Designing for Food, Community and Multi-Use Space: Lessons Learned from Grassroots Urban Agriculture

by

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ABSTRACT

DESIGNING FOR FOOD, COMMUNITY AND MULTI-USE SPACE: LESSONS LEARNED FROM GRASSROOTS URBAN AGRICULTURE

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Grassroots urban agriculture projects are highly interactive spaces, allowing people from different socio-cultural and economic backgrounds to learn, play and work together. They offer unconventional urban greenspace and recreational opportunities and contribute to urbanites’ understanding of how food is grown. Landscape architects can contribute numerous professional strengths to the design of these food-oriented landscapes. Case study research at Hackney City Farm, UK, and Prinzessinnengarten, Germany, illustrates that grassroots projects could benefit from a strong spatial design and increased layering of on-site uses in order to serve a greater cross-section of the community than at present. This research culminates in the design of a multifunctional food-oriented landscape at Brant Avenue Public School, Guelph, and is shaped by the case study findings and literature on participatory design and facilitation. The research demonstrates how landscape architects can work with community groups to provide a high diversity of on-site uses and user experience.

KEYWORDS
Participatory design
Prinzessinnengarten
Hackney City Farm
Multifunctional space
Temporary use projects
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CHAPTER 1.0 - INTRODUCTION

Urban agriculture, the production of food in, or very near, the city, offers numerous social, environmental and economic benefits (de la Salle & Holland, 2010; Mougeot, 2006; Oates & Patterson, 2009; Viljoen, Bohn & Howe, 2005). This thesis focuses primarily on community-based urban agriculture (UA) projects. It seeks to fill a gap in the literature on the social benefits of UA as well as investigate the multifunctional character of these particular landscapes. Literature in the urban design field focuses primarily on the environmental and economic benefits of UA. Planners and architects have contributed the majority of the scholarship while landscape architects are only just beginning to enter the academic discussion (Doran, 2005; Edwards & Mercer, 2010; Mendes, Balmer, Kaethler & Rhoads, 2008; Viljoen, 2005). In public practise, landscape architects are increasingly charged with balancing environmental, economic and social needs in the design of public spaces and are well equipped to create multifunctional food-oriented landscapes.

Underlying this research project is the premise that when we create urban spaces with diverse opportunities for experience, they will serve a large proportion of the surrounding community. Designing multifunctional food-oriented landscapes can therefore help further the cause of urban agriculture. Landscape architects can offer spatial design and facilitation skills and not only help to structure these multifunctional landscapes but also work with community groups to ensure that they serve diverse populations and demographics.

In the primary phase of this study, I sought to understand how exemplary multifunctional UA projects operate and what they contribute to the social lives of urbanites. UA is not a mainstream activity. In the Western world, much of the push for growing food in cities is coming from academia and
the grassroots. While architects are at the forefront of innovative theoretical approaches to growing food in cities, most of the innovation currently being practised in the city is led by grassroots organizations (Center for Studies in Food Security, 2011; City Farmer, 2012; Nasr, Komisar & Gorgolewski, 2009). Thus, community-based projects are where one must look to understand both where the movement has come from and the strengths it has developed.

This research project investigates two grassroots UA projects, one in Berlin, Germany, and one in London, England. These projects must be understood as community-led projects first and foremost, and an examination of their strengths and challenges from an organizational and social standpoint will form the core of these case studies. The projects were also analyzed spatially to determine if or how a professional design might help them better meet their aims. This analysis illustrates that these grassroots projects would, indeed, benefit from a stronger spatial design and a more coherent spatial organization. The analysis also illustrates that they could foster greater multifunctionality.

In the fall of 2011, the School of Environmental Design and Rural Development’s Community Outreach Centre received an application for help with a “neighbourhood hub garden” and “outdoor living community center” at Brant Avenue Public School in Guelph Ontario (Waraich, 2011). This project provided an opportunity to apply lessons from case study research in a real world setting. The resulting project used participatory methods in order to maintain its community-based character. These methods ensured that the community organizers and members would be able to shape the project to meet their specific wants and needs, and to continue to maintain ownership of it in the future. The project exhibits multifunctionality, a coherent circulation system and the flexibility to evolve with the community over time. It serves as an illustration of the type of project that can be created by harnessing the strengths of community-based UA projects and the skills of landscape architects.
1.1 Project overview

This thesis is divided into five chapters. Chapter 2.0 details the relevant literature on UA and multifunctional landscapes and provides the rationale and grounding for this study. Chapter 3.0 explains the methodology of this study which includes case study research, focused literature review, a charrette and engaged action research. Chapter 4.0 provides case studies of Prinzessinnengarten, Berlin, Germany and Hackney City Farm, London, England. Each case study includes an explanation of urban and socio-economic context, project aim and vision and an analysis of strengths and challenges. A summary of these findings can be found in section 4.3. Chapter 5.0 describes the approach used to design the Brant Avenue Community Garden. Section 5.1 begins with a focused literature review of participatory design and facilitation and details of the charrette research conducted in January 2012. Finally, the Brant project and participatory process is detailed in section 5.2 and the design is presented and discussed.
CHAPTER 2.0 - LITERATURE REVIEW

This chapter serves to ground this research project by explaining the rationale for UA as well as multifunctional landscapes. It serves as a backdrop for understanding the case studies that will be presented in Chapter 4.0 and the community garden design detailed in Chapter 5.0.

2.1 Current food system

Our food system has become global in nature. Large industrial farms produce vast quantities of single crops which are then shipped around the planet. We are at a distance from our food with far fewer people engaging in farming today than a generation ago. Humanity has become a highly urban animal; whereas in 1900 only 13% of the global population lived in urban settings, 60% is expected to live in cities by 2030 (de la Salle & Holland, 2010). As cities expand outward, urbanization continues to engulf the surrounding natural and agricultural landscape (Mougeot, 2006). Large industrial farms are replacing independent family farms in Ontario, and making a livelihood for the independent family farmer is nearly impossible today (Lister, 2008). Many Southern Ontario farmers rely on second incomes to support their families and do not see a future in farming for their children in the current system (McGee, 2010). While a global trade for luxury food items has been in existence for thousands of years, today’s globalized food system facilitates the import of staple food items to our grocery stores. Indeed, today food travels further to get to our plate than 50 years ago (de la Salle and Holland, 2010; Nasr, MacRae & Kuhns, 2010). Lister (2008) notes that in 1960 the majority of Toronto’s food came from within 350 kilometres of the city. In North America today, however, food travels an average of 2500-3000km from field to table (Kokola et al., 2008; Hester, 2006; Lister, 2008).
An excessive and illogical amount of transport is now common in the global food system. Long-distance transport has become commonplace for foods that we have the capacity to grow locally. For example, in 1997, the UK produced enough milk to export 270 million litres of it. However, it also imported 126 million litres. “(T)he transport of food and drink products around the UK increased by 50 per cent in the past 15 years, while the amount of food being transported increased only by 16 per cent” (Paxton, 2005, p. 41). Our global food trade is expensive from an energy standpoint, not only in terms of fuel but also for packaging and storage. Chemical inputs such as pesticides and fertilizers further contribute to the large energy costs of our global food system (de la Salle & Holland, 2010; Gerrard, 2010). As Bohn and Viljoen (2005) explain,

> [t]he energy – mainly non-renewable – currently used for conventional food production...exceeds by far the energy received in return from consuming the produced food. The unlimited, daily usage of non-renewable energy contributes significantly to global resource depletion and, through greenhouse gas emissions, to global warming (p. 13).

Though our current agricultural system has facilitated a record increase in global food production, this increased productivity has been coupled with decreasing health, both for humans and the environment (de la Salle & Holland, 2010; Gerrard, 2010, Kokola et al., 2008). Genetically modified crops are commonplace as is heavy pesticide use, both during production and post-harvest. In fact, the UK Department of Health recommends peeling orchard fruit because of residues remaining from post-harvest pesticide applications, intended to preserve fruit for transport (Paxton, 2005). Antibiotic use in meat production is rampant, with 70% of all antibiotic use in the United States being fed to healthy pigs, poultry and cattle. In turn, antibiotic resistant strains of bacteria are causing serious health risks in humans (de la Salle & Holland, 2010).

Current agricultural practises threaten the productivity and health of the biosphere. Conventional agriculture is linked to habitat destruction and a loss of biodiversity in a variety of ways.
Petrochemical fertilizer leaches into groundwater and disrupt ecosystem balance, threatening flora and fauna. Widespread pesticide use reduces biodiversity as it kills off beneficial and harmful insects alike. Monocultural farming results in rural landscapes that are often less species rich than urban areas. The expansion of farmland in rural areas further contributes to a loss of biodiversity through habitat destruction (Viljoen, Bohn & Howe, 2005). As the genetic basis of our food crops continues to narrow, we reduce our ability to withstand crop failures, thereby threatening our future food security. Finally, the land itself is suffering as we continue to apply copious chemicals, resulting in increased desertification and salinization worldwide (de la Salle & Holland, 2010).

In the Western world, our relationship to food is also damaged. Agriculture has been removed from the urban structure, with a strict urban/rural divide apparent in North American cities for the past 50 years (Lawson, 2005). The idea that food production has no place in the city has become deeply entrenched in our psyches (Smit, Ratta, & Nasr, 1996). Our urban parks are largely ornamental in character comprised of vast expanses of lawns and non-native trees, both of which do little for the ecological health of our cities. For the majority of city-dwellers, food is primarily obtained from the grocery store where it is neatly packaged and removed from its context. The selection of food available in the average Western grocery store is generally consistent year-round, divorced from the natural seasonality of food crops (de la Salle & Holland, 2010). As Viljoen, Bohn & Howe (2005) note, “[t]he increased disconnection between consumers and producers of food means that urban populations have little connection with food production and thus have a limited knowledge of the issues associated with it” (p. 21).
2.2 Urban agriculture

UA offers an alternative way to grow, consume and understand food. At its most basic, it is the production of food in or very near the city (Gerrard, 2010; Lister, 2008). UA encompasses a great diversity of practices, including the production of animals, fish, vegetables and fruit. There are myriad reasons for growing food in or near cities, such as reducing the distance food travels from production to consumption, strengthening the local economy, re-acquainting urban dwellers with animal husbandry techniques and providing fresh vegetables for one’s own family. UA is practised in a variety of settings, from rooftops to backyards to abandoned lots, as well as on a larger scale in greenhouses and urban farms. UA seeks to re-connect us with our food and to improve the health of the local ecosystem. It emphasizes local economic and community development and facilitates a closer connection with the natural systems that sustain us (Kokola et al., 2008; Mendes, Balmer, Kaethler & Rhoads, 2008; Oates & Patterson, 2009; Smit et al., 1996).

UA has much to offer the city from an environmental standpoint. Compared with rural farming, UA uses far fewer resources on less land. Urban farmers in developing countries have been shown to produce three times as much produce as rural agriculture while using a fraction of the water and fertilizer, a testament to the success of their intensive methods (Smit et al., 1996). Food produced in or near the city is oriented toward the local market, and can therefore include highly perishable, high value crops. Such crops typically move from field to plate within the day, thus requiring little storage and minimal shipping. Therefore, local food is generally less energy-consumptive than imported foods (Doran, 2005; Lovell & Johnston, 2009; Smit et al., 1996). UA practices typically also involve the reuse of urban wastes, such as compost from organic materials and stormwater harvesting, therefore “closing the urban open-loop ecological system of resources in, wastes out” (Smit et al., 1996, p. 8).
Urban farmers capitalize on available space in cities, whether it is unsuitable for development in the long-term or is temporarily idle. Urban farmers can turn an under-utilized plot of land into a productive green space, whether in the interim or as a permanent land use. Such projects benefit the urban landscape by improving biodiversity and microclimate and providing access to nature for urban dwellers (Bohn & Viljoen, 2005; Mougeot, 2006). Whereas urban open space in the Western world often tends to be a simplistic configuration of turf grass and non-native trees and shrubs, UA contributes to urban biodiversity and to the urban aesthetic. Aesthetics on the urban farm or garden may be different than what is commonly experienced in the North American urban landscape, but as Smit et al. (1996) suggest, “if fields of corn in the countryside are beautiful, why is a plot of vegetables in the city viewed as an eyesore” (p. 8)?

UA contributes fresh, local food to the city. The benefits of this cannot be understated from a food equity and educational standpoint. The urban poor often have limited access to fresh food, living in food deserts where corner stores are the only accessible grocery outlet. Food produced in the city can be grown specifically to stock local food banks, providing access to fresh produce for those struggling financially. UA can also take the form of allotments or community gardening, giving individuals the opportunity to meet their own dietary needs. City dwellers often have a limited understanding of where their food comes from. In their daily lives, urbanites have little opportunity to experience what a beet looks like or how a chicken is raised. This lack of knowledge is detrimental to our relationship with food as well as our relationship with the earth more generally. UA allows us to partake in or witness food production, contributing to a greater understanding of the natural cycles that sustain us as well as our role within the food chain (Lister, 2008; Lovell & Johnston, 2009; Oates & Patterson, 2009; The Stop Community Food Centre, 2012; Viljoen & Bohn, 2009).
2.3 Urban space

A discussion of UA naturally leads to the question of allocating land for food production in the city. While the argument for UA has been made by many, setting aside growing space in densely urban areas can be contentious (Lawson, 2007). As Howe, Viljoen & Bohn note (2005), “in virtually all European cities, urban food production faces stiff competition from other land-uses such as housing, commerce and industry, which often have a far higher profile and financial return” (p. 62). These barriers are also in place in North America; in Portland, Oregon, “urban agriculture has struggled with the perception that it is an incompatible and inefficient use of urban land that could command higher financial returns” (Mendes et al., 2008, p. 438). While these pressures are real, Howe et al. (2005) suggest that it is important to remember that our economic system “only measures direct profits from the development of land” (p. 62). A city that invests in its local economic and ecological health surely has more to offer than real estate profits.

The discussion about officially allocating urban land for food production has intensified in Toronto in recent years (Oates & Patterson, 2009). A report produced by the Metcalf Foundation in 2010, entitled Scaling up Urban Agriculture in Toronto: Building the Infrastructure, identifies planning guidelines and land use zoning as a major barrier to the increase of UA in Toronto. Amongst its many recommendations, the study calls for an increased use of park space for UA. Adding food production to existing park space capitalizes on an existing resource while increasing its biodiversity and complexity of use. This is but one approach to furthering UA, but an important one in a city with a large amount of available green space like Toronto (Nasr et al., 2010).

