Killarney Park: Creating a Centre for Play in the Community

By

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ABSTRACT

Like law and culture, environment tells us how to act without requiring of us a conscious choice (Lynch 1972, p.40)

Public parks play an important role in the health of the community. Not only are they places to play sports and run the family dog, but they also provide an essential interface between the natural world and the built environment.

Located in East Vancouver, Killarney Park and Killarney Community Centre were built (in 1962) as a sports-oriented facility. While the extensive sports fields are quite well-used during game times, the sparse landscape consisting mostly of flat turf lined with street trees goes largely unused for purposes other than sports-playing. As well, the current park design fails to meet several programmatic needs of the community. Tai chi practitioners and local youth find themselves without an appropriate venue for their interests. Killarney Park has failed to evolve to meet the needs of the evolving community of Killarney.

By formally addressing the issues of structure, community, ecology and play, the design proposal considers the whole community and its needs. The proposal for Killarney Park results from a layering of social, cultural and ecological programs where stormwater management systems interface explicitly with the main circulation system to put the site's ecological functioning in the public eye. Existing sports facilities are maintained, while community and ecological programs are layered to make full use of the site's potential as a community hub.

The design for Killarney Park is a place of local celebration where sports viewing, outdoor movie watching, and local produce selling all find a home. The needs of the natural world are addressed by enhancing the stormwater infiltration and fruit production on the site.

By layering the ecological functioning of the site with its community programming, this project explores how the neighbourhood sport-park can benefit not only the community and its people but will add to the the healthy functioning of the local ecosystem.
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CHAPTER 1- OVERVIEW

1.1 THESIS STATEMENT

The neighbourhood sport park must go further to meet the needs of the 21st century community.

1.2 PROJECT GOALS

To expand the role the neighbourhood sport park plays in the building of communities and families.

- To examine the forces that created Killarney Park and identify the forces that should be taken into account when designing a neighbourhood Sport Park for the 21st century.
- To create a centre for the community of Killarney
- To examine how the acts of playing, learning and exploring interact to build healthy communities
- To improve the ecological health of the community
- To develop a set of recommendations for future sport-park development that will meet these goals.

1.3 PROJECT OBJECTIVES

The project attempts to achieve the following:

- To examine the connections between landscape design and community building through literature and precedent review
- To explore how the needs of Killarney have changed since Killarney Park's inception in 1962, and to address those needs in the design of Killarney Park in 2004
- To ensure every part of the site serves several uses

1.4 DESIGN OBJECTIVES

The design attempts to resolve the following:

- Integrate sports and community facilities
- Enhance sports viewing and sports celebration
- Maintain existing sports facilities
- Layer community facilities within park structure
- Extend the bounds of the community centre and high school outside
- Integrate the children's play area with the landscape
- Integrate of the site with Vancouver's Greenway System
- Resolve the interface between the site and the adjacent urban fabric
- Create a legible circulation system through the site that encourages travel as well as interaction
1.5 DESIGN STRATEGIES

The following design guidelines will reinforce the concepts of STRUCTURE, COMMUNITY ECOLOGY and PLAY and will structure the Design Description (see section 5.2.1-5.2.4).

1.5.1 STRUCTURE

1. treat travelways as spaces that can be inhabited by the community and use these travelways as a primary organizing structure
2. provide facilities for the programmatic needs of the community
3. capitalize on the existing topography as a means to define space
4. use a consistent palette of materials that reflect and promote imageability in the context of the community of Killarney, Vancouver, and British Columbia

1.5.2 COMMUNITY

1. maximize connections between the site to the surrounding street network to reinforce Killarney Park's role as the heart of the community
2. identify and address those community needs not currently provided for by the present programming of the park
3. enhance existing community needs and structures
4. identify, support and enrich community programs provided through Killarney Community Centre and Killarney High School and provide a landscape in which the community can get involved

1.5.3 ECOLOGY

1. ensure that all stormwater that falls on the site is infiltrated back into the groundwater system on-site
2. use the site drainage system to reveal the hydrological functioning of the site
3. use the drainage system to help guide the site's design
4. use the site to produce food that can be consumed locally
5. create a fruit and flower market facility that encourages the consumption of locally produced goods

- Ensure that all stormwater that falls on the site is infiltrated back into the groundwater system on-site
6. provide for as much local recreation as possible as to reduce the distance the community must commute to recreate
7. promote the use of the city's greenway system by integrating this system with Killarney Park

1.5.4 PLAY

1. provide an extensive skateboard-friendly environment
2. promote sports viewing and celebration
3. provide facilities for "adult games"
4. incorporate children's playscape into the landscape
5. create spaces adjacent to the community centre and high school to facilitate incorporation of activities into outdoor landscape
6. strengthen the connection between Killarney High School and Killarney Community Centre

1.6 BACKGROUND AND RATIONALE

Inspiration for this project arose while I was living in Christchurch New Zealand. It became apparent to me that sport and recreation plays an integral role in the socialization of a huge portion for the population of all shapes, sizes, ages, economic status, regardless of geographic location. Through sports playing and viewing, communities were formed and grew stronger. Attending a national rugby game was not only inexpensive and fun, but made the viewer feel a part of something powerfully communal. Most people are involved in sport in some sense; whether playing rugby, cricket, lawn bowls, netball, field hockey, surfing, bocce; or from a coaching, or viewing perspective. This involvement seemed to engage all segments of the population and was readily apparent in every neighbourhood. The elderly walk to the local park to watch the younger segment of the population play rugby; those who cannot play coach; and on any given Saturday night, groups of friends tune into the local cricket or rugby game. Sport and recreation are a wonderful way to give structure to social interaction and community involvement abounds. Through a precedent study this project seeks to identify the ways by which strong communities are built using good design. Results will be applied to Killarney Park with the intent of creating spaces that engage the community in recreation and community building activities.

1.7 THESIS LIMITATIONS

Many aspects of the design of Killarney Park have been resolved only to a conceptual level. Time constraints dictated that focus was kept to the four major elements of the park limits: the parking lot, tai chi centre, the Kerr Street entrance and community centre backyard. Focus was placed on the way these spaces address the programming and community building needs of the community and how these spaces interact and
overlap to function together as a whole. The spaces adjacent to Killarney High School are addressed at a conceptual level only; and as well the specific details pertaining to stormwater management on the site. A conceptual drainage plan has been prepared and it shall complement the site plan and its intentions as an ecologically sustainable neighbourhood park design. The manner in which the site interacts with the greater context of the region is addressed in a conceptual manner as well, while detailed design has been limited to the spaces inside the park boundary.

1.8 METHOD USED

The following set of steps outlines the method followed in the design of Killarney Park:

- Site selection
- Literature and precedent search that focuses on:
  - exciting and engaging neighbourhood sport-park design
  - play space design
  - design for community building
  - eco-revelatory design
- Contextual analysis:
  - regional context: the site's location and role in the lower mainland
  - neighbourhood context: the site as it relates to other community facilities in Vancouver
  - review of 2001 census data- compilation of information relating to population
  - analysis of biophysical features of the area- topographic information, old streams, location within the context of local watersheds etc.
  - historical context: a look at past land uses and neighbourhood features
- Site Analysis
  - biophysical features of the site
  - inventory of current uses
- Overlay of analysis of current conditions that will inform design: land use, slope, aspect, drainage, circulation, greenway connections, arrival, transit access
- Development of concept
- An exploration of several organizing principles
- Development of detailed design
- Post-design Analysis
- Analysis of how the design meets the project objectives
- Development of design principles for future neighbourhood sport-park design
2.1 INTRODUCTION

2.1.1 HISTORY OF THE PUBLIC PARK

It was only in the beginning of the twentieth century that public parks in their current iteration began to find their place in North American society (Francis et. al. 1984). As urban places became denser and rural dwellers became fewer, the need for recreation spaces that maintained the health of the population became apparent (Glikson 1971). One of their original roles was mainly oriented towards children and their need for a safe place to play out of the streets (ibid). In addition to providing a place for children, parks were conceived to break up the density and seeming ill-health of the urban realm. Parks boards were eventually established to manage their design and expanded their uses (Glikson 1971). They maintained a relatively simple mandate: to provide a place of respite from the built world and the pollution and chaos associated with it.

2.1.2 OUR CHANGING NEEDS

Several marked differences exist between the society in which parks originally evolved, and today's society. By examining these differences, we can understand how today's parks must evolve to meet the needs of today's communities.

In the past, people lived in a smaller community, travelling a shorter distance to school and work, and interactions with neighbours were more frequent. A good sense of community was a likely outcome from this type of existence and the role the public open space system played in community development was a minor one.

Today, we live in a more hectic, disconnected and dispersed community. There is greater opportunity to become isolated from the community in which we live. Work may be far from home; and rather than walking by our neighbour's house to work we often travel by car, making us isolated from our community. Our increased mobility broadens our horizons but precludes us from feeling integrated in our local community. The public park can be seen as an opportunity to unite communities locally.

