrook Place	Residential	Complete	2012	Gold	Modern Green
Academy	Residential	Complete	2013	Gold	Polygon
Faculty & Staff Housing - Nobel House	Residential	Complete	2015	Gold	UBCPT
Binning Tower	Residential	Complete	2016	Gold	Wall Group
Prodigy	Residential	Complete	2016	Gold	Adera
The Laureates	Residential	Complete	2016	Gold	Polygon
Faculty & Staff Housing - Webber House	Residential	Complete	2017	Gold	UBCPT
Eton	Residential	Complete	2018	Gold	Polygon
Faculty & Staff Housing - Cypress House	Residential	Complete	2018	Gold	UBCPT
Faculty & Staff Housing - Pine House	Residential	Complete	2018	Gold	UBCPT
Crescent West	Residential	Complete	2009	Silver	Fairmont
Faculty & Staff Housing - Larkspur House	Residential	Complete	2009	Silver	UBCPT
MBA House	Residential	Complete	2009	Silver	UBCPT
The Wesbrook	Residential	Complete	2009	Silver	ASPAC
Tapestry	Residential	Complete	2010	Silver	Concert Properties
Sage	Residential	Complete	2011	Silver	Kenstone Properties
Wesbrook Professional Centre	Commercial	Complete	2012	Silver	
Keenleyside	Residential	Complete	2008	Bronze	UBCPT

(UBC Properties Trust, n.d.)

Appendix J: Defense Presentation

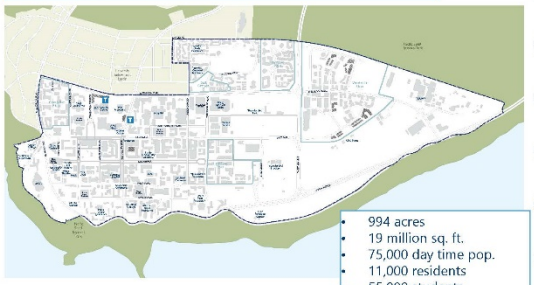
Urbanizing the Academy

UBC's Planning, Development and Sustainability Story

Mike Wakely

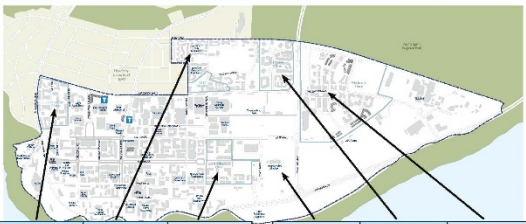
Supervisor: David Van Vliet
Internal Reader: Richard Milgrom
External Reader: Jonathan Hildebrand

Context



- 994 acres
- 19 million sq. ft.
- 75,000 day time pop.
- 11,000 residents
- 55,000 students
- 9,550 university staff
- 5,003 faculty members

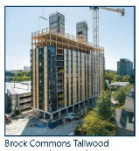
Context



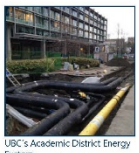
Chancellor Place	Acadia Park	Hawthorne Place	Stadium Road	Hampton Place	Wesbrook Place
1,700	1,110	1,770	2,000 (complete)	2,393	7,000 (current) 12,500 (complete)
2014	1960 80s	2007	Planning + Design	1989	2005 ongoing

Context

Context



Brock Commons Tallwood House Student Residence



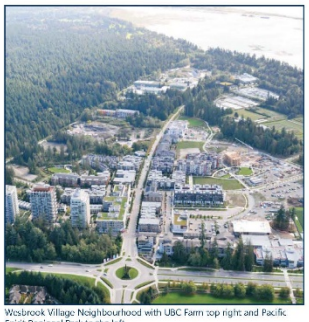
UBC's Academic District Energy System

The Centre for Interactive Research on Sustainability (CIRS)

Bioenergy Research and Demonstration Facility

Sustainable Stormwater Management

Context



Wesbrook Village Neighbourhood with UBC Farm top right and Pacific Spirit Regional Park to the left.