Shrinking cities, those that are forecast to continue to lose population, such as Berlin and Detroit, do not experience the same land pressures as in growing cities like London and Toronto. “It is in
places that are not coded by market-led urban development - since temporarily left aside of the hegemonic visions of configuration of urban space (due to their having become obsolete in terms of their original function and use-value) - where distinct possibilities for practices of innovation and playful intervention arise” (Groth & Corijn, 2005, p. 4). Berlin and Leipzig Germany exemplify this type of city, with a surplus of space resulting from a changing, slowing economy. Temporary-use projects are interim solutions for activating under-utilized land - “spontaneous, organic evolutions [which] epitomise a different notion of ‘urbanity’” outside of formal urban planning structures (Groth & Corijn, 2005, p. 4). Thus, in the interim, fallow land can be lent to groups or individuals and become highly productive while not restricting its ability to accept redevelopment (Blanco et al., 2009; Mougeot, 2006; Overmeyer, 2007; Rall & Haase, 2011).

Temporary use projects can be short-term or long-term, depending on the urban context. In Berlin, where post World War II re-development has been a slow process resulting in vast expanses of derelict land, urban areas can be occupied for many years before development takes over. In London, UK, by contrast, land pressures are higher and re-development progresses more quickly. During the re-development of King’s Cross in London, UK, skip gardens¹ were positioned in areas that were awaiting development, allowing food production to take up temporary residence. When the land was ready to be developed, these containers could quickly be picked up and moved to a new location (King’s Cross Central Limited Partnership, 2008). This transient pattern of land-use is characteristic of much urban farming world-wide, with UA taking up temporary residence on plots awaiting development. As the market improves and the land is slated for development, the farmers are often forced to relocate (Smit et al., 1996).

¹ Skips are similar to dumpsters used for construction waste. Images of the project can be found at www.foodgirl.squarespace.com/book/2010/10/18/a-movable-feast-in-london-kings-cross-skip-gardens.html
London, a city with a growing population, exemplifies the effect fluctuating real estate values and land pressure can have on UA projects. In 2009, proposals were accepted for alternate plans for 122 Leadenhall Street, the site of a proposed office tower whose development was halted by the recession. Piers Taylor of Mitchell Taylor Workshop was shortlisted for his proposal of a city farm in the heart of London’s financial district. The farm would offer economic and educational benefits to the community as well as providing a natural refuge for city workers at their lunch hour. However, UA was considered for this location only under difficult economic conditions; when the market improved, the office tower went ahead as scheduled (British Land, 2010; Levenston, 2009). That UA is only deemed a viable land use when real estate values are low is emblematic of the dominant economic system. Howe et al. (2005) suggest that “(i)f the prevailing view regarding the comparative value of different activities changed, then planning regulations would follow, and development” (p. 62).

Development pressures will continue to be faced in growing cities such as London and Toronto. However, Viljoen and Bohn (2009) argue that “a new and inclusive planning approach is needed to justify the use of inner-urban space for non-building activities….even in countries with high land value” (p. 51). As increasing environmental and economic pressures necessitate increased local food production, urban and peri-urban land will need to be used as efficiently and productively as possible. The utilization of space will need to be carefully considered, and layering multiple uses within public and private space is one way to ensure that the best possible use of space is achieved. By designing for a variety of functions such as food production, recreation, and bird habitat, an urban open space can serve many populations, adding to its value. We can learn a great deal from shrinking cities about the innovative use of fallow land and the ways in which planning departments can assist or limit such projects.
2.4 Multifunctional landscapes

Combining food production with other functions is one way to make UA a more viable land use in the city (Lawson, 2007). Utilizing space efficiently and layering uses within each site are important design strategies that can maximize the potential of the landscape. A multifunctional space provides many things to many populations, increasing its value to those who use it and to the surrounding urban fabric. Spatial heterogeneity is a cornerstone of ecological design and ensures that the landscape is resilient and highly functioning (Gerrard, 2010). However, this principle extends beyond ecology; multifunctional landscapes can provide economic, ecological, productive, psychological and social benefits, thereby increasing its value to both the human and natural community (Lovell & Johnston, 2009; van Leeuwen, Nijkamp & de Noronha Vaz, 2010).

The social benefit of multifunctional space is espoused by urban design theorists such as Jane Jacobs and Randolph Hester. Jacobs’ 1961 work draws attention to the importance of designing for complexity and mixed-use in public space. In her 1961 book, *The Death and Life of Great American Cities*, Jacobs argues that to be successful, cities need “a most intricate and close-grained diversity of uses that give each other constant mutual support, both economically and socially. The components of this diversity can differ enormously, but they must supplement each other in concrete ways” (p. 14). Her model of successful cities is centred on a complex and multifunctional street life that facilitates social contact and trust. Jacobs argues that public spaces such as parks and squares should be used to “intensify and knit together the (street) fabric’s complexity and multiple use” (1961, p. 129), instead of separating uses from each other.
Hester also argues for the design of multifunctional spaces, specifically in the form of strong community centers. Hester (2006) tells us that good centers are intense concentrations of different uses... that attract people from different income levels, gender groups and life-cycle stages. The activities feed off each other, each inviting more users by proximity to others, and seemingly incompatible uses invite diverse publics to the same place (p. 23).

He explains that “[a]lmost every city-design theorist from Lewis Mumford to Suzanne Keller concludes that communities require centers for economic efficiency, physical legibility, primary social contacts, sense of community, and local attachments” (p. 21).

Architects Bohn and Viljoen (2005) envision the use of urban park space for UA as part of their Continuous Productive Urban Landscapes (CPULs) concept. The CPUL is a vision for sustainable urban design comprised of city-traversing multifunctional greenspaces that connect to the regional landscape beyond. CPULs would be “be read as parks or urban forests, green lungs or wilderness, axes of movement and journey, or places for reflection, cultural gathering and social play” (Bohn & Viljoen, 2005, p. 11). This multifunctional urban design strategy seeks to encompass not only UA but also social and economic urban needs. Existing urban farms, community gardens and back yards would form parts of the corridors but would be connected with a wider network. Bohn and Viljoen (2005) suggest that “[e]ven fully laid out open urban spaces, i.e. parks, could allocate parts of their land for productive use, gaining in return access and connection to a continuous landscape design, thereby becoming wider, wilder and healthier” (p. 12). These corridors would facilitate movement of human and non-human species, increasing the social and ecological connectivity within the city. They would provide multiple uses and multiple benefits to the urban structure. By offering diverse experiences for users, UA can be made more viable and offer more to the urban and social structure.
An example of a multifunctional UA project in Toronto is the Earls court Garden organized by The Stop Community Food Centre and maintained by Toronto Parks and Recreation and local schools. The project is volunteer-based and grows produce for The Stop’s food bank and community kitchens. Beyond seeking to provide fresh food for local people, Earls court Garden’s aims are educational and social; it seeks to provide education about urban ecology as well as providing opportunities for diverse cultural groups to work together. The garden provides a multi-use green space in downtown Toronto “where people come to play, to rest, and to reflect” (Levkoe, 2006, p. 93). The Earls court Garden, like many innovative UA projects, was initiated by a grassroots community group. This project is illustrative of the model of UA which forms the focus of this research project: a food-oriented project with social and educational goals that provides diverse experiences for users.

In Amsterdam, the BVV, or Association of Gardeners, uses the concept of multifunctionality to advocate for the continued use of urban park space for food production (Pouw & Wilbers, 2005). They argue that the wider Amsterdam population benefits from these spaces as they are not only urban gardens but also provide leisure space and contact with nature and contribute to improved physical and psychological health. Children also learn from these gardens as they are incorporated into educational curriculum. Further, Amsterdam’s urban gardens contribute to the city’s biodiversity and are managed using sustainable practises. Cultural events such as art installations are often organized in these gardens, further adding to their positive impact on the community. Social contact amongst users contributes to a sense of community and reduces urban problems such as isolation and loneliness (Pouw & Wilbers, 2005). The idea that UA can contribute more than just food to the urban structure is exemplified by this example of Amsterdam gardeners’ advocacy for their cause. By layering uses within public park space, opportunities for learning, recreation, social interaction and food production combine to produce a richly diverse space, appealing to multiple demographics (van Leeuwen, Nijkamp & de
2.5 Community-based projects

Community-based UA projects often provide multiple opportunities for experience with the added benefit of being created by and for local people. Community gardening can be defined as gardening in a communal area on private or public property. It is a social activity, bringing people from different socio-economic and cultural backgrounds together to produce food for personal consumption or donation to community kitchens or food banks. Community gardening not only produces food but fosters formal and informal learning and helps build communities. People garden together and can informally share their knowledge and skills. As they learn real skills they also learn about one another and how to work with others who are often from very different backgrounds from themselves (Illes, 2005; Levkoe, 2006; Nettle, 2011; Sayle, 2011, Clausen, 2011; Wakefield et al., 2007). Studies of community gardeners in Toronto suggest a number of social benefits to this type of co-learning environment. In a study conducted by Wakefield et al. (2007), community gardeners emphasized sharing as an important element of their garden. “We share ideas, we share... tools, vegetables we share, the foods, we share even the knowledge, cultures, through gardening” (p. 98). Even if language barriers exist, non-verbal communication such as sharing, hand gestures and smiles create bonds (Wakefield et al., 2007). Similar sentiments were expressed by community gardeners in case studies conducted by FoodShare, a Toronto non-profit organization committed to addressing hunger and food access issues (Baker, 2004).

The term ‘community’ can be applied to residents of a specific geographical location and can also be used as an ideological resource to express the views and goals of a group of people. A desire for community can be seen as a yearning for “friendship, commitment, togetherness, responsibility, care
and mutual aid” (Nettle, 2010, p. 134). As it relates to urban agriculture, “food growing projects can act as a focus for the community to come together, generate a sense of ‘can-do’, and also help create a sense of local distinctiveness - a sense that each particular place, however ordinary, is unique and has value” (Garnett quoted in Howe, Viljoen & Bohn, 2005, p. 57). Hester’s idea of ‘symbolic ownership’ is relevant here, “a sense of jurisdiction over a space, valuing the place and activities which take place there, and a feeling that the space responds to its users’ particular needs” (Nettle, 2010, p. 33). Indeed, various studies have noted that vandalism rates are lower in community-initiated space than those that were designed without community input (Baker, 2004; Hester, 2010; Wakefield et al., 2007; Waraich, 2011).

A number of studies have suggested that community-based UA projects positively contribute to the social capital of a group (Levkoe, 2006; Wakefield et al., 2007). The social capital approach to measuring community emphasizes the degree to which people will work together, supporting one another as they pursue common goals. While social capital lacks a unified definition in the literature, it is often explained as the intensity of social ties as well as shared norms within a group. Social trust and social participation have been suggested as important, though not necessarily related, indicators of social capital. This concept suggests that communities with high social capital are more likely to take collective action on issues pertaining to the group (Crawford, Kotval, Rauhe, & Kotval, 2008; Guillen, Coromina & Saris, 2011; Iles, 2005; Nettle, 2010).

While the idea of community as a unified group with similar goals and hopes is a common concept in community gardening literature, the reality is often more complex. Another way to look at community is through conflict that can occur when diverse individuals interact and engage with one another. Indeed, community gardens can be spaces where ideas of community are negotiated. How a
garden is designed, who it includes and excludes, illustrates people’s understanding of who is and is not part of the garden’s notion of community. The term can be used “to frame… projects in ways that claim legitimacy on the grounds of embodying ‘the community,’” negating the possibility of a range of values and needs (Williams, quoted in Nettle, 2010, p. 134). Thus, we see that a unified notion of community may be an oversimplification of the multiplicity and difference which are often present in groups.

Nettle’s 2010 PhD thesis details examples of Australian community gardens in which the idea of difference and conflicting agendas are embraced as strengths. One community garden organizer notes that

[t]here’s been conflict between various people [in the garden]. That’s just normal. We should figure out how to enjoy our conflicts as well… One of the things we need to do as a culture, as a society, is learn how to deal with conflict really well, so it becomes normal, a positive, instead of shrinking and being scared of it (p. 144).

Another garden organizer expressed the difficulties in trying to create a community:

It’s not the easy way to go. Like finding the courage to listen, to grow, to speak your truth, for us to admit that the easy path is not always the best path. But if you want to do good things in the world and have a great life then sometimes when it’s a little bit harder it’s actually a bit juicier, there’s substance, rather than it being thin or shallow and easy flowing (p. 145).
2.6 Summary

This chapter discussed the rationale behind urban agriculture and its social and environmental benefits. Urban agriculture reduces the distance food travels from production to consumption, thereby reducing greenhouse gas emissions. Urban food production can foster a greater connection with the food system for urbanites, reducing the psychological distance that is so prevalent today. It also provides access to fresh food for urban dwellers, especially important for those who have difficulty accessing food such as those of lower socio-economic status. Urban dynamics were shown to either limit or facilitate the implementation of UA. Cities with an abundance of space such as de-industrializing cities that are losing population, are exemplifying the ways in which UA can temporarily activate under-utilized space. By contrast, in cities in which space is at a premium, UA becomes a marginal land use that has difficulty competing with those providing a higher financial return.

Multifunctionality was proposed as a way to increase the value of UA in such circumstances, creating landscapes that combine food production, recreation, education and naturalization, for example. The concept of Continuous Productive Urban Landscapes was discussed as an example of how such a strategy can be implemented. Community-based UA was introduced at the end of the chapter, illustrating the ways in which these projects not only produce fresh food but help to strengthen community ties. Such projects also provide diverse opportunities for users to socialize, learn and recreate.

The literature reviewed in this chapter grounds the case study research detailed in Chapter 4.0 where two community-based UA projects will be examined. The challenges of trying to build community in such a project will be revisited in Chapter 5.0 in the discussion of the Brant Avenue Community Garden design. The next chapter, 3.0, details the methodology of this research project.
CHAPTER 3.0 - RESEARCH STRATEGY

This research project can be characterized as both inductive and constructivist (Deming & Swaffield, 2011). I began the investigation with a loose framework, seeking to determine what lessons a landscape architecture student might learn from community-based UA projects. The research is constructivist in that the knowledge generated is intrinsically tied to the process by which it was produced. As an observer, an interviewer and a designer, my interests and worldview influenced how I approached the research process. Similarly, key informants were understood to be speaking from their own unique viewpoint. Thus, this research reflects an experience and perspective of these projects shaped both by my worldview and interests as well as those of the key informants.

3.1 Goals and objectives

Goals

To explore the spatial, social and organizational strengths and challenges of community-based urban agriculture projects, and to understand how landscape architects can contribute to their success.

Objectives

- Develop criteria for selecting case studies through a review of the literature and internet research on relevant projects
- Investigate the social, spatial and organizational dimensions of the selected case studies
- Identify lessons learned about community-based urban agriculture from strengths and challenges of case studies
- Investigate facilitation techniques and participatory design methods to assist the design of community-based projects
- Implement a participatory design charrette
- Develop a design for the Brant Avenue Community Garden informed by all previous objectives
Evaluate the design and participatory process

3.2 Methods

This section outlines the methods used to meet the objectives outlined above, including case studies, focused literature review, charrette and engaged action research.