Also, the nature of work has changed substantially over the last century from "essentially a labour focus to a technological focus" (Reid 1989, p.47). In our current high-tech economy (ibid), as work has become less hands-on and more automated, people need to find other ways of expressing their creativity (Reid 1989). As well, there seems to be an increased desocialization of the workplace (ibid) as more and more people sit in front of a computer screen for much of the day (myself included, it seems). People therefore rely more heavily on their leisure time to provide them with the social interaction that once was part of the workday.

There is a new set of concerns over the working environment. In the labour-focused economies past, people were concerned with getting injured or physically exhausted from work. Today, however, people are more concerned with a lack of satisfaction and
fulfillment from their job (Reid 1989). The role of leisure facilities should be closely tied to this need for satisfaction, for the overall health of society is compromised when people's satisfaction is not addressed. It becomes important, to provide leisure facilities that help people to feel satisfied. Parks should provide facilities to help people feel productive; feel like they are part of something; and that they are contributing to society. Parks should feel like a place to get involved. As such, the role of leisure planning must shift from a physical "recovery" (Reid 1989, p.47) to include social programming as well.

The amount of work people do is another change worth noting. Perhaps counter-intuitively, the workweek has substantially decreased over the last 150 years, going from a 70-hour, 6-day workweek to a 40-hour, 5-day workweek (Rapoport 1975, p.1). Although this may initially seem like a vast improvement, there are several factors at play that complicate the matter and are relevant to the topic of recreation and park design.

First, although the number of hours per workweek may have decreased for most individuals, it is important to remember that women now make up a much greater portion of that working population. Anecdotal evidence suggests that the chance is great that both parents will work away from home (albeit for reduced hours). Although each worker may have more free time, it is inevitable that family time will be reduced resulting from both parents being at work. The quality of that family time becomes critical. In this light, the public park plays an increasingly important role in providing a stimulating, challenging, community building environment, for public park in North America is the public's first and most immediate and accessible source for leisure outside of the home. Parks should allow the community to do the things they cannot do in their backyard, their home, or at work and in the process allow them to come together as a community to lead a richer, fuller life.

There is growing evidence that today's parks are falling short of what they could be. In one study of public parks, many researchers concluded that professionally designed and publicly managed parks and playgrounds often do not satisfy the needs of their users" (Francis et al 1984, p.5).

The possibility is strong that this disparity results from an old model being applied to a new problem: society has changed but designers' attitudes towards leisure design have not.
2.2 PHILOSOPHICAL BACKGROUND

The following section is a summary of the philosophies behind the various aspects of the proposed design of Killarney Park. These include an acknowledgement of the role public parks play in community building; and the role of landscape in the context of the neighbourhood park with regard to play, learning, social interaction and sustainability. This section will offer some insight into the direction park design should take in the future to meet the needs of both the human community and the natural world of which it is an integral part.

2.2.1 THE PARKS OF TODAY AND YESTERDAY

People look to their park system for their recreation needs. From the 1974 Edmonton Conference of ministers, the role of Recreation Services in Canada was defined by the following:

a) to assist individual and community development;

b) to improve quality of life and

c) to enhance social functioning (in Reid 1989, p.46).

If we look at the vast majority of public neighbourhood parks in Canada, a clear pattern emerges in their design. The local park usually consists of a rectangular turf lawn with various goal posts and backstops, some seating and trees along each edge. This prototype is very useful for a game of soccer (which in and of itself is a community building exercise) but failing interest or ability in organized sports, this design falls short of providing community building space and hence neither greatly improves quality of life nor enhances social functioning. In fact, Kent and Madden make the following statement regarding the future role of public parks:

We believe that urban parks can and should evolve from their current, primarily recreational role, to serve as important catalysts for community development and enhancement (Kent & Madden 2003, p.71)

A park that provides ample sports fields for its users often goes unused most of the time, when games are not being played, and

when there are too few reasons for people to go to parks, fewer people use them, and they cease to be valued (Kent & Madden 2003, p.71).

When parks cease to be valued they risk falling into disrepair. In fact, “underused parks and their equipment [are the ones that] suffer from vandalism” (Jacobs 1961, p.95). The challenge then is to layer the uses onto those sites to provide a space that serves more than just the sports playing segment of the population and is highly valued by the community.

In the past, recreation departments and parks departments were organized as separate entities and as a result "parks received much design attention and recreation areas very little" (Rutledge 1971, p.5). This seems a logical explanation for the simplistic approach to neighbourhood sports-oriented park design. Many of these facilities simply
had sports fields arranged on them in a spatially economic manner. These spaces were attributed with a single role: to provide for the sporting needs of the community. As the common space in a neighbourhood, these parks should however act not only as a sports facility but as community square, common, garden and neighbourhood street as well.

There is a trend recently, towards amalgamating several facilities into one super-park. While this model does suggest at the outset an economy of means (where feasibly a parent could drop their three children off at three different activities in one trip), there is a lack of sociability that surrounds a car-accessible 'big-box' sports complex. The catchment for this sort of park will tend to be much larger than a small neighbourhood park and the likelihood of encountering one's neighbours becomes slim.

Considering this background, the scope of this project shall be to provide for the sports-playing segment of the population while enhancing the community-building potential of the neighbourhood park.

2.2.2 THE IMPORTANCE OF LANDSCAPE

The neighbourhood park plays an important role in reminding us that the city is in fact part of a landscape that must be cherished, and preserved. As such, parks must bestow upon us some of the benefits of interaction with the natural world, for they are the first point of contact between the city dweller and the natural world. If we examine what we value about our experiences with the natural world, we will discover two things. First, those experiences are replicable at some scale in the neighbourhood park, and second, they are experiences that help to us grow, learn and relax. These features shall in turn provide a framework for design; and one of the focuses of this thesis will be on the creation of landscape in Killarney Park that will engage the user while it adds to the ecological health of the region.

The natural world appeals to our sense of discovery. The seemingly unpredictable and surprising aspect of the natural world adds an element of mystery not often seen in the neighbourhood park. The twists and turns of a riverbed or the sudden appearance of spring bulbs or changing red leaves can both excite and delight adult and child alike. As such, a thread of the natural world will weave its way into the design of Killarney Park.

People associate landscape with health and well-being. Interaction with the natural world is considered a restorative act and it is not surprising that in the North American cultural context, planting and greenery are strong cultural cues that people use to judge the quality of places (Rapoport 1977, p.228). These culturally-based associations between landscape and health, rest and play turn landscape into beacons of environmental hope. Simply by making public parks look more like natural landscapes, some of these restorative benefits can be incorporated into the neighbourhood context.

Landscape in the urban context can be particularly valuable as it breaks up the monotony of the urban fabric. The "changes in the thermal, olfactory and acoustic cues" (Rapoport 1977, p.228) created by the juxtaposition of landscape with the built environment add to the richness of the neighbourhood landscape and create a landmark that both sets that place apart and aids in orientation (ibid, p.228). The more that landscape contrasts with the built environment, the greater this effect will be. By creating
spaces that incorporate natural landscape features and rich plantings, the designer adds a stimulating element of surprise and richness to the urban setting.

2.2.2.1 Landscape and children's play and learning

Who has not noticed with what delight small children walk along a line or a plank or perform some other spontaneous balancing exercise? (Standing 1962, p. 9)

This excerpt from Standing's book: “The Montessori Revolution in Education” reminds us of how children perceive their environment differently than adults do. Children are more attuned to the sensorial cues they receive from the world around them. A child moves his or her body through the world on a voyage of discovery, and the neighbourhood park can be a wonderful environment to both stimulate and delight, if it is incorporated with landscape. The following look at theories about play and learning will be used to address how landscape should be incorporated into the children's play environment.

Children use their neighbourhood park for play, and indeed, Children do their best learning through play (Norén-Björn 1982). Killarney is a walkable community with a large population of children. The current swing set and wooden play structure in Killarney Park provide a play environment that helps develop timing and coordination as well as physical strength in children (Harrington 2000): several important aspects of their physical development. Converse to this traditional playground model, a play environment that is incorporated into the landscape (rather than placed on the landscape) evokes “emotions, passion, beauty and wonder” (Harrington 2000, p.18). A landscape-based play environment will better serve these children by providing a sensorial, stimulating environment that will foster learning and development (Harrington 2000) as well as their physical development. Also, by incorporating the landscape into children's play structures the play experience will help breed an understanding and respect for that landscape as well.

The developmental psychologist and genetic epistemologist Jean Piaget studied how knowledge grows, especially in children (http://www.piaget.org/biography/biog.html). In his theory on play, Piaget demonstrates that the play environment is a place for children to test out the new experiences and emotions they encounter in everyday life, and “incorporate reality into [their] own conceptual framework” (in Norén-Björn 1982, p.19). This explains why playing make-believe is such a common game among children. Creative play is a way to practice the behaviour learned from the world around them. It follows that the less structured and the more stimulating the play environment, the more that environment will foster creative play.