Wesbrook Land Use

Wesbrook Green Features

Research Questions

1. What are the key features of land use planning and property development at UBC?

    a. What are the underlying conditions and motivations that led to UBC planning and developing its land?

2. What were the contributing factors that led to sustainable development becoming a leading objective at UBC?

    a. In what ways is sustainble development incorporated into land use planning and property development?

3. In what ways has land development created new relationships and responsibilites for UBC?

4. What lessons can other universities, such as the University of Manitoba draw from UBC's experiences?

Conceptual Framework

Conceptual Framework

Universities as Developers

Perry and Wiewel (2005) compiled and examined case studies on university urban development.

The case studies largely focused on American and other foreign universities. One Canadian university was included.

Key Features of University Developments:

- Leadership
- Internal Structure
- Town-Gown Relationship
- Communication
- Financing

Conceptual Framework

Entrepreneurialism

Denotes a university's efforts to act in its own best interest toward a more self-reliant state by:

- Leveraging its intellectual and research capacity to advance the market value of its assets;
- Attracting research grants, alumni donations, and increase its reputation among universities;
- Embodying a spirit of competition.

Burton Clark's research focuses on the transformation a university undergoes toward entrepreneurialism, which he coined "Pathways of Transformation".

Key Features of an entrepreneurial university:

- Stregthened Steering Core
- Expanded Development Periphery
- Diversified Funding
- Stimulating the Academic Heartland
- Integrated Entrepreneurial Culture

Conceptual Framework

Growth Coalitions

The concept was introduced by Logan and Molotch (1987).

A diverse group of local elites, called place entrepreneurs, united by the consensus that urban growth is desirable and a universally good outcome for a community.

Property and real estate can provide the means of creating wealth through urban development and increased property values.

The imperative for growth is anchored to a local area of a growth coalition because their investments and social relations are not easily transferable to another place.

Supporting local actors include politicians, media outlets, quasi-public agenecies and universities*.

Conceptual Framework

Sustainable Development

The goal is to meet the needs of today without compromising future generations from meeting their needs.

Three core dimensions, refered to as the Triple Bottom Line:
- Environmental
- Economic
- Social

Conditions for Implementation:
- Good governance and leadership
- Stakeholder consultation and inclusion
- Evidence-based decision making
- Integrate greening initiatives
- Internalize responsibility

Methods

Case Study

Archival and Document Research

Documents types:
- Policies
- Plans
- Reports
- Memos
- Media releases
- Websites

Categorize and Analyze

Semi-Structured Interviews

Five Interviews covering:
- Planning
- Development
- Sustainability
- Residents
- Faculty

Transcribe, Code and Analyze

Written Document

Brief History

- 1908 - UBC established and endowed with 3,000 acres
- 1926 - The first concept for a residential development unveiled
- 1970s-1980s- Funding from governments declines
- 1988 - UBC establishes the UBC Real Estate Corporation
- 1989 - Hampton Place completed, UBC's first residential neighbourhood development

63 years

Brief History

- 1990 - UBC signs the Talloires and Halifax Declarations
- 1996 - GVRD adpoted the Livable Region Strategic Plan
- 1996 - UBC built its first green building, the CK Choi Building
- 1997 - UBC Real Estate Corp. changes to the UBC Properties Trust (GBE)
- 1997 - UBC Board of Govs. adopts Policy 5: Sustainable Development
- 1998 - Freda Pagani establishes the Campus Sustainability Office
- 2000 - UBC adopted its first OCP

Brief History

- 2001-2008 ECOTrek and ELECTrek programs
- 2000 - SEEDS program established
- 2002 - UNA established and Neighbours Agreement adopted
- 2004 - REAP created
- 2005 - UBC TREK 2010 adopted
- 2005 - Wesbrook Place Neighbourhood Plan adopted
- 2006 - Sustainbility Strategic Plan
- 2008 - B.C. Climate Action Plan adopted by the province