Case Studies

Case study selection was informed by the literature review on multifunctionality and community-based UA. City farms and community gardens as defined by the American Community Gardening Association as well as the Federation of City Farms and Community Gardens in the UK provide the prototype for these projects (American Community Gardening Association, 2011; Federation of City Farms and Community Gardens, 2011; Isles, 2005). City farms and community gardens are diverse projects that can range from a small plot gardened by 10 gardeners to large community projects with educational programming and public partnerships. They are community-focused and managed and offer opportunities to learn about food production in an urban environment, whether through direct participation or observation. They are not-for-profit enterprises and are not professionally designed.

In selecting projects for study, I sought those with the greatest diversity of experience offered on-site; complex projects that offered formal classes and workshops and that are connected with other local organizations with similar environmental or social aims. Thus, they are city farms and community gardens that exemplify multifunctionality. In summary, the criteria for case study selection are:

- agricultural
- community-focused and managed
- not-for-profit
- partnered with allied local organizations
Once I had developed my criteria, I began investigating potential projects on the internet. I sought projects in major European cities in order to extend the study beyond the North American context. Prinzessinnengarten was discussed on the City Farmer website and stood out due to its flexible and temporary use of space, its multiple offerings for experience, and its productive capabilities (City Farmer, 2010). For comparison, I investigated numerous sites suggested by Katrin Bohn, architect and co-author with Andre Viljoen of ‘Continuous Productive Urban Landscapes: Designing Urban Agriculture for Sustainable Cities’ (2005) but decided on Prinzessinnengarten due to its superior organization and multifunctionality. My internet-based research led me to the United Kingdom’s Federation of City Farms and Community Gardens website. From the listing of London’s projects, I sought the most multi-use examples to visit. The borough of Hackney is home to several innovative projects but, after visiting other sites, I determined that Hackney City Farm was the most multi-use and publicly-accessible.

Case study research utilizes a wide variety of sources and approaches to develop a detailed account of a particular case (Creswell, 1998; Francis, 2002). I first consulted project-specific literature to understand the background, aims and context. This research was conducted largely from project websites and any available news articles or other published material. I conducted a further literature review to understand urban context for each project: the ways in which grassroots projects evolve and the influence they have on their neighbourhoods.

I conducted site visits at Prinzessinnengarten, photographically documented the site and conducted informal observations of site layout and use. As I was not in Berlin for very long, my on-site research was limited. However, Prinzessinnengarten is a well-documented project and I was able to
gain considerable insight into project aim, vision, strengths and challenges from a number of online interviews given by the project’s founders, Marco Clausen and Robert Shaw. I then emailed Clausen for insight into areas of interest that he had not covered in these interviews.

My time in London was more extensive. I photographically documented Hackney City Farm and conducted numerous site visits. I observed patterns of movement and demographic trends in the three major public areas of the site as detailed in Table 1.

Table 1
*Hackney City Farm observation in hours*

<table>
<thead>
<tr>
<th></th>
<th>Weekday A.M.*</th>
<th>Weekday P.M.*</th>
<th>Weekend A.M.</th>
<th>Weekend P.M.</th>
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<tbody>
<tr>
<td>Courtyard</td>
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<tr>
<td>Paddocks</td>
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<td>x</td>
<td>X</td>
</tr>
<tr>
<td>Walled garden</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

*Note: *10:30-1:30; ~1:30-4:30; x=1 hour

I also conducted semi-structured interviews with two project organizers, Gustavo Montes de Oca, Environment and Enterprise Manager and Charlie Sayle, Education and Volunteer Manager. Hackney City Farm is not as well documented as Prinzessinnengarten and thus I asked the key informants more detailed semi-structured questions, as follows:

- What is the project vision?
- How was it initiated?
- What were its goals in the beginning?
- Tell me about moving ahead with the project; what helped or hindered its development?
- Have the project’s goals changed since its inception?
- Who uses the space?
- How is the project funded?
- What are its greatest strengths?
- How do you see the project evolving in the future?
The case studies were analyzed in two parts: project organization and spatial organization. Hackney City Farm and Prinzessinnengarten’s project vision, aim, strengths and challenges were gleaned from interview data and archival research. The interviews were analyzed based on recurring themes between the key informants and that were also represented in the project literature. Themes that recurred across both projects were given special attention. Themes that were diverse or represented a particular interest of one of the key informants were also noted. Spatial organization was assessed based on photography, satellite imagery and site observations. The projects were assessed to determine if a stronger spatial design could help them better meet their aims.

Focused literature review

In order to apply the lessons learned from the case studies to a community-based project in Guelph, I sought to understand the methods by which landscape architects engage communities in design. I conducted a focused literature review of participatory design and planning theory as well as facilitation techniques to determine which methods would be suitable, as well as the strengths and challenges of such processes.

Charrette

Helping to organize and structure a charrette for the Organic Agriculture Conference in January 2012 provided me with the opportunity to more deeply explore this technique. I also observed the charrette process and assessed its organizational strengths and challenges as well as the facilitation styles used by participants and organizers. A Likert scale survey gleaned feedback from participants about their experience of the process. The scale included the following three statements:

- I felt comfortable expressing my opinions and thoughts
- My thoughts and opinions were heard and incorporated into the final record
This charrette was inclusive and collaborative

Engaged action research

I conducted engaged action research as I worked towards a design for a community garden at Brant Avenue Public School in Guelph, Ontario.

Action research is a way of learning from and through one’s practice by working through a series of reflexive stages that facilitate the development of a form of ‘adaptive’ expertise. Over time, action researchers develop a deep understanding of the ways in which a variety of social and environmental forces interact to create complex patterns. Since these forces are dynamic, action research is a process of living one’s theory into practice (Riel, cited in Deming & Swaffield, 2011, p. 193).

In this project, participants were actively involved in the development of my research process as I sought to adapt to the community dynamics. Participatory processes and collaborative engagement were utilized not only to empower project organizers and the community to own the project and continue to shape it but to investigate the strengths and challenges of these participatory processes. I used a semi-structured consultation framework with the project organizers and community members and adjusted my process where possible in keeping with the project organizers’ expert knowledge of their community. The design was then shaped by the hopes and desires of the community members, students and key informants as well as the lessons learned from the case studies. A detailed account of this process and results can be found in Chapter 5.0. The next chapter, 4.0, describes the results of the research into two case studies: Prinzessinnengarten and Hackney City Farm.
CHAPTER 4.0 - CASE STUDIES

This chapter details the selected case studies, Hackney City Farm in London, UK, and Prinzessinnengarten in Berlin, Germany. The case studies were selected as they exemplify multifunctionality in community-based UA projects. The criteria for selection were based on the American Community Gardening Association as well as the Federation of City Farms and Community Gardens, the two overarching bodies of community-based UA in North America and the UK, respectively.

This chapter includes an investigation of each project’s urban and socio-cultural context, their vision, strengths and challenges. These projects are assessed both socially and spatially to determine how they can inform future designs of community-based UA projects. City farms and community gardens are situated within a particular urban and socio-economic context that cannot be divorced from the project itself. Both Berlin and London have specific characteristics that have influenced how Prinzessinnengarten and Hackney City Farm have developed. When attempting to apply lessons from other cities, we must bear in mind that each city’s UA will be different based on its context. Both Prinzessinnengarten and Hackney City Farm illustrate the unique characteristics of projects embedded within their locality.

City farms and community gardens are diverse projects that can range from a small plot gardened by 10 gardeners to large community projects with educational programming and public partnerships. They are community-focused and managed and offer opportunities to learn about food production in an urban environment, whether through direct participation or observation. They are not-for-profit enterprises and are not professionally designed.
In selecting projects for study, I sought those with the greatest diversity of experience offered on-site; complex projects that offered formal classes and workshops and that are connected with other local organizations with similar environmental or social aims. Thus, they are city farms and community gardens that exemplify multifunctionality. In summary, the criteria for case study selection are:

- agricultural
- community-focused and managed
- not-for-profit
- partnered with allied local organizations
- not professionally designed
- multifunctional
4.1 PRINZESSINNENGARTEN – BERLIN, GERMANY

Prinzessinnengarten is an award-winning temporary use project situated at Moritzplatz in the borough of Kreuzberg, only 200 meters from the former Berlin wall (Interkultur, 2011; Gidsy, 2011). Moritzplatz was formerly home to a department store which was bombed during the Second World War and remained a brownfield until Marco Clausen and Robert Shaw began Prinzessinnengarten in 2009 (Dobias, 2010). Prinzessinnengarten was established in 2009 as a not-for-profit enterprise that provides opportunities for people to learn about growing food in urban environments (Clausen, 2011). Prinzessinnengarten describes itself as “social and ecological urban agriculture... [It offers] not only locally produced food, it also creates a new urban city life where we work together with neighbours, friends and interested people to relax and learn” (2011).

Contemporary Kreuzberg is a densely urban neighbourhood with very little green space (Prinzessinnengarten, 2011). Kreuzberg has an ethnically diverse population, with a large proportion of Turkish and Arabian inhabitants, and has been traditionally underprivileged from a socio-economic standpoint (Couch et al., 2011; Dobias, 2011). Clausen explains that social mixing is not always very common in Berlin. He notes “we have a lot of separations in the city between generations, between different cultural backgrounds, and I think what we learn is that a garden is really an instrument to bring people together, especially a food garden because food is something we all need and we can all talk about” (Dobias, 2011).

Prinzessinnengarten was inspired by co-founder Robert Shaw’s visit to Cuba where he experienced their unique form of urban agriculture - a mix of productive food gardens, social space and learning. In attempting to transfer that idea to Berlin, Shaw and Clausen decided it was unlikely they would be granted permission to use urban land in the center of the city for long-term farming projects.
characteristic of Havana. Thus, instead of seeking to create a large, permanent urban farm, they created a containerized project which could quickly be moved to a new location if the rented land was sold (Clausen, 2011). While Prinzessinnengarten’s mobility was established as an adaptation to insecure land access in central Berlin, it has become central to their vision. “We are temporary users and that’s important for us. Our mobile system helps us to transform any place into a garden quickly and efficiently. We can react to rapidly changing influences in the city, adapt to urban processes” (Anstiftung & Ertomis Foundation, 2010). “The concept is [to] be mobile and it’s gorgeous to have that moment of creating something with the neighbourhood and with the people who live here together” (Dobias, 2010).

4.1.1 Urban change

Contemporary Berlin is the result of many layers of change since the Second World War. Intensive bombing had left 70 percent of the city in ruins by 1945, leaving 1.5 million people homeless (Hjelmstad & Øren, 2011). Today, Berlin is one of the poorest German cities, with a declining population and “an increasing socio-spatial polarisation” (Groth & Corijn, 2005). Further, its de-industrialization has left the city strewn with large tracts of former industrial land and abandoned railway tracks (Dobias, 2010; Overmeyer, 2007).

Berlin has a strong history of grassroots activism. Kreuzberg in particular has been the site of a leftist counter-culture since the 1970s (Ahlfeldt, 2011). Badly damaged in the Second World War and situated on the edge of West Berlin, the borough fell into decline. Urban renewal strategies in the late 60s and early 70s focused on wide-spread demolition followed by new development, destroying traditional neighbourhood structures and displacing former residents. By the early 80s, resistance to urban renewal was growing and Kreuzberg residents began to renovate and occupy vacant buildings to
“demonstrate an alternative future for the neighbourhoods” (Couch, Sykes & Borstinghaus, 2011), a strategy that spread throughout West Berlin in the 80s. By the late 80s, the city began to follow a new development strategy called ‘careful urban renewal’ which encouraged local people to invest in their housing stock, offered support for small businesses, and reused abandoned industrial and commercial facilities for local economic and community development (Couch, Sykes & Borstinghaus, 2011; European Academy of the Urban Environment, 2001; Holm, 2006). Contemporary voluntary organizations in Kreuzberg have their roots in these tenants’ rights movements of the 1980s and have developed to meet the social, cultural and economic needs of local people (Organisation for Economic Cooperation and Development, 1995/1996). The action of Kreuzberg residents in the early 80s illustrates the impact grassroots movements can have on urban change.

The legacy of community-initiated urban change continues to be felt today. The re-use of urban space in new and different ways has largely come from the grassroots in Berlin. Many abandoned buildings as well as vacant open spaces have become home to thriving music, art and fashion subcultures which characterize Berlin today. Berlin is home to over 400 art galleries, more than any other European city (Hjelmstad & Øren, 2011), and is home to “one of the most important music clusters within a city that is... often perceived as the city of contemporary music” (Ahlfeldt, 2011). This creativity has been facilitated not only by the possibilities that urban re-use provides; the newly emerging knowledge economy coupled with a surplus of residential and office space has brought many young creative people to Berlin in recent years. However, as the city’s economy continues to lag, young people struggle to find permanent employment and increasingly seek to invent their own livelihoods (Dobias, 2010; Groth & Corijn, 2005; Overmeyer, 2007).

Berlin continues to rebuild itself with the help of temporary use projects. Temporary use
projects are characterized by formal as well as informal partnerships between the city and project organizers. Such projects can be defined as an “interim stage when a site’s original purpose has been abandoned, its future development is still uncertain, and it can be used on favourable terms...imminent commercial exploitation generally looms as a cloud on their horizon” (Overmeyer, 2007, p. 36). With the city financially unable to initiate its own urban renewal projects, working with individuals on temporary use projects offers a way forward. These projects can activate the site while awaited re-development is still far in the future, offering new experiences to potential users in the meantime (Overmeyer, 2007). Temporary use organizers experience a level of freedom to try things out and experiment in their projects because of the lack of civic intervention, a situation Clausen (2011), co-founder of Prinzessinnengarten, believes is characteristic of contemporary Berlin.

These space pioneers, as they may also be called, are evidence of a trend to greater social commitment, to more participation, to active networks and the desire to try something new...in which they can dare try out their own social experiment and strike a balance between material prosperity and community well-being (Overmeyer, 2007, p. 21).

As was seen in the ‘careful urban renewal’ debates of the 80s, contemporary dialogue about temporary use projects illustrates the strong voice of Berlin’s grassroots. These projects are often vulnerable to market pressures, as is exemplified in the discussion of the RAW-Tempel project, a former industrial site in the borough of Freidrichshain, across the Spree River from Kreuzberg. RAW-Tempel was appropriated by artists who sought to create a collective space for social and cultural projects. The founders created an organizational structure and legal framework for the diverse projects that developed on-site and the illegal status of the occupation quickly was transformed into a temporary lease. However, with pressures for development along the Spree, the temporary lease has been threatened, illustrating how such projects are often contingent upon weak economic realities. Nonetheless, strong networks have been created throughout Berlin, and developers, city authorities and users continue to debate the potential of temporary uses for sustainable urban development (Groth &
4.1.2 Overview

Prinzessinnengarten is a collaborative gardening project. The beds are tended by volunteers who are free to choose their level of commitment. Some drop in for the open gardening sessions, offered twice a week, while others volunteer consistently, often taking on specific responsibilities such as tending the tomatoes or watering. Currently, Prinzessinnengarten has 20 gardeners with specific responsibilities (Clausen, 2011). Volunteers are mainly comprised of Kreuzberg residents as well as visitors from around the world who have found the project online (Gidsy, 2011).