Dr. Maria Montessori, born in 1870, was the first Italian woman to receive a medical degree. A physician and educator, she founded the Montessori method of education based on creating an environment that promotes self-directed discovery in the child. This method was a vast departure from traditional forms of education, and was developed from a keen understanding and

Figure 6: Children experiencing landscape (Noren-Bjorn1982, p.58)
respect for the child as an individual. In his book about Dr. Montessori, Standing (1962) explores this understanding of the child that led to the development of the Montessori Method.

Standing (1962) reminds us that, "every child is a born explorer" (p.25) and that,

\[
\text{touching, handling, moving, rearranging, dissecting, comparing, these little scientists are incessantly prying into everything. (p.26)}
\]

On their voyage through life,

\[
\text{the child's intellect is sufficient- through its own spontaneous activity- to drive him on to acquire the elements of culture. (p.22)}
\]

A child's play environment must be a place of discovery, providing opportunities for creative play and learning. By creating a place that stimulates a child's imagination and allows them an opportunity to manipulate their environment, the playground designer can successfully address the development and welfare of their young clients.

Dr. Montessori's philosophy on education "based on the principle of freedom in a prepared environment" (Standing 1962, p.5) states that:

\[
\text{Education is a natural process carried out by the human individual, and is acquired not by listening to words, but by experiences in the environment. (American Montessori Society website: http://www.amshq.org/montessori_philosophy.htm)}
\]

Allowing children to experience landscape while playing in their neighbourhood park will enrich the child's play experience. Dr. Montessori also asserts that:

\[
\text{Learning takes place through the senses. Students learn by manipulating materials and interacting with others. These meaningful experiences are precursors to the abstract understanding of ideas. (American Montessori Society website: http://www.amshq.org/montessori_philosophy.htm)}
\]

By this token, the design of children's play spaces should focus on creating stimulating environments with which children can interact and become engaged rather than creating structures with defined uses.

Norén-Björn takes it one step further when explaining how the experiences of play help to shape an individual's experiences when she asserts that the child should be seen as:

\[
\text{an active, inquisitive individual who, through play, exploratory behaviour and social interaction, acquires knowledge about his physical and social environment and about himself as well. (Norén-Björn 1982, p.17)}
\]

This philosophy will be critical when designing spaces for play that are both creative and fun and allow children the chance to interact with each other as well as adults.
and their environment.

Norén-Björn (1982) also suggests the physical forms a stimulating play environment should take when she reminds us that it is the responsibility of the playground designer to:

plan for everything which children of an earlier time, despite frequent poverty, had close at hand: nature, work places, hidden corners, sheds and scrap-heaps (p.11)

A wonderful environment for learning and play can be created with the use of natural systems and materials.

The destruction of the land's natural contours and plant growth have already ruined many of the chances to create a positive environment for children to grow up in. (p. 12)

The neighbourhood park should offer children some respite from the child-unfriendly city in which they dwell. The use of natural materials in a naturalistic setting can be as much, if not more fun and inspiring than a metal swing set or see saw. Also, while an area of the park may be devoted specifically to children, it is important to think of the whole site as a potential play environment.
2.2.2.2 Landscape and eco-revelatory design

Eco-revelatory design is characterized by the use of the site’s ecological processes to guide its design. We tend to respect those things of which we have knowledge, and by creating a place that more closely resembles the natural world, we can create opportunities for learning and hence opportunities for respecting that world. The idea of “revealing” the natural world in design is one that has gained importance in recent years. As our natural world becomes more and more sparse, especially in the urban setting, those “natural” places we have left need to work harder to make their role known, appreciated and valued. Making ecological processes visually apparent allows users to “experience, learn about, and appreciate those processes” (Eisenstein, date unknown, p.1).

Some of the ways in which this revelation have been manifested are:

- managing stormwater on the surface of the land rather than underground in pipes
- revealing the location of underground streams through surface treatment
- demonstrating the collection and transfer of stormwater from roofs to ground

This project will identify the natural features and processes at work in Killarney Park, and will use these processes to guide the site design. These will include:

- the flow of stormwater through the site,
- orientation of the site towards the sun and resultant micro-climatic conditions
- gently sloping landform
- street tree network

These design decisions that reveal these features and processes will be explicit and will be made apparent to the public, in order that their virtue be revealed, understood and respected.
2.2.2.3 Landscape and sustainability

One of the underlying themes in landscape architecture is creating places that enable people to live more sustainably. This can be achieved in many diverse ways and "the interplay between human aspirations and ecological integrity is an underlying theme of sustainable development" (Forman 1990, p.261). Design can be a wonderful tool to empower people to live more sustainably and sustainable design can happen at any scale, including the neighbourhood park (Forman 1990).

Many researchers have asserted that organisms and their environments should not be considered in isolation from one another, for they result from one another (Sfeiner 2002). It is important therefore to evaluate the functioning of any landscape not only in terms of itself but also in terms of its users. In this light, the ways in which sustainability will be addressed in the context of Killarney Park will be two-fold.

- site functioning
- users’ relationship to the site

The site should function as a closed loop in the hydrologic cycle. The neighbourhood park is like an island of permeable surfaces amid a sea of impermeability formed by the urban fabric. The park should act as a sink for stormwater falling on the city. By decreasing the impermeable area and re-infiltrating stormwater from impermeable surfaces back to the groundwater system, the neighbourhood park will help the city to function more sustainably.

The neighbourhood park should function as part of a system of urban forest, a system that provides both habitat and shade, sheltering humans and animals. Trees help to not only shape space but they also help soils to resist erosion, create shade that help buildings cut down on cooling costs, produce life-sustaining oxygen and help clean the air.

In terms of its relationship to its users, the sustainable neighbourhood park should provide as many uses as possible for its community. Through good design, the neighbourhood park can provide a wide range of social and sport-oriented programs that allow people to play locally, rather than drive to a recreation location. A place of many, layered uses will be more useful, adaptable and valued in the long-run than a single use open space.

The relationship the neighbourhood park has with its community should remain flexible to the ebb and flow of that community for years to come. The theories T.T. Forman (1990) uses to describe ecosystem stability are worth exploring in terms of park design, or even landscape design in general terms. Forman (1990) describes a type of stability he terms "mosaic stability" (Forman 1990, p.263) where the patches in the mosaic may change in some way but the integrity of the whole remains largely constant. In the mosaic, the patches remain spatially differentiated, but they function together to sustain the integrity of the whole.

The public park is like a patch mosaic, its various parts serving different functions for the community. The parts may be used at different times by different users; may be renovated at different times when budgets and planning allow; may indeed change uses according to need. These patches will function together, more powerful and resilient as a
whole and more sustainable in the long run. Designing the right mix of parts, in the right spatial configuration is the challenge of the park designer and will be the focus of this thesis.
CHAPTER 3 - THEORETICAL BACKGROUND - Creating a Framework for Design

3.1 LITERATURE REVIEW

3.1.1 Sustainability and Site Design

*Site Design Manual for Sustainable Urban Landscapes: James Taylor Chair in Landscape and Liveable Environments, UBC:*

The Site Design Manual was used as a resource tool for designing an ecologically responsible site. This document illustrates a selection of alternative engineering practices for implementation in new communities and retrofit in old ones in British Columbia (Condon et al. 2001). These alternative practices have the intent of making these communities more sustainable. They demonstrate a commitment to the successful and sustainable overlay of natural and man-made processes within the urban fabric. The manual demonstrates that it is not only possible but is in fact crucial to allow the site's natural processes to occur in conjunction with the human processes and structures. The following is an outline of those practices that influenced the design of Killarney Park.

The manual suggests using the site's natural features to "enhance neighbourhood identity" (Condon et al. 2001, p.68). Natural drainage features such as streams and naturally wet areas are effective ways of giving a unique focus to the site. Places that store and slowly dissipate stormwater back into the groundwater system are good reminders of the natural systems acting on a site. They can also be places that add beauty and intrigue to the site. By allowing a stream course to appear on the surface rather than remain hidden in a pipe, the designer creates an opportunity to remind the public of the role that site plays in the natural functioning of the local ecosystem, while creating a beautiful and restful piece of landscape.

The manual proposes that minimizing hard surfaces is an effective way of lessening the impact that development has on the environment (Condon et al. 2003). By including more places where water can infiltrate naturally back into the water table, the site may function more closely to its original state. Some effective ways of achieving this goal in public park design include the design of permeable parking areas and specifying interlocking pavers that allow water to seep between them. Where impermeable surfaces are required, runoff may be diverted to an open drainage system (such as a swale or detention pond) that will allow rainwater to seep back into the water table on-site.

The concept of "designing smart parcels" (Condon et al. 2003, p.77) is an important one to take into account in sustainable site design. The site should be considered as a small unit of the sustainable landscape. When the sustainability of each unit is taken into account and improved, then the sustainability of the region is improved. In the case of park design, each park has ample permeable surfaces to allow reinfiltiration of all rainwater that falls on the site, and thereby can allow the site to function more closely to its original state. In addition, rainwater that falls onto roofs and large paved areas can be diverted to permeable areas and reinfiltilated rather than draining directly into the city.
stormwater system. In fact,

infiltration is many times more effective than conveyance and treatment based strategies. (Condon et al. 2003, p.129)

As such, one of the goals for the design of Killarney Park will be to reinfiltate all of the stormwater that falls on the site.