Brief History

- 2009 - Metro Vancouver imposes Zoning Bylaw
- 2009 - MEVA adopted by the provincial government
- 2009 - Board of Govs. adopts Policy 92: Land Use and Permitting
- 2009 - Place and Promise: The UBC Plan adopted
- 2009 - UBC Farm Plan adopted
- 2010 - UBC's Land Use Plan adopted
- 2010 - MOU between Vancouver and UBC
- 2010 - Climate Action Plan
- 2012 - Housing Action Plan

Brief History

Findings

Leadership and Strong Steering Core

Factors	Description
Champions	• Key individuals in leadership positions actively promoting a vision and guiding the process
Governance	• Committed and enabling governing and adminstrative bodies; enact supportive policies and funding; enable others
Policy	• Goals and priorities are formalized in policy • Decisions and actions are guided by policies

Findings

Internal Capacity and Structure

Factors	Description
Organizational Structure	• Clearly defined roles and responsibilities • Effective lines of communication and coordination
Robust Team of Professionals	• A diverse group of people with complimentary backgrounds
Experience and Expertise	• Requires skills and know-how • People with specialised knowledge • A background in undertaking relevant initiatives or projects
Policy	• Appropriate policies to guide processes

Findings

Development and Sustainability Coalitions

Factors	Description
Entrepreneurial	• Open to new and innovative ideas • Seek out new opportunities
Social Capital	• Leverages networks of relationships
Professionally Inclined	• Individuals have a background, experience or education

Research Question 1

What are the key features of land use planning and property development at UBC?

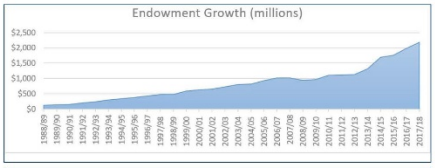
Campus and Community Planning Office
UBC Properties Trust (GBE)
Board of Governors
Policy Regime/Legislation

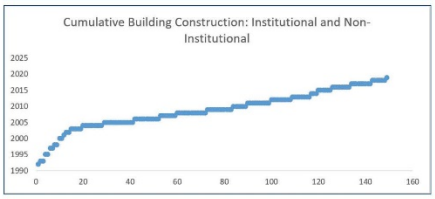
Research Question 1a

What are the underlying conditions and motivations that led to UBC planning and developing its land?

Revenue Creation
Shift from commuter campus to campus community
Create a complete and sustainable campus community

Research Question 1a





Research Question 2

What were the contributing factors that led to sustainable development becoming a leading objective at UBC?

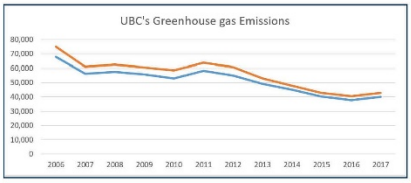
Leadership/Champions
Administrative Commitment
Policy Regime/Legislation
Dedicated Internal Organization
Early Successful Initiatives
Programming

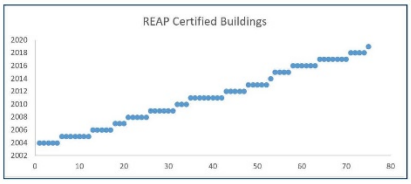
Research Question 2a

In what ways is sustainable development incorporated into land use planning and land development?

Land Use Plan and Neighbourhood Plans
Building Design and Construction
Residential Environmental Assessment Program (REAP)
District Energy

Research Question 2a





Research Question 3

In what ways has land development created new relationships and responsibilities for UBC?

University Residents (UNA)
Metro Vancouver
Land
Market

Research Question 4

What lessons can other universities, such as the University of Manitoba draw from UBC's experiences?

Leadership is fundamental
Academic mission and goals should remain central
Administrative commitment is paramount
Build internal capacity - value planning
Include the university community

Research Question 4 con't

What lessons can other universities, such as the University of Manitoba draw from UBC's experiences?

Do not sell land
Develop medium to high density
Address the needs of the university community
Establish a development entity (GBE)
Be bold

Final Thoughts

Ensure the right leaders are in place
Focus on internal capacity and structure
Leverage existing knowledge and expertise
Policies guide, but do not stimulate action
Pilot projects are valuable