The project allows people from different ethnic, social and cultural backgrounds as well as varying levels of gardening experience to share skills and knowledge. For example, the project benefits from the knowledge of Turkish residents who have recently migrated from rural areas. Clausen further explains that,

Prinzessinnengarten is a place of informal learning. Collectively, knowledge and skills in the fields of biodiversity, organic farming, climate change adaptation and sustainable urban planning is appropriated, thereby bringing people from different cultures, generations and social environments together (2011).

4.1.3 Strengths

Clausen and Shaw welcome collaboration and participation at Prinzessinnengarten. The project has relied on extensive volunteer help since its initiation, from cleaning up the wasteland that was Moritzplatz to creating the containerized beds and transforming a shipping container into a cafe. The range of activities and projects on-site are a result of Clausen and Shaw’s openness to new ideas and innovations. In a video detailing the project, Shaw discussed their approach to project suggestions:
I personally enjoy this specific process. When someone walks in...they might say: what about collecting rain water from the container’s roof? And we reply: sure. If you want to, why don’t you start doing it? It’s a wonderful moment when people come up with an idea, you then enjoy saying: just do it, take this cordless screwdriver. We’ll give you what we have. We won’t manage on our own anyway. It’s about participation anyway, so what’re you waiting for? (Anstiftung & Ertomis Foundation, 2010)

This openness to collaboration and new projects invites the neighbourhood in, allowing people to take ownership and feel a part of the project. One of Prinzessinnengarten’s greatest strengths is its ability to invite people in to share their passions and skills while encouraging a diversity of projects to take root. Clausen believes that, “just like in any garden, ours gets more beautiful, bountiful and productive the more we mix things. It’s also good for a city to have some mix, to create diversity” (Anstiftung & Ertomis Foundation, 2010). The diversity of projects further increases the breadth of Prinzessinnengarten’s reach into the community and contributes to its multifunctionality.

In its second year, Prinzessinnengarten began collaborating beyond food production. Social outreach initiatives operating out of Prinzessinnengarten include a refugee contact and advice service and youth brainstorming sessions to envision a new future for Berlin. A research project on potato genetics was initiated by a Swedish artist, and an art collaborative called the Pale Blue Door created seven tree houses from found objects (Clausen, 2011; Prinzessinnengarten, 2011). Prinzessinnengarten has also developed educational opportunities for children, inviting classes to take care of a section of the garden for a season or setting up their own containers at their school (Prinzessinnengarten, 2011).

4.1.4 Networks and partnerships

Organizations with a similar vision also volunteered a great deal of help when the project was initiated; for example, a local company converted a shipping container into a cafe and boxes from an
organic bakery were used as planters (Clausen, 2011). When asked about project challenges, Clausen (2011) noted that he and Shaw have found it difficult to fund the project on their own as neither of them have a business or fund-raising background. Working with allied organizations has thus enabled them to achieve much more than they could have on their own.

One of Clausen and Shaw’s goals with Prinzessinnengarten was to create a self-sufficient project to symbolically illustrate that one can generate an income from a communal urban farm. The project is structured as a social enterprise; thus, the money earned must be diverted toward the project’s social and ecological aims. Prinzessinnengarten generates income in numerous ways. It sells its produce either directly to the consumer or through the restaurant. The cafe is one of the largest generators of income on-site, having become a popular retreat for local people and gardeners. Workshops and school programs also generate income, as does individual and group sponsorship of square meter plots (Anstiftung & Ertomis Foundation, 2010; Clausen, 2011; Dobias, 2010).

Prinzessinnengarten does not receive any financial support from the economically struggling city of Berlin. Along with help from partnered organizations who sponsor projects on-site, Prinzessinnengarten is able to pursue its own objectives without needing to alter its vision to fit into a funder’s parameters. As the project has become more widely known, organizations with various aims have approached Clausen and Shaw to offer support. However, such partnerships usually expect a reciprocal supportive relationship and, in order to maintain their vision, Prinzessinnengarten has made choices to refuse support from some potential partners (Clausen, 2011). A diversity of income sources and reliance on voluntary help and partnerships with allied organizations allows Prinzessinnengarten’s founders to stay true to their vision of social and ecological urban agriculture (Anstiftung & Ertomis Foundation, 2010; Clausen, 2011; Dobias, 2010).
4.1.5 Spatial analysis

Prinzessinnengarten temporarily inhabits a city-owned brownfield in Berlin. As the land could be sold at any time, little effort is being made to alter the landscape permanently. The site, having been vacant for over 60 years, has regenerated significantly, offering primary succession wooded areas for human retreat as well as contributing to urban biodiversity. Each year, Clausen, Shaw and their volunteers transport their containers from storage and arrange them for the season. The modularity of the planters means that site design can be dramatically altered each year if they so choose. I critiqued the project based on the legibility of the site: how easy it is to move around, to comprehend where one is allowed to walk and what areas are private or public.

The aesthetic experience of the project is illustrated in Figure 1. It is a mix of naturally regenerating vegetation and the wildness of disorderly vegetables, herbs and ornamentals. The containers are mainly of two different materials, plastic crates and burlap rice sacks, creating a feeling of unity within the site. Their regularity is contrasted with the wildness of the plants contained within them. Nassauer’s (2009) idea of messy ecosystems with orderly frames seems particularly relevant here, balancing the disorder created by functional plantings (in Nassauer’s case, native species - in this case, food species) with tidy frames. Along the main entrance pathway planters have been placed for aesthetic purposes, framing the entrance to the cafe and creating a welcoming feeling.
Figure 2 provides a layout and circulation diagram of Prinzessinnengarten, illustrating the predominance of productive and regenerating space. From the main entrance, a wide pathway leads directly into the cafe area. West of the cafe are tables and chairs in a slight clearing, followed by another cluster within the regenerating woodland. There is a significant amount of seating available, facilitating large group gatherings such as harvest festivals and community events. Fruit and vegetable production beds are laid out on either side of the entrance pathway. While these areas are primarily productive, informal seating areas can be found scattered throughout (see Figure 3). At the southeast end of the site, storage for tools, soil, extra planters and compost can be found, far from the main entrance but
proximal to the secondary entrance. The far west side of the property features a small children’s playspace well as a nursery which appeared to be growing perennials. Beehives are located just south of this children’s area within the woodland. Herbaceous regeneration areas form the periphery of the property, which, along with the woodland, contribute to biodiversity and provide food for the bees.
At Prinzessinnengarten, the majority of the site is open to anyone to wander around and explore. However, exploration is made difficult due to the illegibility of the circulation system. The strongest circulation route is the wide and direct path from the main entrance at the North into the cafe seen in Figure 4. Indeed, this path is wider than necessary for even a grand entrance in a space of this size. The site also features a fairly strong secondary path which moves from the primary to the secondary entrance, while also moving west toward a dead end (Figure 7). Two other paths lead from the cafe axially to the east and west ends of the site, leading toward the children’s play area and the secondary exit, respectively.

*Figure 3. Prinzessinnengarten - socializing amidst the vegetables*
The rest of the site, however, is fairly difficult to comprehend from a circulation standpoint. In the productive spaces, the paths between the planters are fairly narrow, making it difficult to pass between and explore. It is unclear whether this type of traffic is welcomed or whether the narrowness is an attempt to restrict movement (see Figure 5). Desire lines are also evident, leading toward the nursery, children’s play area and beehives from the secondary path (see Figure 6).

Figure 4. Prinzessinnengarten - Circulation hierarchy

Figure 5. Prinzessinnengarten –productive space: narrow rows, unclear circulation
Figure 6. Prinzessinnengarten - dead end in the west

Figure 7. Wide secondary path
Prinzessinnengarten’s organization provides insight into the ways in which designers could contribute to a stronger spatial design, even if only temporarily. Narrower main pathways and slightly wider paths between the planters could both maximize the space available and facilitate greater interaction between visitors and the plants. I first visited the site with only a shallow understanding of the project’s organization and goals and found the site to be somewhat unintelligible. Where one is allowed to walk, what is private and what is public, and who has ownership of the plants are not immediately comprehended upon visiting the site. Signage is limited to one project vision description (German and English text), English signs detailing the on-site potato genetics project, and two German signs - one describing beekeeping and another advertising garden sponsorship. Thus, stronger circulation patterns as well as increased signage could help the project better communicate with visitors and maximize the available space.
4.2 HACKNEY CITY FARM – LONDON, UK

Hackney City Farm (HCF) is situated within Haggerston Park in the London Borough of Hackney, UK. Initiated by community members in 1985 as a farming demonstration project, today HCF is highly complex, its programming driven by the underlying goal of providing environmental and food system education as well as community support. It aims to educate people about where their food comes from as they visit barnyard animals such as chickens, pigs and sheep and see vegetables and ornamental plants being grown in a walled garden. HCF aims to be an open and welcoming place for all socio-economic and cultural groups. It specifically focuses on supporting the underprivileged and marginalized in the community with the aim of fostering social ties as well as providing opportunities for self-betterment and empowerment (Sayle, 2011; Montes de Oca, 2011; Hackney City Farm, 2011).

HCF is a member of the Federation of City Farms and Community Gardens, a movement that started in London with its first city farm, established at Kentish Town in 1972. Early city farms were created in response to a lack of community-led green space in the city. They have since evolved to encompass various social and educational aims to meet the needs of the United Kingdom’s diverse communities. They are local projects created by and for local communities. “Most projects provide food-growing activities, training courses, school visits, community allotments and community businesses. In addition, some provide play facilities and sports facilities, and after school and holiday schemes” (Iles, 2005, p. 83; Federation of City Farms and Community Gardens, 2011).

4.2.1 Urban change

While today Hackney is an inner city borough, in the eighteen century it was a rural hamlet outside the city of London. Small villages such as Haggerston, Hackney and Shoreditch were surrounded
by fields and pasture. For centuries, farmers from East Anglia and Essex would bring their livestock to market in London, stopping along the way in present day Hackney to let them graze in the fields. During the 19th century, Hackney industrialized to support the growing needs of the City of London. A gas works was constructed on the present Haggerston Park and tenements were erected to house the working classes. During the Second World War, the gas works was hit by a V2 rocket which caused major damage to the works as well as structural damage to the houses in the vicinity. For nearly ten years the gas works was in ruins, finally being cleared and turned into a park in 1958. With additional slum clearance in the 1980s, HCF was established (London Borough of Hackney, 2011; London Borough of Hackney, 2009; Hackney City Farm and Haggerston Park User Group, 2011).

The dynamics of urban change in Hackney between the 1950s and 1980s were complex and varied. Haggerston Park and HCF were made possible by government-led urban renewal characterized by the massive clearance of decrepit or damaged pre-war buildings. During the 1980s, England was feeling the effects of recession and the Conservative government continued to move ahead with urban renewal projects focused on economic regeneration (Couch, Sykes & Borstinghaus, 2011). In contrast to government-led urban regeneration, gentrification also had an impact on Hackney's development. Gentrification can be characterized as urban change initiated by an influx of middle class residents into a former working class neighbourhood. Over time, these neighbourhoods begin to change both structurally and economically, with higher income households increasingly replacing lower income inhabitants (Holm, 2006; Larson, 1993, Moran, 2001). The neighbourhood surrounding Haggerston Park has experienced significant though spotty gentrification, with pockets of high-income dwellings next to social housing estates (Sayle, 2011). The resulting socio-economic contrasts are important to an understanding of contemporary Hackney.
Situated in London, the richest city in England, Hackney is ranked as the most deprived borough in the country (Alvarado et al., 2009; Trust for London and New Policy Institute, 2011). It is one of London’s most ethnically diverse boroughs with a high proportion of struggling new immigrants, refugees and asylum seekers (Bowyer, Caraher, Eilbert & Carr-Hill, 2009). Hackney also attracts the young and trendy, drawn by the cheap rent and the East London subculture (Spittles, 2011). The London Fields area of Hackney, situated 10 minutes north of Haggerston Park, exhibits these marked socio-economic contrasts. The area has undergone significant gentrification in the last 25 years, with some houses appreciating from 15 000 to nearly 1 million pounds today (Sayle, 2011). In the spring of 2010 in London Fields, a 27-year-old man was shot by a stray bullet fired by a gang member. Lewis, a journalist with the London newspaper the Guardian, notes “[t]he shooting may reflect the division between two overlapping communities that co-exist in London but rarely mix. Few of the young professionals in the park would have known they were relaxing in what has become – particularly during the summer months – a borderland between rival east London gangs” (2010, p. 2). This is Hackney today, an area of contrast, with pockets of wealth amidst a backdrop of poverty and deprivation which is often invisible to the outsider, but is “never more than a few hundred meters away” (Duggins, 2011, p. 28; Dangerfield, 2010).

4.2.2 Overview

HCF exemplifies diversity and multifunctionality in its programming and aims. Informal education occurs as people walk around the farm, watching the sheep graze and the tomatoes grow. Visitors are observed sharing their knowledge with one another, such as a parent pointing out a tomato to their child or friends discussing how to best grow asparagus. A community orchard was recently planted just outside of HCF’s walls in Haggerston Park, allowing passersby a new opportunity to experience food in the urban landscape. The mini-farmers club provides children the chance to feed and
care for the livestock, a unique opportunity for urban children to learn hands-on animal husbandry skills. Class-based educational opportunities are offered for both adults and children. Adult courses focus on environmental issues as well as skills training; topics covered include using and fitting a wood stove, beekeeping, cultivating edible mushrooms and rag rug making, to name a few. Sayle estimates that around 1500 pupils come through HCF yearly, mostly from within the borough of Hackney. Classes focus on the environmental and ethical implications of the industrial food system as well as environmental issues such as waste and energy use (Hackney City Farm, 2011; Sayle, 2011; Montes de Oca, 2011).