The design of Killarney Park will add to the health of the region by contributing to the urban forest-cover. An extensive network of fruit and non-fruit trees, as well as a diverse range of riparian vegetation will not only add to the aesthetic value of the site, but will provide a home for a wide range of species associations and will help in the water-retention and cooling abilities of the site.

From the site design Manual, the following guidelines for the sustainable design of Killarney Park were created.

- Rainwater from rooftops will be channeled through a filtering system that will remove particulate matter and toxins accumulated from contact with roof before flowing through one of several swale systems. These swale systems will lead either to a detention pond or gravel infiltration sink that will accommodate any overflow from large storms.
- Rainwater falling on the parking lot will be infiltrated through the gravel and grass pavers used as parking lot surfacing. The medians between parking lot aisles will be designed as swales and will accommodate overflow in case of large storms.
- Rainwater falling on other impermeable surfaces will either flow across the surface and onto an adjacent permeable surface, or will be collected in an area drain or French drain to be deposited in one of the swale systems on-site.
- Swale systems will be planted with riparian species that will help to simultaneously slow down the speed of water and absorb toxins.
- This combination of measures will help ensure that the site acts responsibly to reinfiltreate as much stormwater as possible.
3.1.2 Crime Prevention and design

It is not surprising to hear that "crime is predominantly an urban problem" (Burgess 1994, p.6), but it may be surprising to hear that in cities, fear of crime is as much of a concern as is the incidence of crime (Jacobs 1961). People's fear of crime changes their behaviour and makes them decide not to go for a walk at night or not to visit their local park. This fear of crime is most prevalent in "public spaces, especially parks, commons and woodlands" (Burgess 1994, p.7). This section will examine ways by which not only crime but indeed the fear of crime can be reduced through the design of the physical environment.

The prevention of crime through design is an idea explored by Jane Jacobs in her book "the Death and Life of Great American Cities" (in Wekerle 2000). Jacobs suggests that fear of crime is as important to consider as the presence of crime itself. Our streets and neighbourhoods become intolerable when people do not feel comfortable in them. By creating places that not only are safe but that also feel safe, the designer has made an important contribution to the individual's experience. An exploration of some of the methods used to prevent crime through design will provide a starting point for the creation of a positive community space.

While open space in cities is in and of itself a good thing, creating spaces that are open but unused does little to enhance the urban experience. Unused spaces become un-owned spaces and places where crime is likely (Werkele 2000) and Jacobs notes in her book that "parks are successful when they encourage a range of activities and users" (in Werkele 2000, p.46). By layering the uses on an open space, the designer creates a place accessible to a range of activities and users. A place that people use is a place over which people feel a sense of ownership, and a place where people become their own protection. Jacobs' approach to crime prevention focused primarily on the presence of people in the landscape (Werkele 2000) and her theories suggest that by creating places that people could and would inhabit, the designer has promoted not only a decrease in crime but a decrease in the fear of crime. Only once people feel control over their personal safety, will they be able to enjoy themselves in the landscape. In terms of park design, by increasing the community-oriented programming, and thereby increasing the human presence on the site the designer has increased the effective safety of the site.

While Jacobs concentrates on the human element to personal safety, it is important also to consider how the physical environment has an effect on people's perception of safety and on crime reduction itself.

Often the elements in the landscape that add a sense of serenity are the same elements that cause a fear of crime. The shrubs, walls, fences and other elements that obstruct visual access give a sense of enclosure but at the same time can provide shelter for criminal acts. The challenge lies in designing for both security and visibility; to define spaces that leave people feeling confident without taking away the naturalness that they value in their parks (Burgess 1994).

These ideas can be manifested in several ways, divided below into physical and social strategies of crime reduction (interpreted from Burgess 1994). Physical strategies are things that can be designed into the landscape and social strategies are methods of using people's behaviour to reduce crime and the fear of it.
Some physical strategies relevant to the design of Killarney Park include (interpreted from Burgess, 1994):

- Increase visibility by maintaining site lines: wide pathways, low-planted foliage shrubs, deciduous trees limbed to above eye-level
- Create a route that will act as the main "safe" route through the site and concentrate lighting on this route
- Park facilities should not be shrouded by dense foliage as they should act as surveillance points within the site

Some social strategies include (interpreted from Burgess, 1994):

- Better standards of maintenance (and the creation of low-maintenance spaces) that will ensure the park appears well-used and cared for
- Diverse programming that attracts a wide range and large amount of people
- Community involvement

Yet another movement in the design against crime is known as Crime Prevention Through Environmental Design (CPTED). This movement focuses on the creation of a landscape that is defensible, a place that will be an unappealing target for crime. Some strategies involved in this movement include (from Wallis et al. 1980, p.74):

- "Surveillance": the risk of being seen and caught committing a crime is an important deterrent
- "Movement control": restricting access at a particular time or place
- "Activity support": encouraging legitimate users to inhabit the site, and encouraging knowledge of one's own community

These strategies are general approaches to crime prevention that can take physical form in various ways. Some of those that are pertinent to park design appear below, and following each is an example of how each tactic could relate to Killarney Park (interpreted from Wallis et al. 1980):

- Trim trees and shrubs to increase the possibility of surveillance and increase the appearance of the site being occupied. This not only prevents crime but decreases people's fear of crime.
- "Establish territorial domains: people are more likely to defend areas that are clearly assigned to them" (p.89)
- "extend the use of school facilities" (p.102): by encouraging programs such as night school and evening recreation programs, human presence on the site will be increased.
- "Personalize the environment" (p.105): public environments discourage hostility when they express signs of personal expression
- "Encourage authorities to maintain public areas" (p.106)

One clear message from these guidelines is that by encouraging community involvement and thereby increasing the human presence in the landscape, public space becomes more defensible and less appealing for committing criminal acts. Also, the ideas of surveillance from within the site and from outside the site are important in increasing people feeling of safety and will therefore not only discourage crime but encourage people's legitimate use of the site.
3.1.3 Rainwater in the Urban Setting

The easiest way to change the functioning of an ecosystem is to change its hydrology. The way water cycles through plants, soil and air is paramount to the functioning of the system as a whole. One of the major impacts that cities have on the landscape on which they are imposed is the way in which they impact the system's "hydrological function" (Condon et al. 2001, p.10). Growth and expansion of the urban fabric in the lower mainland and the subsequent piping and channeling of the local stream systems has resulted in the creation of desert-like urban conditions in what was once a much wetter environment (Condon et al., 2001). This change has had many impacts on the functioning of the landscape, including a reduction in fish-bearing capacity of the many streams and rivers that once abounded in the region. These channeled stream systems deposit stormwater back into the water cycle at large outfalls, and that water has not had the chance to percolate through the ground before it reaches the stream, river or ocean. The effects of this change are twofold. First, the rate at which water is delivered back to the watercourse is much more erratic than in a natural system, and the high volumes of water after a rainfall can be detrimental to aquatic life. Second, the quality of water in an urban piped setting is poor, for toxins and particulate matter do not have the chance to be filtered during the percolation process.

The role that urban parks can play in remedying this situation is becoming elucidated to the designer and the interface between stormwater and the underlying hydrological cycle is gaining importance. The presence of stormwater in the landscape is a concept that was deemed unacceptable for many years and stemmed from fears of water and mosquito-borne diseases. It is now becoming clear that a re-evaluation of the role of stormwater is necessary if we, as urban dwellers are to live sustainably on the land.

In the past, park planning tended to revolve merely around providing green spaces for recreation (Reid 1989). Today, the park planner plays a more important role in providing an interface between city and ecosystem (Girling 1996). Public green space is gaining importance in expanded roles in enhancing the health of the ecosystem by "controlling floods, enhancing water quality and preserving wildlife habitat" (Girling 1996, p.72). In her article, "Where Waterworks Meet Nature", Girling (1996) goes on to suggest that many of the roles of the traditional underground sewer system could be played by public places. When it comes to flood control, the above-ground systems are actually more effective at accommodating the runoff from large storms, as they can more effectively expand their capabilities than the traditional engineered pipes (ibid)

The possibility then exists to enhance the ecological functioning of the urban fabric while visually enriching the urban experience with the use of stormwater management systems that not only cost less, but are also more effective. Girling (1996) describes the stormwater management plan for a community in the suburbs of Seattle, where an open stormwater management system was estimated to "cost thirty percent less than a conventional underground system" (Girling 1996, p.73) and would prove effective at protecting the community from floods, while enhancing conditions for wildlife. The system would go even further to improve water quality through the use of purifying wetlands, among other systems. The system of waterways, ponds and small lakes produced 740 acres of wetland and fifty miles of open streams for the community to enjoy, bringing the natural world closer to home (Girling 1996).
Through this type of stormwater management system, the possibility exists to create an interconnected system of greenspaces for the public to enjoy. An interconnected park system can also act as pathway system that integrates "recreation, education and alternative transportation" (Girling 1996, p.74). By creating a system that interfaces stormwater management and recreation, the designer will raise the public’s awareness of the ecological functioning of the site.

In addition to helping restore the site to its hydrological health, bringing stormwater to the surface (both literally and physically) plays a second role in the landscape. Its existence can be an important educational tool to raise the profile of hydrology as an environmental blighconcern. In his book, City Form and Natural Process, Hough describes a housing project on the LeBreton Flats in Ottawa in which a retention pond features as the centre of the park at the centre of the community. Hough suggests that not only does this feature provide an intriguing and ever-changing place for children to play, but that it becomes "a building block on which discussion and learning are developed" (p. 107) and goes further to assert that revealing stormwater "provides the best opportunity for understanding hydrology in cities" (ibid). Reminding people of how the natural world becomes affected and indeed changed by the presence of water will help to remind people that we are a part of that natural world, no matter how urban we have become.
3.1.4 *New Urbanism and public parks*

New Urbanism originated as a reaction to the development, in the 1970's and 80's, of sprawling urban landscapes that consumed urban edges at an alarming speed (Jones 2000). The movement originally focused not solely on the physical elements of urban design but on regulations that could result in less sprawling developments, and the community programs that could be developed to enhance the living environment (ibid). New Urbanism became a 'ground-up' approach to urban development that focused on encouraging people to interact with their community and the people in it, and on providing them with the urban form that would make this possible. This set of concepts focuses on developing that which is unique about the particular region, and designing a place that is unique to that place.

New Urbanism's attitude towards landscape and the role it plays in the urban form is one worth discussing in terms of park design. Where the public open space in urban sprawl developments tended to be generic and designed to fit into the leftover space from the urban developments, new urbanism suggests that the existing landscape should dictate a starting point for design. Unique landscapes should be preserved as landmarks that identify one neighbourhood as unique from any other (Jones 2000). Priority is placed on creating landscapes that heighten the role the neighbourhood plays in the ecological functioning of the region, while creating an identity for the local human environment (ibid). Knitting green recreational spaces with residential, commercial and industrial areas becomes important when creating places designed to facilitate social interaction and a strong sense of community (Jones 2000). By facilitating contact with neighbours as well as wild places, new urbanism promotes the creation of close human and natural connections so important in the formation of a robust community.
3.1.5 Community Building and Recreation

Much has been studied on how and why community building should find its way into recreation design and management. The link between social activity and community building is often made, however the structures to facilitate this link often seem to go undesigned and unbuilt. This idea of the public park as the social hub for the community is not a new one, but the implementation of this idea into physical form is something not often seen.

Many neighbourhood parks (Killarney Park included) fail to provide facilities that build communities by:

- planning for events that are both competitive and short-lived, leaving little chance for people to interact socially and stem relationships outside of programming
- recreation planning coming from the "expert", leaving the individual and the community with little to no input
- recreationists organizing events, rather than organizing the people that participate in them (Hutchison, 1998)

Instead the recreation planner should focus on what the community really needs from their greenspace. This should include a combination of places to engage in competitive play as well as community-gathering oriented spaces and infrastructure to support cooperative community programs. Places to get involved, and programs with which to get involved are key components to this idea. The places for community interaction should focus on being beautiful place, places with which people will want to engage.

When the designer takes a community development approach to recreation planning, strong communities are built and strong communities are healthy communities (Sparrow 1998). When the needs and desires of each community individually are taken into account, the outcome is a recreation facility that the community can't help but use. The whole community must be included in the design of recreation facilities and care should be taken to design a space for every age group (Hutchison 1998). These community spaces represent a unique opportunity to celebrate the multi-faceted mosaic of people that represent our communities today in North America.

In her article on the role of leisure in community development, Sparrow (1998) reminds us that "recreation is a means to a bigger end" (p.8) and that those "ends" include personal, social, economic and environmental roles. Through play, adults and children alike improve not only their personal health by staying active but they foster relationships and create for themselves a community of which to feel a part. By involving the community in the planning of recreation facilities, the designer is more likely to create a place that will be well use and well valued, for it will be a place of worth to the community.

Providing a place to perform important social functions is an important role of the neighbourhood park, and indeed recreation services in general. Damaging behaviour often results when individuals are “unable to access meaningful forms of acceptable behaviour” (Robertson 1996, p.21). The idea that keeping people busy keeps them out of trouble is an old concept with real contemporary value. The creation of social connections in the public park is a real way for young and old to become connected with their community and programming for the correct activities and events is paramount to
providing for the community.

3.2 PRECEDENT STUDY

3.2.1 Community building through design

Recreation facilities should support not only the recreation services, but should ultimately support the people who use them. While team sports do go a long way to foster and support human interactions, their short duration and scheduled times leave little room for those with busy schedules or lesser athletic ability (Hutchison, 1998). Real community interaction tends to come from informal, more cooperative interaction (ibid). Public open space becomes a wonderful resource for creating good human interactions. Creating places that link community facilities (schools, community centres, daycares) can be a powerful tool for bringing the community together. According to Hutchison, these formal partnerships are an important resource for community building. This form of integration also becomes a way of using resources wisely, for the potential for the layering of uses is extensive when such diverse user groups are considered. The following precedents address community needs.

3.2.1.1 Boston’s Southwest Corridor: From Urban Battleground to Paths of Peace

The Southwest Corridor was once the route of the Penn Central railroad that ran through the centre of Boston, cutting off communities along its length from the city’s centre. Its soot-covered, granite-faced embankment created at one time an impenetrable barrier. In the 1960’s the site was deemed the ideal alignment for the completion of Interstate 95, a move that would have irreparably fractured the communities along its length (Mann 1991, p.48). After intense community uproar, this plan was abandoned and the site remained once again unused (ibid).

This important urban corridor eventually became the focus of a design initiative, the results of which will be discussed below. The earliest proposals for the site sought rail and transit improvements that upgraded connections to the adjacent connector and arterial streets (Mann 1991). This proposal proposed improvement to the transportation network in the area but also took into account the needs of the adjoining neighbourhoods. The major elements of the proposal include urban mass transportation, parkland and joint developments (Mann 1991, p.51). The corridor travels through several, diverse neighbourhoods both economically and culturally and the challenge was to address the needs of these diverse

Figure 8: Concrete planter
(Mann 1991)
communities and create from the industrial wasteland a “genius loci” for Boston.

The final proposal was one that integrated local character, provided recreation space for the community, and included a commuter-corridor that would link several neighbourhoods to the city centre from which they were once cut off. Cyclists, walkers and mass-transit takers alike would be able to take advantage of the development. This transportation network helped to link the site together as a whole unit rather then being “a mere daisy chain of neighbourhood playgrounds” (Mann 1991, p.54).

Bold use of shade trees lining the divided walkways along its length allow people to read the site as a whole, while the use of consistent materials (namely the granite recycled from the rail line) give the place a feeling of permanence, and pulls it together as a whole. This palette extends into the adjacent neighbourhoods.

The site has become a beautiful and defensible “front yard” (Mann 1991, p.58) for the neighbourhoods along its length. Where at one time buildings along its length turned their backs to the railway tracks, now they have re-oriented to face the corridor (with flower boxes and even new balconies, while new construction along the corridor embraces it like a traditional street) and the site has become a bustling walkable travelway and park.

One of the main features of the site that has brought an abundance of life is the chain of neighbourhood parks along its length (Mann 1991). These clusters of activity help articulate the system and create places to pause and spend time playing, meeting and resting. Community gardens, seating, play spaces, sports fields and courts count among the elements that help bring people into the space, and have added to the sense of ownership the neighbourhood residents feel for the space.

This project marks an important victory for community building and demonstrates that good structures and unified design can bring down walls and create new bridges both among and between communities.

This project represents a victory for Boston’s urban fabric. The site is the grounds for what was a railway line that divided communities and indeed the city. Today one of the major themes of the site is accessibility: harking back to a time on North America when “footpaths ran through towns and farms in partial disregard of property ownership, very much like the English and Scottish common law footpaths” (Mann 1991, p.46).
3.2.1.2 Kentlands Development: New Urbanism and Community

Building

Duany and Plater-Zyberk, Gaithersburg, DC

Kentlands is a masterplanned new-urbanist community built over the last decade in Gaithersburg, a suburb of Washington, D.C. Called a neo-traditional residential community, it is 352 acres and built on reclaimed farmland. Designed in 1988 by Andres Duany and Elizabeth Plater-Zyberk, it provides housing for 1,800 units and 800,000 square feet of commercial space. The development is characterized by walkable streets, front porches, neo-classical design, tot lots, common greens, small-scale shops and a big box retail mall (Kim 2000). A mix of housing types and mixed-use areas arranged along a warped grid network of streets and alleys make this development quite different than most of North American suburbia. Kentlands, although it does not relate directly to recreation, distills some important theories about creating community through design.