The farm draws a variety of users due to its range of experiential opportunities. Casual visitors to the walled garden, courtyard and animal paddocks were observed over a number of days to assess demographic trends and spatial use. These observations illustrate an approximate balance between groups and individuals with children judged to be under age 8 and groups and individuals without children. Women were observed more than twice as often as men (see Table 2). Workers and volunteers were the most commonly observed users and many of the same individuals were seen on numerous days. Groups comprised of a woman and at least 1 child and groups of 2 were the next most common demographics observed (see Table 3). The most obviously absent demographic was teenagers, while groups of friends judged to be in their early 20s were frequent visitors on weekends.
Diversity permeates HCF’s projects, its users and its staff, each of whom brings something different to the farm. HCF has room for many perspectives, a diversity that adds to its richness and to the breadth of individuals it reaches. However, HCF illustrates the challenges that arise from a diversity of aims coupled with limited time, space and financial resources. HCF is managed by a collection of full-time and part-time staff as well as a wide variety of volunteers. The environment and enterprise manager, Montes de Oca, and the education and volunteer manager, Sayle, served as key informants for this study. While agreeing on the underlying goals of the project, each brought their individual...

Table 2
Weekday vs weekend demographics (individuals and groups)

<table>
<thead>
<tr>
<th></th>
<th>Weekday</th>
<th>Weekend</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Children</td>
<td>32</td>
<td>34</td>
<td>66</td>
</tr>
<tr>
<td>Without Children</td>
<td>20</td>
<td>48</td>
<td>68</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>Workers/Volunteers</td>
<td>25</td>
<td>24</td>
<td>49</td>
</tr>
</tbody>
</table>

Table 3
Demographics – number of individuals observed

<table>
<thead>
<tr>
<th></th>
<th>Courtyard</th>
<th>Rank</th>
<th>Walled Garden</th>
<th>Rank</th>
<th>Paddocks</th>
<th>Rank</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers/Volunteers</td>
<td>16</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>21</td>
<td>1</td>
<td>49</td>
</tr>
<tr>
<td>Groups of 2, mixed gender</td>
<td>16</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>1 woman and at least 1 child</td>
<td>12</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>24</td>
</tr>
</tbody>
</table>
perspective to the interviews. Though the differences were subtle, it was noticeable that Sayle communicated a more therapeutic and educational focus while Montes de Oca emphasized environmental goals and a desire to initiate self-sustaining projects, both on-site and within the community (Montes de Oca, 2011; Sayle, 2011).

4.2.3 Strengths

One of HCF’s greatest strengths is its therapeutic and supportive programming. For some of Hackney’s marginalized and struggling individuals, the farm offers a sense of sanctuary and retreat. As Montes de Oca (2011) notes, “all of the staff are there for the community members. Some of them are going through difficult times and they are there for them, whether it’s for help organizing their hydro payments or having someone to talk to”. Farm programming also provides opportunities for community members to create new bonds, such as during yoga sessions for female refugees or volunteer gardening sessions.

In the gardening sessions, productive agriculture is secondary to their therapeutic and social aims. The garden volunteers are a diverse group of adults who come to the farm for a multitude of reasons, whether they have extra time and want to contribute to the community or have mental health or drug dependency issues. Sayle began volunteering during a difficult time in his life and though he is now a paid employee, he continues to volunteer more of his time “because of what goes on here, and what we’re providing for other members of the community...I appreciated what it gave to me when I...needed it” (2011). In essence, the gardening sessions are “all about self esteem and self worth and building that up and...making them feel part of, rather than sort of separate” (Sayle, 2011).

Montes de Oca believes that HCF’s openness is one of its greatest strengths.
[A] vast amount of what we’ve done has come out of collaborations that happen just because somebody has come in to pick up and eggs and ends up talking to somebody about a passion that they have and we end up being able to connect at some point...[I] think that sense of openness is what really grounds us in the community and in the needs of the people who are visiting and also just allows us to take advantage of things as they come (2011).

Projects come and go as do those who champion them, but the flexible and adaptable character of HCF ensures it continues to keep “buzzing full of ideas [and] keep bringing in new people who have new interests” (Montes de Oca, 2011). Sayle also agrees that responsiveness to the community is an important strength of HCF. He explains that the projects they initiate are based on the feedback from the community and from partner organizations as well their own vision of their role as an organization. His belief that their role is to support the community is evidenced by his response, when asked about how they decide which projects to pursue: “[i]f we see a project that we need to do for the people in Hackney, for the people that we know locally, we’ll find the money somewhere” (Sayle, 2011).

One example of a community-initiated project is the History of Haggerston Park initiative. In conversation with farm manager Chris Pounds about the project, he notes that older Hackney residents often shared their memories of the area with farm staff and volunteers. One of the park’s gardeners is an amateur filmmaker with a passion for history. Thus, the filmmaker and Pounds decided to capture this history, developing a project that resulted in a video on Youtube, a yearly exhibit which features images of the past and stories of residents, and a pamphlet available through the Borough of Hackney website. In this instance, the farm served as a hub of knowledge where people came and shared their memories, ideas, and ultimately produced something that celebrates the history and culture of the neighbourhood (Pounds, 2011; London Borough of Hackney, 2009; London Borough of Hackney, 2011).
4.2.4 Networks and partnerships

Beyond its openness to community members, HCF also strives to extend its networks through collaboration with local organizations. These collaborations often result in a wider variety of opportunity and resources for community members. Examples of such initiatives include the Magnificent Revolutions workshop which provides education about energy use through bike power demonstrations as well as an on-site alternative school for youth. The farm often rents its strawbale hut for meetings and workshops by various organizations. Those with environmental and community aims often use the hut without charge as a way of supporting work the farm believes in. Sayle (2011) says that these relationships usually are reciprocal as these organizations help the farm in various ways.

Haggerston Park User Group serves as a platform for park users to voice concerns about the future and current state of the park. The user group is comprised of individuals such as Parks Development manager for Hackney Sam Parry, HCF manager Chris Pounds and interested citizens. The user group has experienced conflict over land use decisions in the park, illustrating the debates around what is the best use of public land and the factors that affect how decisions are reached. When a parcel of land at the north end of the park was proposed to be given over to a neighbouring school in 2008, the user group was outraged. However, when the market crashed and plans for this expansion were halted, the farm proposed to initiate containerized food production, thereby offering Hackney residents a chance to grow their own food. While the debate over future use for this land parcel continues, the farm was granted permission to create a food forest in the south end of the park, in another under-utilized plot of land. While a positive contribution to the food landscape of Hackney, the extent of the food production at this site is somewhat symbolic, not nearly to the scale they had hoped (Montes de Oca, 2011; Haggerston Park User Group, 2011). Thus, we see how competing land uses and market pressure can influence the potential for expanding food production in public space.
HCF is run as a charity. It receives funding from a diverse range of sources, such as the Hackney Council, private donors, and grants, most notably the National Lottery grant. However, its financial viability is always being monitored. HCF has developed a diverse range of support and revenue sources characteristic of many city farms and community gardens (Iles, 2005). HCF rents out part of its building to at least three businesses; the rent covers nearly half the yearly costs of the entire project (Sayle, 2011). The second largest funding source is the generous National Lottery funding with which HCF is able to support many projects for Hackney community members, such as the refugee women’s yoga. HCF is also beginning to develop social enterprises in order to further sustain itself, says Montes de Oca (2011). Initiatives such as the farm shop generate an income which is then reinvested into the farm’s social and environmental aims, thereby ensuring its ongoing viability. Funding from corporate sponsors is another tactic that they may pursue more aggressively in the future. Thus, diversity in economic approaches also contributes to HCF’s success (Montes de Oca, 2011).

4.2.5 Spatial analysis

The farm’s urban context contributes to its success at drawing in a wide segment of the neighbouring population. HCF and Haggerston Park were both developed from the former urban structure of Haggerston and many of the pathways today were formerly roads (London Borough of Hackney, 2011). HCF also reused the existing built form which was not cleared during urban renewal. Figure 9 illustrates HCF’s circulation pattern and off-site connections. A former brewery on-site was adapted to include a cafe, a pottery studio, meeting rooms and offices. The farm is located on a major pedestrian and bike route which connects two popular weekly street markets, the Columbia Road Flower Market and Broadway Market, as well as connecting further south into the City, London’s
financial center. Its location within a municipal park offers the opportunity for individuals to happen upon the farm as they head out of the park. However, the farm was established separately before the park and the connections between the two entities are not very well-articulated. The main pathway into the farm from the Goldsmith’s Row at Hackney Road is quite visible and the sign for the Frizzante Cafe from Hackney Road helps to draws in casual passersby (see Figure 8). However, access to the farm either from the North-west (Haggerston Park) or South-west (Hackney Road) entrances are informal and unmarked.

![Hackney City Farm – main entrance looking north-east along Goldsmith’s Row](image)

*Figure 8. Hackney City Farm – main entrance looking north-east along Goldsmith’s Row*
A wide variety of activities take place at HCF, including strolling; observing the flora and fauna; fruit and vegetable production; workshops; community meetings; and gathering with friends. The most prominent spatial use is that of animal husbandry. Social gathering takes place largely in the cafe or in the small open space in the walled garden. A functional analysis of the park is shown in Figure 10. The majority of the activities taking place on-site require a specific location from which to operate. HCF is home to several partner businesses and social enterprises such as Bike Yard East repair shop and Frizzante Cafe. The farm also runs a variety of workshops focused on food systems and environmental education. Many of the projects operate from within the retrofitted brewery buildings; only the farmers
clubs and gardening sessions are intrinsically tied to the landscape (Appendix). This suggests that HCF organizers may not seriously consider how they use their landscape as it is not particularly important to achieving their aims.

\textbf{Figure 10. Hackney City Farm – Functional analysis diagram}

The most multi-use areas on-site were deemed to be indoors, particularly the rooms used for workshops and the cafe. Outdoors, the spaces tend to have a specific use or function and often a clearly identified pattern of circulation as well. The walled garden, in pink on Figure 11, exemplifies this; it is organized around a paved pathway that forms a loop around the beds and connects to informal mulched paths and desire lines. The majority of observed visitors followed this formalized circulation pattern moving either clockwise or counterclockwise from the entrance as illustrated in Table 4. Only a few visitors were observed to walk a random path through the walled garden, termed the ‘anomalous’ path below.
Table 4. Walled garden circulation patterns

<table>
<thead>
<tr>
<th></th>
<th>Typical (paved or mixed*)</th>
<th>Opposite (paved or mixed)</th>
<th>Anomalous</th>
</tr>
</thead>
<tbody>
<tr>
<td># of visitors</td>
<td>10</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: * denotes using both paved and informal mulched paths

Multifunctionality was observed most in spaces that are under-utilized. One day I observed a workshop taking place in one of the lesser-used animal paddocks. This same paddock houses shipping containers which provide bike storage for the on-site bike workshop, managed by a partner organization. The front woodland garden, while often closed to the public, does accommodate a variety of functions, from workshops to volunteer gardening sessions. However, its spatial segregation at many times limits its ability to support even more uses.

Many activities take place in specific areas on-site and many are segregated from one another for a variety of reasons. Workshops take place in areas separated from the public, either in the strawbale hut, the fenced-off area at the front of the property, or in one of the meeting rooms in the building. Some classes are paid activities; thus, there may be a need to separate them from the public.
It is also possible that London’s rainy weather necessitates meeting space that is indoors instead of out. Sayle (2011) mentioned that segregation of user groups is often necessary from a safety standpoint. Some of the adult volunteers are vulnerable because of mental or physical challenges and for these reasons as well as child safety, it is necessary to keep the adult and children volunteers apart. This is accomplished by spatial segregation as well as having sessions at different times.

A large proportion of the site is devoted exclusively to animal grazing. This spatial organization has been in place since the farm was initiated, reflecting the original goals of the community organizers. While the project has always focused on exposing urbanites to farming practises, today its aims are much broader, encompassing broader environmental education and community-building. Montes de Oca reflects on how the legacy of past decisions affects contemporary spatial usage and the project’s ability to support possible future goals. For example, Montes de Oca (2011) explains that if they were to try and produce more food on-site, the spatial layout does not facilitate that. The animal paddocks are more favourable for food production as they are much sunnier than the two shady areas currently used for food production - within the walled garden and the wooded area (see Figure 12). He further explains that the animals seek out the shade; they gather by the fence, close to the trees. Visitors have made their own paths by the fence line; trampling the undergrowth in an attempt to get as close to the animals as possible (see Figure 13).
This discussion draws attention to the challenges that have arisen at HCF due to its organic development. A lack of understanding of animals’ needs, as well as the lengths to which humans will make their own paths illustrate how site analysis and an assessment of opportunities and constraints would have benefited this project from the start. By being involved in the early stages of planning such a project, landscape architects could prevent these problems before they arise by assessing site opportunities and constraints; valuating microclimatic factors that influence both animal thermal
comfort and vegetable and fruit production; and using this inventory and analysis to help inform spatial layout.

Past decisions have influenced how space is used in other ways as well. The main floor of the building is rented to a for-profit cafe, a decision that was made when the farm was struggling financially and was looking for alternative sources of income. Today, the cafe is a popular destination for locals and brings many to the farm who might not otherwise visit, illustrating one of the benefits of multifunctional landscapes. However, the cafe’s prices are too high for many of Hackney’s underprivileged inhabitants, thereby largely serving the middle class. Further, the cafe is not tied to the Hackney City Farm’s environmental or food system aims; while the cafe could contribute to food system education by using farm-produced and local foods, the cafe is under no obligation to pursue this avenue. So, while the cafe provides a large proportion of the farm’s income, this relationship limits the farm’s ability to create an inclusive community space as well as further their food system education aims.

Resources, and decisions based on a lack thereof, lead to trade-offs; while the farm is sustaining itself financially through this partnership, it limits its ability to meet its social and educational aims.

4.2.6 Design suggestions

HCF experiences success in meeting its environmental and food system education aims. However, as has been shown, they are largely being met through workshops that are not tied to the landscape in any real way. It has further been suggested that the amount of land devoted to animal grazing might not be in scale with their current focus. However, this project is community-led, relies heavily on voluntary help and funding, and is unlikely to be interested in changing its spatial organization considerably. The project could, however, increase its passive environmental education by planting a greater proportion of native species which would not only contribute to biodiversity but, with
appropriate signs, could further educate the public about the environment. Similarly, stormwater infiltration and education could be improved with re-worked rain gardens and more visible rain capturing techniques.

These measures would not require a re-organization of space; under-utilized areas could be approached as infill projects. A more intensive re-design could include re-working the walled garden to create a multi-use space that mixes food production, group gatherings and biodiversity, resulting in a more highly productive and spatially efficient design. The woodland garden exhibits a great deal of under-utilized space and could be re-worked to create a larger gathering space organized around ornamental, educational or food producing gardens. The cafe’s outdoor seating area is extremely popular but is quite small; this space could easily extend further into the woodland, allowing for a larger social area that would welcome visitors. The front section could thus be opened up to greater use while the back section could remain a volunteer area, to allow separation to continue to exist. These examples should not be seen as a criticism of HCF, but simply to illustrate the opportunities a landscape architect could create in helping to retrofit such a space.
4.6 Case studies discussion

Prinzessinnengarten and Hackney City Farm, while very different projects, illustrate some important lessons about community-based urban agriculture. Urban context is an important determinant of how a project evolves as each city offers a unique cultural, socio-economic and political environment. Socio-economic context impacts the project’s development, based both on who it needs to serve and who its main users are. Further, urban land use guidelines and zoning restrictions influence what is and is not allowed on public and private land. The length of land tenure of a project also influences how much effort is put into the site. Finally, the organizers’ particular interests and focus also affects how a project evolves. Prinzessinnengarten and Hackney are unique projects in which different styles of management are apparent, thereby illustrating the influence of individual leadership.