The success of a community is measured by its residents’ satisfaction. The residents of Kentlands were surveyed about their impressions of the neighbourhood and its sense of place and Kim (2000) addresses their reactions in his article. Results were overwhelmingly positive with regards to the sense of community that was created. Walkable streets encourage people to get outside and meet their neighbours and the network of services provided allows people from various income brackets to interact on a regular basis.

According to Kim (2000, p.52) “the physical characteristics of a community facilitate residents’ social interaction”. Although this statement refers to neighbourhood design, the same idea can be applied to neighbourhood park design. Building community in a neighbourhood park setting is closely linked to how the park’s uses are connected. Creating interstitial spaces that encourage social interaction will encourage people to stop and talk during their trip to the park. The combination of uses addressed in the park design will entice a wide variety of neighbourhood residents to use the facility and will help improve the close-knit sense of community. By creating a place that people will want to spend time in, residents’ sense of ownership will improve. The site’s connection to the neighbourhood will be enhanced by creating strong entrances and legible connections to the adjacent greenway, just as the interconnectiveness created by the legible street layout enhances the liveability of Kentlands.

By creating legible ways to travel through the park, like a legible neighbourhood, the neighbourhood park will gain a sense of identity. By designing these spaces as social places people will feel comfortable interacting in them. The neighbourhood park should hold together visually as a unique place, and as part of a network recreation system. In Killarney Park, a palette of materials that relates to the local greenway system will both integrate and create identity like the “unique physical character” of Kentlands sets it apart and instills residents with a sense of place. Strong connections between community buildings and landscape will strengthen community ties by rooting community buildings in the site.
3.2.2 Eco-revelatory Design

3.2.2.1 Rainwater in the Urban Landscape: The Garrison Creek Demonstration Project

Brown and Storey, Toronto, Ontario

The City of Toronto is characterized geographically by its location on a sloping plane bisected by a collection of twenty creek systems and associated ravines (Brown & Storey 1996, p.24) that snake their way through the city, draining their rivers into Lake Ontario. Many of the city’s public parks lie in this network of sunken oases that have been preserved or reclaimed for recreational and conservation purposes. Garrison Creek and its associated ravine was not as lucky.

The Creek was once valued as a natural water source for Fort York, the original military outpost established by Lord Simcoe in 1792 (Brown & Storey 1996, p.18). The creek was subsequently populated by industry in Toronto’s early history and was used as a place to discard waste. Eventually the creek was buried in a 10-foot brick sewer but the space was retained as open space. Though it was quarried for gravel, and used as brickyards, the integrity of the ravine as a sunken landscape was retained, and the corridor continued to play a vital role in the city’s economy. Until the 1920’s the City of Toronto had a policy of maintaining the corridor and acquired lands that became Christie Pits Park and Bickford Park. Where roads bisected the ravine, bridges were erected and a continuous pathway was maintained on the ravine bottom. This fate of the ravine changed in the 1930’s and 40’s when the site became an important dump for garbage and construction debris (Brown & Storey 1996, p.19) and today only the sunken form of Christie pits acts as a reminder of the ravine and creek that once meandered along this length of urban fabric.

The integrity of the stream system and the benefits of the linear recreation facility seemed lost forever until a proposal was put forth by James Brown and Kim Storey (1996) to

“reduce the volume and improve the quality of rainwater that drains into the sewers by collecting and treating rainwater locally within the Garrison watershed”. (p.19)

The combined sewers that currently run down the length of the ravine discharge bacterial sewage-laden stormwater (“combined sewer overflows- CSO’s”) directly into Lake Ontario during large storm events when the storm sewers overflow their capacity and combine with sewage pipes. The city plans to rehabilitate many of the original sewer lines by installing a large overflow pipe along the waterfront that would collect CSO’s and allow this polluted water to be treated before being discharged into the lake- at a cost of $60 million (Brown & Storey 1996, p.19).

The design team proposes a series of ponds and other stormwater management systems (downspout disconnection, rain barrels, tree canopies, French drains and porous paver) as well as biofiltration systems and smaller local treatment plants to ensure that storm water neither overflows to combine with the sewer system, nor dumps its high-
volume hydrocarbon-laden contents into the lake (Brown& Storey 1996).

The proposal seeks to not only manage stormwater in an environmentally sensitive manner but seeks to catalyze the regeneration of the Garrison ravine system and the communities along its length. A small portion of the site running from Christie Pits to Bickford Vale and the Montrose Schoolyard was examined more closely as a demonstration site. In this design, the system of stormwater management structures are integrated with “vegetal, urban and civic spaces” (Brown& Storey 1996, p.24) to create a useful cultural and recreational site. The rainwater would be collected through a series of interconnected gravity fed ponds terminating in a small wetlands. Water could then be recycled for park irrigation, fed back into the groundwater system or be redirected back into the stormwater drain system in a smaller volume and cleaner state.

This proposal demonstrates how the site's drainage can be used to bring back its history and remind people in a subtle and beautiful way that the city still needs to play a role in the ecology of the region. Once residents are able to see the way water levels rise and fall in pond and swale systems, they are made aware of the natural systems working in their midst. Existing sports, educational and residential uses of the site are maintained while allowing room for the meandering stormwater management system and as such, ecology, recreation and community coexist in a harmonious manner.
3.2.3 Starting Point: allowing the site to guide the design

3.2.3.1 Landscape Park Duisburg-Nord: The metamorphosis of an industrial site

Latz und Partner, Ruhr district, Germany

When re-evaluating the role that the Duisburg-Nord site would play in the life of the local community in the Emscher District of Germany, the designers (the firm of Latz und Partner) looked to the site’s past to find inspiration for its future. The unique cultural history of the site was an important starting point for the designers and a look at how the past was manifested in the present will be a pertinent precedent study in the context of Killarney Park. Creating community was a priority in every aspect of the design of both sites.

Killarney Park’s rich natural and cultural history as a fruit-growing area at the headwaters of the still creek watershed became an important factor in its conceptual design. To look to the history of a site and to bring some of that history to light is to remind us of the manner in which our lives and our world are a product of the layering of years of existence. We do not, nor do we wish to exist in an anachronistic state where time and place are not connected.

Duisburg-Nord, in the Emscher District of Germany, was the site where extensive coal, iron and steel industries, left behind by the changing economy, left physical and chemical industrial scars on the landscape. The restoration of these lands (part of an area that is home to 2.5 million people) featured in the aim of the International Building Exhibition Emscher Park. The 230 acre site was part of a master planning and design process that began with an international design competition in 1991, and continued with planning and implementation that lasted until 1999 (Latz 2001, p.150). The resulting landscape park focuses on integrating and even showcasing the remnants from the site’s industrial past where,

fantasy and playfulness allow the existing abstract structures to function in new ways. (Latz 2001, p.151)

Through “transformation and metamorphosis” (Latz 2001, p.151) the remnants from the site’s industrial past become the basis for the playful elements in the site’s future. Huge bunker walls are used for climbing, and enclose a series of “secret gardens” interconnected by cutting through the thick concrete walls. The underground lakes formed by groundwater under the original ore bunkers become the new home for a diving club. Old buildings become the centres for “playhouses and play structures” (Latz 2001, p.151). These transformations focus on the idea that with creativity and good design one landscape can serve several uses throughout its lifetime. Using cues from the site as a starting point for the design, Latz und Partner (2001) have created a design that appears to have evolved from the site itself.

The presence of rainwater becomes important in the design of Duisburg-Nord. Rainwater is impeded from infiltrating into much of the site as the presence of soil-born pollution resulted in the need to seal much of the site. The transfer of rainwater laterally as opposed to vertically became an ever-present feature. Rainwater is collected from
roofs and hard surfaces and flows through open drain systems as well as through existing overhead pipe-systems. Old cooling ponds are sites of water collecting and oxygenating, and former settling tanks have been cleaned and reused to settle out particulate matter. This revelation of the ecological functioning of the site (the way in which it acts as a self-sustaining cleaning operation) is an important tool for educating the public. By turning the functioning of the site into a design feature on the site, the designers remind the public that the site functions as a system, and the idea that humans are integrated with this system becomes apparent. This attitude will become important in the design of Killarney Park, where endemic natural topographic and hydrological features will not only be incorporated into the new design, but will act as structures integral to the site’s design.

The site results from a layering of several systems. These layers function largely independently and connect explicitly at certain points through interconnecting structures. A system of elevated walkways named the “railway park” (Latz 2001, p.153) is the uppermost layer and affords visitors with a birds-eye view of the landscape. Beneath the surface, the “water park” (ibid) provides an underground playground for local diving clubs. Sandwiched between these two layers exist systems of pathways and vegetation where most of the human circulation take place. These systems interface through a series of ramps, stairs and terraces that provide an opportunity to create intrigue in the landscape.

By creating a landscape that allows the user to simultaneously see the past, present and the future of the site, the designer has created a place that will likely become rooted in that landscape and in that culture. Landscapes that are integrated in the culture in which they exist are those landscapes that become cherished by their users. Landscapes that are cherished are those that add value to the human experience. In his book “What Time is this place?” Kevin Lynch (1972) examines the preservation of the historical landscape and explores what people cherish about old landscapes. People are naturally inquisitive and a historic landscape acts as a source of information about the past (Lynch 1972, p.36), but what is it about the past that people find so intriguing and full of value? Lynch (1972) points out that saving the past, can be a way of learning for the future, just as people change themselves by learning something now that they may employ later. (p.43)

It is not merely this thirst for knowledge that appeals to our sense of the past, but
also the feeling of belonging to something bigger than ourselves. Understanding not only the current state of place we are in but really understanding the history of that place give us a feeling of being on the inside, a feeling of belonging. The restoration of a stream of the reuse of redundant ore bunkers help the user to understand the past of the site and thereby feel more a part of its present.
4.1 WHY THIS SITE?

Killarney was chosen as a site to examine a new role for the neighbourhood sport park for several reasons. See attached CD for complete site context and analysis.

4.1.1 its location

Killarney Park is located in an ethnically diverse neighbourhood in East Vancouver. Typical of many urban communities is Canada, Killarney has a high proportion of immigrants from all over the world. This was both a challenge and a resource in this project. Killarney is a neighbourhood that has changed dramatically in nature since the community centre was built in 1963.

The park has received little attention since this time and many of the existing structures are the original ones. It gives the impression of being worn-out and slightly neglected.

Killarney High School is home to over 2,000 high school students and is located on the site.

4.1.2 its size

Killarney Park is 13.2 ha in size. It provides ample space to accommodate the sports fields required by the neighbourhood, while leaving scope for the layering of other programs on the site.

4.1.3 its program

In its present state Killarney provides facilities for a diverse range of activities. These include soccer, baseball and field hockey fields; basketball half courts, a running track, a playground climbing structure and wading pool, tennis courts, and parking for 236 cars. The community centre offers an extensive list of recreation programming that includes an indoor swimming pool, hockey arena, cardio equipment and weight room, dance studios, pool tables, futsall tables.

The Community Centre also offers ample community programs, many of which could benefit from aptly designed outdoor space. Seniors’ groups, youth groups, fitness groups and children’s daycare are examples of some of the
users taking advantage of the facilities at Killarney. Killarney Secondary School (KHS) uses the site during and after regular school hours, and diverse sports leagues use the site for their games at various times during the week and on the weekend. The Vancouver Parks Board schedules use of the fields. KHS has a diverse adult night school program that provides continuing and basic education to a diverse segment of the population. This project seeks to provide outdoor space for the benefit of as many users and as many programs as possible.

### 4.1.4 its role in the still creek watershed

Killarney Park is uniquely situated at the top of the Still Creek watershed: a system of streams and rivers (above and below ground) that drain to the northeast into Burnaby Lake and eventually into the Fraser River and Pacific Ocean. Much of this watershed drains underground in a system of storm drains installed almost 80 years ago. Killarney Park's role in the greater watershed was taken into account when selecting Killarney as a site. Renewing its role in the health of the watershed provided a starting point for the design of the site. The design proposal for Killarney Park will reveal the importance of the public park in maintaining the health of any watershed by acting as a place of stormwater infiltration.

### 4.1.5 its location on the Ridgeway Greenway

The Ridgeway Greenway runs 13 km across the city from Pacific Spirit Regional Park to Central Park in the City of Burnaby. Completed in 1998, a portion of this greenway was in fact the pilot project of the city of Vancouver's Greenways project (city of Vancouver website). Pedestrians use the sidewalk for the majority of the greenway, while bicycle traffic shares the roadway with vehicles on traffic-calmed streets.

The greenway is characterized by extensive native and drought-resistant plantings as well as public art projects along its length. Large boulders and slabs of granite have been used as benches, small bridges and water fountains along its length. The Ridgeway Greenway runs across the north end of Killarney Park on 45th Avenue, and a seating area and public art installation associated with the greenway finds its home at the corner of Killarney Street and 45th Avenue, in the northwest corner of the site. This greenway system connects Killarney Park to an extensive system of bicycle routes in the city. With the connections created by public greenways and bikeways, neighbourhood parks become more deeply rooted in the urban fabric and become part of a larger system of recreation facilities within the city. Much of the palette of materials used in this project was inspired by the materials used by the City of Vancouver in their Greenways systems. This continuity of materials will help enhance the impression that Killarney is a piece of a larger recreation system, interconnected by green corridors such as the Ridgeway Greenway.
4.2 CONTEXT: VANCOUVER

4.2.1 Related community facilities

There are several other community facilities located in the vicinity of Killarney Park whose presence was taken into account during the course of this project.

John Hendry Park (at Trout Lake) is located several kilometers to the north of Killarney Park and is the location of a farmer’s market every Saturday from May to October. This farmer’s market features local produce from mainland BC, Vancouver Island and the Gulf Islands. The market has become extremely popular and there is a waiting list for market stalls. Scope therefore exists for the creation of a complementary market facility at Killarney Park. John Hendry Park and Killarney Park are located in close enough proximity to one another that the two locations could be visited together on a Market Saturday.

Central Park in Burnaby is also within a short distance from Killarney Park. Central Park offers a network of walking, cycling and horse-riding trails within a forest setting. The design for Killarney Park should reflect this proximity and should offer activities that complement rather than compete with those available in Central Park.

Everett Crowley Park is located to the south of Killarney Park and like Central Park offers a forest setting for the purposes of recreation. This fact provides another reason to focus the facilities in Killarney Park towards a more structured program.

Because Killarney Community Centre offers both a swimming and ice rink facility, its catchment will tend to be larger than most community centres. Its users will be drawn from a wide geography and as such, the facilities designed for Killarney Park will be considered in the context of East Vancouver as well as the neighbourhood of Killarney.

4.3 CONTEXT: KILLARNEY COMMUNITY

4.3.1 Demographics

The community of Killarney has a cultural makeup that distinguishes it among Vancouver’s neighbourhoods. The following table outlines the relevant demographic information that will be considered when proposing a design solution for Killarney Park.

Killarney is a family-oriented neighborhood. Suburban in style, the streets are quiet and most people live in detached homes, the greatest proportion of which were built between 1961 and 1970. With a relatively low family income rate, it is probable that the neighbourhood uses the community centre quite extensively compared with other neighbourhoods in the city where memberships at private health clubs are more common. Children’s programming should be taken into account because the family-oriented nature of the neighbourhood results in a high proportion of children in the area. A great proportion of families live in homes that they own, and the neighbourhood will tend to be particularly stable in nature. The possibility exists for the building of a strong community as people develop relationships with their neighbours.

The cultural mix in the neighbourhood is Asian-influenced and activities such
as Tai Chi become important to address. Anecdotal evidence indicates that walking and strolling are other important activities needing appropriate infrastructure in Killarney Park and this need shall be addressed in the design proposal.

<table>
<thead>
<tr>
<th></th>
<th>Vancouver</th>
<th>Killarney</th>
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<tbody>
<tr>
<td>Population</td>
<td>1,967,475</td>
<td>5,307</td>
</tr>
<tr>
<td>Pop change 1996 to 2001</td>
<td>8.5%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Median age</td>
<td>37.4</td>
<td>n/a</td>
</tr>
<tr>
<td>Above 15 years old</td>
<td>1,641,570</td>
<td>4,500</td>
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<td>Children</td>
<td>325,905</td>
<td>1,730</td>
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<tr>
<td>Married</td>
<td>822,390</td>
<td>2,325</td>
</tr>
<tr>
<td>Divorced</td>
<td>119,970</td>
<td>240</td>
</tr>
<tr>
<td>Divorce rate</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Language first learned and understood</td>
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<tr>
<td>English</td>
<td>60%</td>
<td>33%</td>
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<tr>
<td>Other</td>
<td>38%</td>
<td>66%</td>
</tr>
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<td>Mandarin</td>
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<tr>
<td>Chinese</td>
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<td>4%</td>
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<td>Visible minorities</td>
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<tr>
<td>Chinese</td>
<td>17%</td>
<td>51%</td>
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<td>South Asian</td>
<td>8.3%</td>
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<td>Filipino + East Indian</td>
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<td>India</td>
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<tr>
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<td>Unemployment rate</td>
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<td>4.7%</td>
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<td>median income/ family</td>
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<td>Dwelling</td>
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<tr>
<td>average value of dwelling</td>
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<td>67%</td>
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<tr>
<td>Percent dwellings owned</td>
<td>38%</td>
<td>33%</td>
</tr>
<tr>
<td>Percent rented dwellings</td>
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<td>33%</td>
</tr>
<tr>
<td>Average earnings individual</td>
<td>$34,007</td>
<td>$22,155</td>
</tr>
</tbody>
</table>

Table 1: Relevant Census Data (Canadian Census website)
4.4 Historical Context

4.4.1 Cultural History

Like many recreation spaces in the city, the current form of Killarney Park is the result of several decades of city planning decisions. The park originally started out much larger than the site is today. In the late 1950's Rupert Street and Kerr Street were connected via the "Rupert-Kerr divide" and the resulting road annexed the North-East corner of the site.