These projects both exhibit a level of openness as well as a high degree of on-site diversity. They seek to incorporate local people into the programming and are responsive to the needs of their communities, changing and adapting the project to reflect those who use it. They are both spaces of creativity and of innovation, encouraging people to start a project they believe in and take ownership of the space. While each project does this in a different way and to varying degrees, they both express this as their aim, to serve the people in the community by encouraging participation. By engaging in the project and the processes, people are able to feel a part of something, part of this specific community. Diversity is exemplified in the wide variety of educational, recreational and social experiences. By offering diverse experiences, a wide variety of people can be reached.

Diversity is further enhanced through partnerships with other neighbourhood organizations, thereby extending the project’s networks. These networks provide mutual support both for the projects as well as the community members. Financial challenges can cause projects to seek support in many
forms, from direct sponsorship and grants to reciprocal supportive partnerships. A project’s direction can be influenced by such collaborations and funding sources. For example, the National Lottery grant allows Hackney City Farm to pursue a variety of community-building projects they would not otherwise have the resources to provide. Past financial challenges stimulated HCF to rent out part of their building to Frizzante cafe which is not aligned with their vision of local food production and environmental sustainability. By contrast, Prinzessinnengarten has made choices to avoid partnerships with particular organizations in order to remain true to their vision.

Spatially, the projects both exhibit under-utilized spaces as well as a lack of coherence in layout and circulation. These difficulties could be ameliorated with the help of a landscape architect. By working with community groups to design these spaces, landscape architects can ensure that the spaces exhibit greater multifunctionality, thereby serving a greater variety of needs for diverse populations. Designers can contribute a thoughtful layout that considers flow of traffic and complementary and conflicting land uses. It is proposed that, by doing so, such projects will become better loved and more widely accepted. Community-based projects are valued by the community partly because they are created by and for those who live in the area, organically and over time. Thus, design intervention will be most appropriate if it is collaborative and responsive to the needs of the community.

In summary, the case studies’ strengths are their collaborative and community-centered nature and their diversity in programming and user experience. They are imbedded in their local context and have been shaped by the interests and passions of those who have championed them. HCF and Prinzessinnengarten are also connected to wider networks of mutual support, another strategy that facilitates their success. However, neither project has a coherent circulation system, nor are they maximizing their available space. Opportunities for greater multifunctionality were noted in each case.
Chapter 5.0 begins by detailing the methods by which landscape architects work with community groups. The design for the Brant site sought to capitalize on the strengths of community-based projects as listed above while providing a coherent land use plan and circulation system.
CHAPTER 5.0 - BRANT AVENUE COMMUNITY GARDEN

Whilst local authorities might be tempted to set up a ‘community’ project from top down, it is better to facilitate and encourage genuine grassroots social participation and community activity. Awareness, and promotion, of the benefits through the local community will reveal community or school groups who have, or would like to, set up new projects (Iles, 2005, p. 86).

This chapter details the process by which I designed a community garden at Brant Avenue Public School in Guelph, Ontario. This project enabled me to apply my learning from the case studies of community-based UA projects as detailed in Chapter 4.0. My intent was to explore how landscape architects can work with community groups, bringing together the strengths of grassroots projects and the skills of the landscape architect. In order to ensure that this will be a truly community-oriented space, I engaged project organizers and interested community members using participatory methods. One of the strengths of the grassroots UA case studies I investigated was their openness and inclusiveness and I sought to foster this from the beginning with the Brant group. The design draws on the lessons learned from the case studies by considering the following:

- local context (community dynamics and Upper Grand District School Board guidelines)
- the vision of the project organizers and engaged community members
- designing for flexible and evolving land use
- responding to the needs of the community
- encouraging grassroots participation in the project
- capitalizing on, and extending, community networks
- designing a multifunctional landscape with a strong circulation that provides diverse experiences
My approach with the Brant group drew heavily on participatory design theory. The community-based nature of this project, as well as the partnerships already existing in the community, enabled me to work with the organizers to develop this design project collaboratively. In planning my approach, I drew on the experience of co-organizing a charrette for the Organic Agriculture Conference, Birgit Teichmann’s participatory approach to engaging children in school ground designs and Caron Cheng’s 2006 MLA thesis on participatory design. Case studies of Marcia McNally and Randolph Hester’s participatory planning and design work further illuminated these approaches conceptually and provided inspiration. An overview of participatory design and planning theory follows.
5.1 PARTICIPATORY DESIGN AND FACILITATION

Participatory design seeks to engage the current or potential users of a landscape in the design process, often through group meetings of various sizes to discuss hopes, challenges, ideas and visions for the future of a specific project (Cheng, 2006; McNally, 2011; Sanoff, 2000). Participatory design is grounded in the assertion that while experts bring analytic and design skills, citizens bring specialized knowledge about their communities, the combination resulting in a place-sensitive design that better reflects the users (Crawford et al., 2008; Crew, 2001; Hester, 1990 & 2006; Lawson, 2005; Teichmann, 2011). Hester (1990) suggests that “[t]he process of working with neighbors or even strangers to solve a common problem creates social bonds that usually continue after the design... is finished” (p. 10). Community engagement offers the possibility to improve the social capital of a community, intensifying the social connections between individuals with similar and diverse values, backgrounds and interests (Crawford et al., 2008; Guillen, Coromina & Saris, 2011; Ramirez, Aitkin, Kora & Richardson, 2005).

Participatory methods can be conducted at a variety of scales and intensities, depending on project goals, the extent of grassroots organization and the level of community interest. Understanding a group’s needs and expectations for involvement in the design process can contribute to a successful design as well as community satisfaction with the process (Hester, 1990). Participatory processes alter the traditional relationship between client and designer. Lawson (2005) explains that the designer not only orchestrates the physical design but is also a participant in the process who brings to it specific cultural background, values, and preconceptions. While acknowledging cultural difference and power dynamics, participatory methods can help the designer understand and conceptualize community desires in a shared vision. It then becomes [the designer’s] professional contribution to transform that vision into achievable design (p. 169).

However, she further explains that “the position that the professional assumes – whether expert,
facilitator, surrogate advocate, or visionary – not only affects how the problem is approached, but also the methods of community engagement and scope of final work” (2005, p. 159).

5.1.1 Levels of citizen participation

Arnstein’s (1969) Ladder of Citizen Participation illustrates the various approaches to public participation in which the professional assumes these various roles. Her model explains that some participatory processes seek to placate, educate or ‘cure’ participants of their way of seeing the project whereas others redistribute power, enabling citizens to take greater ownership over a project. Arnstein (1969) argues that “participation without redistribution of power is an empty and frustrating process for the powerless. It allows the powerholders to claim that all sides were considered, but makes it possible for only some of those sides to benefit” (p. 216). Participatory processes that are truly inclusive bring citizens into the decision-making process as partners or leaders in visioning, planning and implementing their landscapes (Cheng, 2006; Hester, 1990; Ramirez, Aitkin, Kora & Richardson, 2005).

Participatory design can range from public consultation to joint decision-making and co-creation. Not only can designers involve users in the visioning process but they can be instrumental in design implementation as well. Berlin-based landscape architect Birgit Teichmann regularly engages students and teachers in the design and planning process for school grounds. Students are involved in every stage of the process, including envisioning their ideal play spaces. She often brings their play structure ideas to contractors who then transform these visions into something workable. She also believes in involving students in design implementation, helping with construction in child-appropriate ways. Teichmann (2011) argues that in participatory design, involvement is the main objective as it cultivates a sense of ownership and helps build community.
5.1.2 Charrette

The charrette process exemplifies many participatory design principles; participants brainstorm together in a group setting to discuss and find a solution to a problem. A charrette is a quick-paced group problem solving exercise, often design-related but not exclusively. Professor Karen Landman and I assisted in structuring a charrette for the Guelph Organic Agriculture Conference in January, 2012. The charrette provided an opportunity to explore participatory methods more deeply, as well as the opportunities and challenges that arise from this specific group dynamic. Themes consistent with participatory literature arose in the process, including power dynamics, multiple participant perspectives and goals, and the flexible role of the facilitator.

The charrette was chosen as the method for the Organic Agriculture Conference’s annual workshop, bringing together organic sector professionals, academics and students to discuss adaptation to climate change. The charrette was structured to first provide introductory information on the challenges climate change presents today to ensure everyone was starting from the same level of understanding. First, the groups of between 6 and 10 people brainstormed their concerns about climate change and then moved on to discuss how they could adapt to create a more positive future, recording their ideas on large sheets of paper. Each group had a student facilitator and recorder while a few tables included one of the organizers.

Strong listening and facilitation skills were notable in working with the organizers to structure the charrette. Listening closely to the organizers enabled Karen and I to capture their concerns and hopes and then create a charrette that would help answer their questions. The organizers were a diverse group of professionals from academia, non-governmental organizations and public practice, tied by their interest in and concern about climate change adaptation linked to landscape stewardship.
Karen’s approach with this group was open, supportive and enabling, allowing them to work through their issues and differing viewpoints patiently as we moved iteratively into the final structure. The construction of the charrette format was similar to a design process; we gathered initial information from the organizers about their goals and objectives, a framework was suggested to the group for consideration, adjustments were made based on their feedback and then the structure was finalized. Thus, the format was created through a participatory process which utilized the designers’ facilitation and design skills to create an end product for the client group, the charrette organizers.

The climate change charrette groups were facilitated by first-year MLA students who helped to organize and guide the conversation at each table. The variety of leadership styles were interesting to observe, from very structured and directive to very flexible and passive. Some groups seemed to need more direction than they were given while others might have benefited from less intervention. It was notable that in some cases, when leadership seemed to be lacking, a participant stepped into the facilitation role. Group dynamics were diverse, as would be expected with diverse participants; some tables were dominated by the voices of several members while other tables communicated in a more balanced manner. At several tables, individuals with particular areas of expertise shared their knowledge, surely a benefit to other participants, but ended up dominating their tables’ discussion as a result.

Generally, feedback from participants in the process was positive. In the post-charrette discussion with participants, as well as in discussion with the student facilitators, having the opportunity to learn from fellow group members and share experiences were notable attributes. A Likert scale survey was administered to charrette participants to gauge their response to the process. The statements were as follows:
I felt comfortable expressing my opinions and thoughts
My thoughts and opinions were heard and incorporated into the final record
This charrette was inclusive and collaborative

Out of approximately 40 participants, 32 completed surveys. Results were calculated based on the percentage of participants who very strongly or strongly agreed to each question. Statement 1 received 91% agreement and statement 2 received 86%; statement 3 received the lowest agreement at 75%. Qualitative comments unfortunately did not clarify the lower level of satisfaction in this area. Qualitative comments were analyzed based on their content and categorized accordingly (see Table 6). Out of 32 feedback forms received, 10 were devoid of comments. Of the remaining 22 forms, 9 of the comments were vague but positive, 6 commented favourably on the format and 6 provided constructive criticism.

Table 5
Charrette feedback comments

<table>
<thead>
<tr>
<th>General (i.e. well done, worked well, great job, thanks...)</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enjoyable/successful format</td>
<td>6</td>
</tr>
<tr>
<td>Ideas shared/generated</td>
<td>5</td>
</tr>
<tr>
<td>Charrette more engaging than a speaker</td>
<td>1</td>
</tr>
<tr>
<td>Respectful format</td>
<td>1</td>
</tr>
<tr>
<td>Too scattered/not enough guidance</td>
<td>3</td>
</tr>
<tr>
<td>Too structured</td>
<td>1</td>
</tr>
<tr>
<td>Requests for follow-up with results</td>
<td>3</td>
</tr>
<tr>
<td>More time for critical thinking and discussion</td>
<td>1</td>
</tr>
<tr>
<td>More varied participants</td>
<td>1</td>
</tr>
</tbody>
</table>
5.1.3 Facilitation

A strong facilitator enables participants to take ownership of a project and drive the process outcomes. Strong listening skills and the ability to balance varying needs and objectives are essential facilitation skills (Hester, 1990). By maintaining neutrality, the facilitator allows participants to work together to reach conclusions. Conversely, offering the expert perspective can shut down communication, making the participants feel intimidated or that their opinion is not being valued. An environment of mutual respect, where everyone feels comfortable expressing themselves, can facilitate participants’ openness and honesty (Cheng, 2006). Dialogue, through meetings and individual conversations, can establish trust as well as allow the designer to learn about “the social and environmental terrain rapidly, from the inside out” (McNally, 2011, p. 20). Re-stating concerns and ideas during the process can ensure that you effectively capture participants’ thoughts and avoid misinterpretation. Finally, understanding the power dynamics within the group can help interpret the underlying reasons for various viewpoints (Cheng, 2006; McNally, 2011). McNally (2011) suggests that “[t]o listen well inevitably means to ask questions about deeper interests, future possibilities, and reformulations of the problems we seem to face” (p. 31).

5.1.4 Group conflict

Participatory processes can facilitate greater understanding between individuals with diverse interests, perspectives and goals (Ramirez & Fernandez, 2005). Conflict is a natural part of group processes as people have different wants and needs. However, it need not be seen as a problem; conflict can be used as a tool to increase participants’ awareness of multiple perspectives. Exposure to others’ viewpoints provides an opportunity to learn how their values and goals affect others. Discussion can often reveal common interests and shared core values even if goals vary, thereby improving group
cohesion (Cheng, 2006; Halvorsen, 2006; Sanoff, 2000). Indeed, establishing common goals need not be the focus of a participatory process. “[E]xperiences in the participation process show that the main source of user satisfaction is not [necessarily] the degree to which a person’s needs have been met, but the feeling of having influenced the decisions” (Cheng, 2006, p. 12). Halvorsen (2006) further suggests that “when the basis for a decision is well-explained, including why specific concerns were not fully addressed, participants are more likely to support the decision and believe that decision makers acted in good faith” (p. 154).

Sometimes, conflicts cannot be resolved, nor can common ground be found. Flexibility in both leadership style and method of engagement can help the designer adapt to the changing needs that arise in attempting to engage a community in design or planning processes (Cheng, 2006; Lawson, 2005). Being able to change tactics to circumnavigate barriers is a valuable skill, as exemplified by McNally and Hester’s master planning process for the Runyon Canyon in Los Angeles in the early 1990s. Due to land development and political power struggles that were deeply entrenched within the community, local people had little interest in engaging with one another in a cooperative planning process. Adapting to this setback, McNally and Hester’s team instead focused on the scientific argument for preserving the canyon. They also organized field trips for locals to experience the natural beauty of the canyon, thereby fostering an understanding of and love for this landscape (Hester, 2006; McNally, 2011). Thus we see how a flexible approach can help a project to continue to move ahead instead of being sidelined by setbacks. McNally (2011) argues “that in community design and planning you do what you have to do – it is proactive, borrowing (from other disciplines), participatory, political, and multi-modal” (p. 31).
5.1.5 Power and engagement

Participatory design and planning necessitate a level of citizen involvement that is not always easy to achieve. Research suggests that engagement in participatory processes is influenced by gender, ethnicity and class, specifically “whether we feel marginalized or empowered to participate in community change efforts, and whether we feel we have a place, or a right to a place, at the bargaining table” (Manzo & Perkins, 2006, p. 340; Halvorsen, 2006; Ramirez & Fernandez, 2005). An understanding of who has access to information, who typically participates and who has the power to influence local decision-making without engaging in participatory design processes is highly informative in determining how to equitably engage the community (Hester, 2006; Ramirez & Fernandez, 2005).

Engaging marginalized populations can be difficult, as Hester (2006) experienced in designing the Nature Park with the South Central Los Angeles community. He found that residents were initially skeptical about the sincerity of community engagement efforts; it took repeated attempts, varying techniques and perseverance to begin to gain trust and feedback from the community. Engagement attempts can be unsuccessful when people believe professionals are either insincere or that their involvement is unlikely to influence the process. These beliefs are more common in those who feel disempowered in their daily lives (Arnstein, 1969; Halvorsen, 2006; Waraich, 2011). Engagement can also be difficult in communities where place attachment is low. Place attachment can be described as “the affective bonds between people and places” (Manzo & Perkins, 2006, p. 337). Communities with high turnover in residents are less likely to have members with strong emotional or psychological ties to space, thereby decreasing the likelihood that people will engage in participatory processes related to community changes (Manzo & Perkins, 2006).
5.2 PROJECT OVERVIEW

The design for the Brant Avenue Community Garden draws on participatory design and facilitation literature as well as the experience of the charrette in a number of ways. It is rooted in the assertion that while the designer brings a particular level of expertise, community members can provide valuable insight and a deep understanding of their locality. Thus, a design process that brings both together will result in a design that better reflects the users. The engagement process was constructed in accordance with literature that suggests that involvement contributes to stronger community ties and facilitates a sense of project ownership within the community. The process sought to foster this sense of ownership by using facilitation skills such as maintaining neutrality, listening carefully, and allowing participants to drive the outcomes where possible. The resulting design is intended to guide future decision-making but is not meant to result in a finished project; it provides a framework and structure to be built upon in future years.

As illustrated in the case studies in Chapter 4.0, urban and socio-economic context shape how community-based UA projects evolve. The Brant Avenue neighbourhood experiences socio-economic challenges and decreased capacity often associated with low income communities. The neighbours, through their Brant Avenue Neighbourhood Group, are working together with agency partners to increase the health of their community. Agency partners of the Neighbourhood Group include representatives from various local and city agencies. Sonia Waraich, formerly a community development worker with the Brant Avenue Neighbourhood Group, continues to be involved in the neighbourhood as an agency partner. This community garden is one of the initiatives that the neighbourhood group hopes will strengthen the community (Waraich, 2011).
My goal was to approach the Brant Avenue Community Garden design project with a flexible leadership style and to adapt to changing needs within the time constraints of a Master’s thesis. My framework was semi-structured; I had an idea of who I wanted to engage based on an understanding of who the project was intending to serve as well as who was already engaged. I approached my work with the organizers as a partnership and relied on their expert knowledge of the Brant Avenue community. My engagement approach was also extremely iterative; when I found a particular method was not yielding results or was not appropriate for the community, I did what I could to adjust my technique based on what seemed to be evolving. I also adapted my engagement processes, where possible, to fit with the organizers’ ideas of what does and does not work in their community. My ability to adapt to the community dynamics was challenged by time constraints as well as my own objectives, which I will discuss in more detail at the end of this chapter.

5.2.1 Participatory process

My participatory process was comprised of meetings with the various stakeholders and interested parties. My first meeting was with one of the project organizers, Sonia Waraich of Family and Children’s Services of Guelph and Wellington County. We met in early November to discuss the scope of the project and her goals as well as mine in engaging in the project. I then put together a proposal as per my involvement, agreeing to provide them with a functional spatial layout and circulation plan as they intended to begin work the following spring, 2012. I also explained my intention to engage community members and students in the process as a contribution to my thesis research.

The next meeting was in January with Waraich and the remaining organizers, Brant Avenue Public School’s principal Linda Beale, horticultural therapy intern and neighbourhood group volunteer Matt Reeves and garden volunteer Hannah Douglas. Before the meeting I communicated to the organizers
that I hoped to discuss their collective and individual goals as well as my proposed participatory approach for developing the site plan. I had a structure in mind for the meeting but, for the first 10 minutes Waraich, Reeves and I were alone as we waited for the others. Thus we started discussing the project informally as Waraich and Reeves showed me former landscape designs for the site and their hopes and plans for the future. When Beale and Douglas arrived, the informal discussion continued and we explored territory I had hoped to cover without needing to directly ask my planned questions:

- Who is involved now? Who gardens?
- What’s great about the garden currently?
- What are your hopes for the garden design?
- What kinds of activities and experiences do you hope will take place in the garden?
- Who do you hope to engage?
- Who is taking initial ownership? (i.e., who will water the plants, who will weed...)

As the meeting progressed and the natural flow of conversation slowed, I began to go over the questions that had not already been answered.

At the end of the meeting I explained the participatory process I hoped to use with the community members and students and the reasoning behind it. Plans for the community meeting were challenging to bring to fruition as the organizers expected a low participant turn-out. Waraich suggested that she take the idea of the meeting to the neighbourhood group and other agency partners who were running programs in the neighbourhood to gain feedback on how best to engage new participants. She also expressed that she wanted to ensure we would not sideline their agenda for an upcoming community visioning session with this project consultation. After meeting with them she communicated their suggestions, to conduct a half hour meeting after community Zumba in the school’s staff room. The short meeting time and proximity to a popular community activity were expected to increase the likelihood of participation. The organizers communicated with community members and local committees in person as well as by email while I posted advertisements about the event in
Despite our efforts, the meeting drew only six participants. I chose a concise workshop format in which group dynamics were an important aspect. In a community that is disengaged, creating an environment where even a few who do not know each other can come together and discuss felt like a step in the right direction. The low turn-out resulted in an intimate and enjoyable session in which I was able to talk with everyone individually. I had a list of questions I hoped to discuss and coloured markers, sticky notes and pens to draw or write on large foolscap. I distributed the question sheets and started the meeting informally, communicating our goals for the session and suggested how we might proceed (Appendix). Discussion was slow to start but groups broke off naturally into three groups with my assistants, Waraich and I acting as facilitators. After discussion had gone on for some time, I brought the groups together to discuss the themes that had emerged. There were similarities and differences in elements that participants hoped to include in the design, and group discussion and brainstorming helped to clarify and solve some of the concerns that had arisen. At the end of the meeting I explained my intention to balance everyone’s input with the site constraints to produce a design that would meet with School Board approval.

The difficulties encountered when working with a team of organizers were exemplified in my attempts to engage the Brant Avenue students in information-sharing sessions. As a great deal of communication about my role in the project was conducted through group emails, the fact that my research required School Board approval was not well understood. Thus, when I was ready to conduct consultation sessions with the students, it became apparent that this approval had not been received. Though approval from the School Board was eventually granted, my time line for completing my research was getting tight and Reeves offered to interview the students himself. He took the questions I
planned to use as a guideline and conversed with three classes; grades 1, 4/5 and 6:

- What do you do in the front yard of the school?
- What do you like about it?
- What would you like to do/how could we make it better?

He also interviewed one of the student gardeners individually as he was not able to interview his entire class. This student was highly engaged in the garden in 2011 and Reeves wanted to make sure he received his input.

### 5.2.2 Site specific design considerations

Once my consultation data was collected, I was able to compile, interpret and utilize it to inform the design. The design for the Brant Avenue Community Garden was influenced both by the existing site conditions as well as by a number of context-specific design guidelines and limitations.

The Brant project is situated on the front lawn of Brant Avenue Public School in Guelph Ontario (Figure 14). Figure 15 details the site inventory. At present, the site is quite open. Two berms and a swale are present and were retained due to the need to match current on-site drainage conditions. Existing trees and ornamental plantings were also to be retained both for microclimatic reasons as well as sentimental; the ornamental plantings have been initiated by the community and thus were deemed valuable.
An analysis of the site resulted in the opportunities and constraints diagram illustrated in Figure 16. As the site is intended to be focused around community gardens and a therapeutic children’s garden, the most important element of analysis was sun patterns which were modelled in SketchUp,
resulting in the category ‘open, sunny, flat’. As the site is also intended to support community gathering and events, existing gathering spaces that were not on prime productive land were selected to be intensified.

*Figure 16. Brant Avenue Public School – opportunities + constraints*

The Upper Grand District School Board (UGDSB) also had specific parameters that influenced the design. Additionally, community gardens in Guelph are not very common; on numerous occasions, Waraich and Reeves emphasized that tidiness and conforming to the community aesthetic were important to ensure the garden would continue to be tolerated by the surrounding community. The organizers also asked for accessible pathways and the potential to include accessible beds in the future. The budget for such a grassroots project is likely to be indefinitely restrictive; thus, pathway design needed to be as concise and limited as possible while meeting these accessibility needs.

The results of the consultations were analyzed and considered in the garden design. There were both similar and diverse interests that needed to be considered but six themes were expressed by at least three out of the five consultation groups. These themes covered tangible elements, including increased vegetation, attracting wildlife, providing seating, incorporating rocks and stones and
suggestions for a more aesthetically pleasing fence design. The main limitations on my ability to incorporate consultation suggestions were maintenance considerations as well as UGDSB restrictions. Where possible, I sought alternatives that would meet the underlying need when it could be identified. For example, hopes for water in the form of a waterfall and/or pond were voiced by almost all of the interviewed groups but the UGDSB’s guidelines do not allow for water on school property. I suggested ways to symbolize water on-site, such as a dry streambed.

5.2.3 Design

The vision for Brant Avenue Community Garden is of a multifunctional landscape welcoming all ages and abilities. It is a restorative space, focused around productive and sensory gardens and a flexible space that readily adapts to varying learning, playing and social needs. It is intended to grow and change with the community as it continues to be championed by neighbourhood members. Figure 17 illustrates the layout and circulation concept for the project. Underlying the design is a strong circulation system and functional layout that will allow the project to grow over time as the community is able to access additional resources. The circulation pattern is simple, maintaining existing desire lines informally. A new pathway has been added to provide accessible entry from the sidewalk and to the shed where gardening tools are kept.
Figure 17. Brant Avenue Community Garden - Layout and circulation concept

Figure 18 provides the layout plan and planting concept for the site. As a community-based and evolving project, the planting concept is intended to act as a guide for future decision-making, being altered, added to or supplemented by members of the Brant community. Proximities were important in deciding how to allocate space on-site. The garden entrance offers an attractive aesthetic experience to walk through or to sit under the tree and relax as friends and neighbours garden nearby. Similarly, the natural playground is positioned next to the community garden plots in order to provide opportunities for kids to entertain themselves while parents garden (see Figure 18). The design is organized around a children’s therapeutic garden and community garden plots but also accommodates social gatherings, children’s play and learning space and accessible gardening opportunities.
I sought to incorporate a diversity of functions and support multiple uses in the design in order to serve a wide cross-section of the population. Multifunctionality can be seen throughout the site in a variety of ways. The community space will be the main area of activity, hosting community events as well as outdoor classes and accommodating informal gathering and meeting. It will be planted with native plant species to attract butterflies and birds as well as add to the aesthetic and natural experience of the site. The retreat is the quieter social space with tables to accommodate smaller group meetings, picnics, crafts and activities. The swale that travels North within the retreat is proposed to be planted with moisture-loving species which contribute to biodiversity as well as facilitating stormwater infiltration. The swale can also provide an educational opportunity to learn about the water cycle and
wetland plants. Thus, these spaces provide multiple opportunities for experience by different demographics.

5.2.4 Discussion

Installation is set to begin in the spring of 2012 with path installation and adjustment of the existing garden beds. From there, the organizers will decide on their priorities for moving ahead this year and in future years. The design is intended to be a starting point for the community to build on; it provides a variety of options and enough flexibility to allow the design to adapt to future needs and grow with the community. Having a design around which to organize is expected to help the engaged community members come together with a united vision, at least for the immediate future. However, as illustrated in literature on community gardening, in-group conflict can be as much a stimulant for community as agreement and common aims. As the community and organizers move forward with implementing this design, conflict may arise and project goals can be discussed and worked through.

Prinzessinnengarten and Hackney City Farm both employ full-time staff, contributing to their ability to exhibit flexibility and openness in their approach to both programming and community participation. Having strong leadership in place makes it easier for such projects to accommodate the uncertainty of relying on community participation. By contrast, Brant is volunteer-based and still in the early stages; thus, it is much more limited in its ability to manage and activate community resources. However, there is potential within the Brant community because of the strong networks in which the organizers are embedded. With the help of their expert knowledge of their community as well as their connections with Brant residents, I was able to work with the organizers within these existing networks.

It is hoped that engagement will improve over time with this and other community-based projects. As Ramirez, Aitkin, Kora & Richardson (2005) suggest “communit engagement...should be
an ongoing interactive process characterized by commitment to ever-changing community needs and interests” (p. 261). Waraich, Reeves and I discussed ways of drawing the community into the project in the near future, such as ‘work bees’ where people can drop in and dig or plant for however long they like. Harvest festivals and other such community events have been successful in the past at Brant and they will continue to host these in the garden. These casual social events and informal work sessions seem to work well in this community, whereas more formal ‘meetings’ are often avoided. In continuing to engage the community in the future, I stressed the importance of communication, so that those who might be interested in getting involved know who to contact and what the project is all about. The Brant organizers are having a sign board constructed this spring by a local Boy Scouts troop which should help immensely with publicizing the garden.

5.2.5 Limitations

My ability to engage with this particular community was limited by a number of barriers including a lack of understanding about the nature or intent of the garden project within the community, the disengagement and power dynamics of the community and the time constraints of my project. The time constraints that come with working on a Master’s thesis meant that my flexibility was limited. I needed to concisely collect consultation data in order to move ahead to design, analysis and discussion. Thus, this should not be seen as an exemplary participatory process in which flexibility and adaptability could be fully explored. The lack of understanding about the project became evident in the community meeting in which three community members were pulled in from community Zumba class and had little knowledge of what was happening with the garden on-site. Further, it became evident that the organization, ownership, and purpose of the garden were not well-understood within the community. This lack of understanding about the project likely made attempts to involve people in a visioning meeting less fruitful than was originally anticipated.
The community dynamics particular to Brant were illuminated by Waraich (2012) who has been a community development worker with the low income segment of the Brant community for many years. On several occasions, she mentioned the difficulties of engaging these community members in meetings or visioning processes. Waraich (2012) suggested that part of this disengagement is rooted in the reality that many impoverished single parent families in the area have to prioritize securing basic needs for their families, and do not have the time or childcare available to take part in community meetings. Furthermore, there is a high turnover of residents moving through the neighbourhood which can decrease community ownership. As residents improve their financial situation they leave social housing, or as their children leave home they are relocated to smaller units outside the neighbourhood.

Waraich (2012) further explained that Brant residents who frequently interact with government bodies for social services such as income assistance, child welfare and social housing, experience frustration at having many aspects of their life regulated by government, which can facilitate distrust of ‘official’ bodies. Further, when these community members do engage in official planning processes such as with the municipality, the language used, bureaucratic processes, and length of time it takes for change to be felt at the neighbourhood level can further alienate residents (Waraich, 2012). Thus, there are many barriers to engaging such a community in local decision-making processes.

5.2.6 Post-project feedback

A month after presenting the final design to community members and organizers, Waraich contacted me with an update on their progress. The design presentation meeting was attended by members of several neighbourhood initiatives that are working towards a healthier, more connected community. Waraich explained that the design has stimulated a great deal of discussion and
enthusiasm and members are considering how they can partner with the garden and increase their leadership within it. She expressed that “the resulting final design plan has continued to serve as a community engagement tool, helping organizers and participants share the project vision, and engage new enthusiasm from both residents and community partners in the next steps” (Waraich, 2012). Community members and organizers are taking ownership of this community space which is serving as a hub of ideas. Thus, while my ability to engage participants in the design process was limited, the community organizers and project leaders are continuing this work, taking ownership and bringing new participants into the project.
CHAPTER 6.0 - CONCLUSION

Urban agriculture tends to define itself as a bottom-up, grass roots movement with no time for the top-down elitism of designers. This is mis-guided... If urban agriculture is viewed as one of many ways of achieving environmentally productive landscape within, around and outside cities, then those whose business it is to contribute to the design of those cities, their open spaces as well as their built fabric, are vital allies in this project (Hagan, 2005, p. 55)

This research project began in an open, exploratory manner, seeking to understand the benefits of UA and what currently limits its expansion. While UA provides social, environmental and economic benefits, other land uses offer a higher direct financial return. This is one reason why urban agriculture remains a marginalized land use in Western countries. A multifunctional space can provide many things to many populations, increasing its value to those who use it and to the surrounding urban fabric. Thus, this study suggests that multifunctionality can be used as a strategy to further the cause of urban agriculture.

Case study research into two exemplary community-based projects illustrates that these projects provide diverse experiences for community members while exhibiting spatial challenges that could be ameliorated with the help of a landscape architect. The projects also illustrate that they have the capacity to support even greater multifunctionality and layering of uses. The design of the Brant Avenue Community Garden in Guelph, Ontario, provides an example of how a landscape architect can work with a community group to create a multifunctional design. The design process included community consultation and relied on the project organizers’ expert knowledge of the Brant community. It provided an opportunity to apply the themes that emerged from the literature and case study research in a real world setting. The project vision is for a multifunctional food-oriented landscape. It provides diverse opportunities for experience, offering learning, gardening and group gathering opportunities as well as increasing the site’s biodiversity. However, the design is intended to
serve as a starting point, to offer a framework from which to build in future years. Biodiversity and multifunctionality can be increased as the community gains access to greater resources. As community members continue to champion the project, it will grow and evolve in accordance with their needs.

Landscape architects can learn a great deal from grassroots urban agriculture projects about the creation of multi-use landscapes organized around food and community. In addition, these design professionals can bring a host of professional strengths to these projects. Landscape architects can bring a strong spatial design and aesthetic sense as well as increase the layering of uses within a site, thereby serving a greater portion of the human and natural community. In working collaboratively and inclusively with the community, landscape architects can facilitate designs that structure the social, educational and recreational needs of a community. By capitalizing on the strengths of community-based initiatives, such urban agriculture projects are expected to be better loved by the community and more widely accepted by the municipality, thereby improving their status as a legitimate use of urban space.

6.1 Opportunities for future research

This project was exploratory and can be considered a starting point for future research in a number of areas. Urban agriculture as a Western phenomenon is in the early phases of study so there is much room for exploration. For example, case study research of community-based urban agriculture projects such as Hackney City Farm and Prinzessinnengarten could look toward community members’ experience of these landscapes. This would yield a more thorough and accurate picture of project strengths and challenges instead of being limited to the specific perspective of project organizers. Further, the community experience and perception of such projects does represent a gap in the literature.
Urban context has been shown to influence how urban agriculture develops in a particular locality. This project included an investigation of some of the cultural and socio-economic factors within London, UK and Berlin, Germany, that facilitated the growth of Hackney City Farm and Prinzessinnengarten, respectively. However, the investigation could be expanded to include the influence of municipal policy to better understand the ways that cities can facilitate instead of thwart urban agriculture projects. Bohn and Viljoen’s (2005) Continuous Productive Urban Landscape (CPULs) concept illustrates how city-traversing corridors could be implemented in London, UK, by connecting existing park land, roads and private land. While the CPULs concept helped to inspire the vision of multifunctional urban agriculture within this thesis, this project was site-focused. Other investigations could look at the potential of creating CPULs in cities such as Toronto or Detroit.

In regards to participatory design and community engagement, the Brant Avenue Community Garden could be studied at a future date to evaluate the success of the project at helping to strengthen community ties and break down socio-economic barriers, its ability to evolve based on the community’s needs, and the extent to which some of the more unconventional design suggestions, such as the natural playground, swale plantings and fruit trees, were implemented. Engaged action research into participatory design methods could be explored in a variety of ways; for example, investigating the effect of power relations on engagement. Further, a more flexible approach to participatory design could be utilized in a project with a longer time frame. Participatory design literature tends to be theoretical with some case studies providing breadth; however, literature in this area of inquiry is limited and there is much room for further research.
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Appendix

BRANT COMMUNITY HUB GARDEN WORKSHOP

Script:

Hello everyone! Thank you for coming. My name is Katie Hurst and I’m a student at the University of Guelph in Landscape Architecture. These are my research assistants, Kim Harper, Kent Semeniuk and Sarah Connolly.

☐ As part of my school work I am helping to re-design the front of the Brant Avenue School to create an outdoor community space and garden. Tonight I’ve asked you here to get input about the garden design and to learn what kind of a space you’d like to have. The goal for the design is to create a garden and community space that feels comfortable and welcoming for the entire community so I really appreciate you taking the time to share your thoughts and opinions today.

☐ What I’d like you to do is tell me what kind of garden or outdoor community space you’d like to create here. I’ve given you some questions to think about, to guide you. Start out thinking about the questions individually; maybe write some things down on the sheet or on sticky notes or draw or doodle if you want. Then, take turns sharing your thoughts within the group and discussing your ideas. We’ll come together to share at the end.

20 minutes:

What kind of outdoor community space or garden would you like to have?

-What kinds of things do people do there?
-What does it feel like?
-What’s great about it?
-Does it look like the current garden?
-If not, what does it look like?
-Do you have any concerns about it?

10 minutes:

Sharing results from the groups

☐ So, the next step for me is to take all of your ideas and balance them with the site conditions and create a plan that satisfies the board’s guidelines for school grounds. If you know anyone who wasn’t able to make it tonight they can call or email me or leave their ideas in the box I’m going to leave in the hallway of the school for the next couple weeks. The goal is to have the plan finalized for the week of March 12th. Sonia, Linda, Matt and I will try and organize a time for you to view the plan before it’s finalized. Thanks so much for your input tonight!

2. Meeting publicity
Communicated 1-2 weeks in advance of meeting

Sonia (Family and Children’s Services)

☐ Brant Partners (UGDSB, Guelph Community Health Centre, Guelph Early Years Centre, GW Housing, New Life Church, City of Guelph, Guelph Campus Ministry)
☐ Brant Community Engagement forum planning committee
☐ community Zumba class

Lynne (Brant Avenue Neighbourhood Group)

☐ neighbourhood group members
☐ advisory board

Matt (garden organizer)

☐ community gardeners

Hannah (garden volunteer)

☐ Brant collective kitchen

Posters

☐ Daycare
☐ Pharmacy
☐ Cash advance center
☐ Laundromat
☐ Short stop
☐ Brant Ave Public School
THE BRANT COMMUNITY HUB GARDEN ALLOWS US TO GROW, LEARN, GATHER, PLAY, REFLECT AND RELAX. WHILE THE LANDSCAPE IS ROOTED IN GARDENING, IT IS BECOMING AN IMPORTANT GATHERING SPACE FOR THE COMMUNITY. POSITIONED ON THE FRONT YARD OF BRANT AVENUE PUBLIC SCHOOL, IT IS ALSO A PLAY SPACE AND LEARNING ENVIRONMENT. THE GARDEN OFFERS UNIQUE EXPERIENCES FOR ALL AGES AND ABILITIES.


IT IS A WELCOMING PLACE, A SOCIAL PLACE, A QUIET PLACE AND A NATURAL PLACE.
BRANT COMMUNITY HUB GARDEN

GARDEN SPACES - CHARACTER

ENTRANCE
- Main pathways to school and garden
- Welcomes, invites one into the garden and to the school

PRODUCTIVE
- Children's garden and community garden plots
- Grow, learn, socialize

SOCIAL
- Lower traffic areas
- Smaller group activities
- Play, craft, picnic, learn

GARDEN ENTRANCE
- Main pathways to school and garden
- Welcomes, invites one into the garden and to the school

COMMUNITY SPACE
- Lots of seating for formal and informal gathering festivals, classroom potential
- Herbs and flowers to beauty, attract birds and butterflies

OPTIONS:
- Bird baths, bird feeders, tire swing

NATURAL PLAYGROUND
- Constructed of sand, rocks, logs
- Dig, explore, balance and jump
- Located near garden plots for family activity
- Promotes physical exercise and creative play

SENSORY GARDEN
- Plants to stimulate scent, sound, touch
- Symbolic plant and stone design to represent the elements (air, water, fire)

OPTIONS:
- Table(s) to provide picnic and work space
- Shrub planting for separation from kindergarten

OPTION:
- Water-loving grasses and flowers in ditch, teaching opportunity about water cycles and animal/insect habitat

FLEXIBLE SPACE
OPTIONS:
- 1 to 3 fruit trees (apple, cherry)
- Expansion of communal or individual garden plots (i.e. strawberries)
- Leave open for free play (e.g., snowman building, manhunt)
NOTES:
ALL MEASUREMENTS IN METERS
MEASUREMENTS ARE TO PATH CENTERLINE
PATH IS 2M WIDE
CHILDREN’S GARDEN IS 7M X 12M
COMMUNITY PLOTS ARE 3M X 3M

HEDERA HELIX
STACHYS OFFICINALIS
ANTHEMIS GARDENIA
SAXIFRAGA ALPINE
SPIRAEA JAPONICA
VIBURNUM CARPINIFOLIUM
LAVENDER
SAGE
THYME
LILAC
BUTTERFLY BUSH
FRAGRANT HOSTA
VIOLET
PEONY
SILVERMOUND ARTEMISIA
BIG BLUESTEM
LITTLE BLUESTEM
MOSQUITO GRASS

CHARACTER
SUGGESTED PLANTS

SCHOOL ENTRANCE
PURPLE CONEFLOWER
BLACK EYED SUSAN
BLAZING STAR
GOLDENROD
BUTTERFLY MILKWEED
BEEBALM
TULIPS
C AMPHODIUM
SNOWROPS

COMMUNITY SPACE
PURPLE CONEFLOWER
BLACK EYED SUSAN
BLAZING STAR
GOLDENROD
BUTTERFLY MILKWEED
BEEBALM
TULIPS
C AMPHODIUM
SNOWROPS

SENSORY GARDEN
LAVENDER
SAGE
THYME
LILAC
BUTTERFLY BUSH
FRAGRANT HOSTA
VIOLET
PEONY
SILVERMOUND ARTEMISIA
BIG BLUESTEM
LITTLE BLUESTEM
MOSQUITO GRASS

RETREAT
CARDINAL FLOWER
BLUE FLAG IRIS
CATTAIL
JOE PEE WEED
SWITCH GRASS
INDIAN GRASS
Brant Community Hub Garden
-Recommendations for moving ahead

Priorities

-this year, main priority is path construction, new bed layout, benches and tables depending on how far your budget goes
-setting priorities for the future... who do you most want to benefit right away? What kinds of spaces do they need?

-if it’s a focus on community-building, put energy into community space and entrances... both for sense of pride in the community and to make it more habitable
-if it’s a focus on play or restorative landscapes, invest in the sensory garden, natural playground or retreat

(I’d recommend working towards building the site in a balanced way to benefit everyone)

Engagement

-some great ideas came out of the community meeting
-ideas about posting ‘is anyone interested in watering while i’m away?’ or ‘feel free to weed this bed if you want to’ can really encourage communication and engagement between community members, especially when people’s paths don’t cross very often

-the sign board you’re having constructed will become an important information sharing mechanism
-Dorota’s idea about having weekly community gardening times, so she doesn’t have to garden alone
-if the sign board is there, she can post it and organize it herself
-as you move forward, make sure there’s good communication about what’s happening on-site, who’s doing what when, who to contact, how to get involved

Working with what you have... with what works for your community

-if people are happy to drop in and dig, set up those ‘work bees’
-also creating opportunities for casual encounters, posting what’s happening when, people can wander by and not feel threatened or pressured to join in, they can be incognito until they feel comfortable, or just enjoy it from a distance (this is perfect for some people)
-maybe have a work bee for creating individualized signs for each plot, if people want to do that, or for constructing a fence for the new beds

Water!!!

-all three classes as well as community members mentioned wanting a pond, water feature and/or waterfall
-UGDSB guidelines say no water (though that was a 2006 version I was looking at... maybe there is a new one?)
-try for bird baths in community space or maybe a pond-less water feature (though they can be pricey)
-if the board won’t approve it, work towards symbolizing it or emphasizing it on-site... symbolic waterfall or stream made with pebble, if water pools in ditch after a rainfall, all the more reason to draw people towards that area with beautiful water-loving plants

Native species

-most of the recommended plants are native so should satisfy the board and make it a more viable candidate for grants re: naturalization