Killarney Community Centre was built in 1962 and was made possible with transfer of $700,000.00 to the City of Vancouver Parks Board. The by-law granting the money transfer was passed on January 12th 1961 (Vancouver Archives website).

Killarney Community Centre, ice rink and swimming pool were officially opened on September 14th 1963 by the Vancouver Park Board and the Killarney Community Centre Society (City of Vancouver Parks Board website). In 1998-1999 the community centre was renovated to improve the facilities by adding more lounge space, expand with 2 new child care facilities and a new fitness centre (ibid). In 2001, a community computer lab was added with 11 computer terminals, and in 2002, a new $8.9 million pool renovation was approved (City of Vancouver Parks Board website). This expanded aquatic facility is scheduled to begin construction in 2004 and will provide a 50m swimming pool with expanded hot tub, childrens play area and change room facilities that will drastically change and indeed improve the north face of the community centre. The new glass façade facing north provides improved opportunities for indoor-outdoor interaction.

4.4.2 Ecological History

Killarney Park was once the site of a large swampy area that was partially drained and reduced in size when the existing street grid system was imposed on it in the 1930's (on-site inscription). At that time, the existing stream system that kept the marsh wet (and eventually drained into Burnaby Lake) was buried in a series of underground pipes. This stream system, part of the Still Creek Watershed, still flows underground in this series of storm drains. The remaining marsh was eventually drained, most likely in the 1960's at the same time as Killarney Community Centre was built. The large area of peaty soil, the border of which runs diagonally through the site, is a remnant from this ecological history and has ensured that a large section of the northwest portion of the site remains poorly drained and unusable for sports-fields in its current condition. As a result, this part of the site has been turned over to local dog-walkers as an off-leash dog area.
4.5 SITE INVENTORY AND ANALYSIS

4.5.1 Vegetation

Vegetation is quite minimal on the site. Large majestic street trees line the main east-west path that runs through the site, as well as portions of the north-south path. These should be incorporated into any future design. They are an important feature to residents and fauna alike and provide an abundant amount of shade in the hot, dry summer months. Five large red oak trees line the straightaway of the existing running track, and for the same reasons, these should be preserved. Other vegetation includes smaller street trees located along Killarney Street and 48th Street.

4.5.2 Soils

Killarney lies at the edge of a large peaty area. The Northwest corner of the site was once the site of a marshland that was drained when the site was enveloped by the surrounding community. This area continues to be poorly drained and this portion of the site often remains wet after heavy rainfalls. This area has remained unused for sports fields for several years. This area offers good opportunity for stormwater retention as the peaty soils will hold, filter and slowly reinfiltrate rainwater back into the groundwater table.

4.5.3 Hydrology

Because of its consistent slope, the site drains naturally from south to north and water draining off the site ends up eventually in the municipal trunk sewers to the North. Both the community centre and high school have flat roofs that collect rainwater, some of which evaporates directly back into the atmosphere. The rainwater not evaporated naturally could potentially be drained off the roofs and reinfiltrated back into the site.

4.5.4 Topography and views

Killarney Park is located roughly in a saddle near the top of the city. The site slopes gently, losing 10 in elevation metres over 483 metres (from 49th Avenue to 45th Avenue), giving an overall slope of 2.1 percent. Its position in the city combined with the slope of the site affords views of the North Shore Mountains. The sloping site results in longer shadows on the north sides of buildings than would a flat site. The site is generally quite flat, with sports fields terraced at various elevations, decreasing to the North. The topography on the western side of the site gives the impression of being located in a gentle bowl opening towards the North.
4.6 CONCEPT

The design proposal for Killarney Park is a manifestation of the interface between natural and human systems. The concept arises out of a response to the strong physical forms created by the overlay of the flows of energy and matter within the site. The pedestrian circulation system leads predominantly north-south and east-west in a linear manner and is overlaid with the drainage system meandering from south to north. The resultant pattern of overlapping flows creates a framework for the design of useful spaces.

Through a system of swales and detention ponds, the stormwater from the site will be reinfiltrated into the groundwater system. The sinuous nature of the swale system will act as a foil to the rigidity of the grid system of paths, and will serve as a reminder of the natural systems that formerly underlaid the urban fabric we inhabit. As such, Killarney Park will serve as a microcosm of the harmony that can exist when human and natural systems interface.

Figure 21: Conceptual Site Plan
showing drainage pattern overlaid with circulation system
5.1 DESIGN GOAL

To explore, in the design of Killarney Park, how community involvement can be promoted while creating an ecologically sound, aesthetically pleasing multi-use neighbourhood sport park.

Figure 22: Site Plan
Figure 23: Drawing Number 24, Kerr Street Entrance

Figure 24: Drawing Number 20, Children's Playscape
a covered 10m wide walkway provides a space for the weekly fruit and flower market. Produce from the on-site fruit trees not consumed by the community can be sold to raise community funds. The proposed swimming pool and ice rink provide additional amenities. The high school auditorium and poured concrete raised planters and seating slope provide much needed hang-out space for high school back entrance.

Figure 25: Drawing Number 2, Permeable Parking Lot
Figure 26 : Drawing Number 4, Tai Chi Centre

KILLARNEY PARK- creating a centre for play
Heather Scott- MLA Thesis
Figure 27: Drawing Number 19, Community Centre Backyard
5.2 DESIGN STRATEGIES

The following section outlines the objectives and strategies proposed by the design for Killarney Park as explored within the framework of structure, community, ecology and play.

5.2.1 STRUCTURE

5.2.1.1 Primary Objective

The landscape in Killarney Park should be aesthetically pleasing and legible to the user, while reflecting an understanding of the programmatic needs of the community.

5.2.1.2 Strategies

1. Treat travelways as spaces that can be inhabited by the community and use these travelways as a primary organizing structure

The main pedestrian thoroughfares through the site run north to south along the axis of Killarney Street and east to west along the axis of 47th Avenue. These respond to the main existing pedestrian entrances to the site located at the intersections of Killarney and 49th Avenue, Killarney Street and 45th Avenue, 47th Avenue and Raleigh Street and 47th Avenue and Kerr Street. These main pathways not only create a circulation grid through the site but create a threshold that flanks the community centre, parking lot and high school. They aid in knitting these facilities together.

Primary pathways range in width from 3 to 10-metres, while secondary pathways may be as narrow as 1-metre wide. Pathways exist in a hierarchy of materials, from formal and structured to informal and almost ephemeral. Main pathways consist of combinations of sidewalk pavement flanked by 30 by 30cm granite pavers, to 20 by 20cm and 10 by 10cm granite-coloured concrete pavers flanked by 30 by 30cm granite pavers. These various treatments are reflective of the differing degrees of use each travelway is expected to experience. Whereas more heavily used pathways will receive the more expensive paver treatment, less used pathways will receive the less expensive sidewalk.
treatment.

The running path that winds its way around the periphery of the site will be treated with a crushed stone surfacing, addressing the need for a soft but even ground surface for running, while reflecting its secondary status in terms of use.

All major travelways will be wide enough to accommodate at least three people across, reflecting the need for social strolling facilities within the site. 3-4 users will be able to walk and talk comfortably on major pathways. Minor pathways will be designed to accommodate 1 to 2 people across. Seating will be incorporated into the edges of several pathways, particularly those expected to be highly used or those flanking points of interest within the site. This reflects the need for resting spots along each pathway and as well provides sitters the opportunity to view the passing scene while taking a rest. Several large granite blocks will be installed as benches (some with wooden back rests and some without), and poured concrete planters will provide ample seating in higher-use situations (such as in front of the community centre and high school).

The fruit and flower market (described in greater detail in section 5.2.3.5) will find its home on the pathway leading along the western edge of the parking lot. This space occupies a 10-metre wide pathway, one side of which is covered with a glass awning. Seating lines the centre of the pathway and market tables shall be set up along each edge. When not in use as a market space, this pathway serves as a portion of the main north-south axis on the site.

These measures will ensure that pathways may be inhabited as spaces rather than merely traveled through.

2. Create a hierarchy of layered spaces centered around the community centre

Pedestrian pathways will create a framework for site organization and most facilities on the site will flank these pathways. From the community centre and high school buildings, users will cross over wide pathways to reach the most-used facilities. This will concentrate the site's activities around the community centre and high school and will help to reinforce the role these facilities play as the heart of the site and the heart of the community. More dispersed uses will unfold radially from the centre of the site.

Facilities that will form the high-use areas include the running track and turf soccer field, community centre backyard (including basketball half courts, ping pong tables, bocce and shuffleboard courts), parking lot and fruit and flower market. These high use areas will be flanked generally by wide pathways and will seem nested in the infrastructure of the site.

The use areas located outside of the centre include the running path, tai chi centre, baseball diamonds and field hockey/ultimate Frisbee fields. While these facilities shall be located away from the centre, supporting structures will be included that will allow these to act as smaller centres in and of themselves. The Tai chi centre will be supported by a small community building moved from the eastern edge of the site as well as by the new angled parking on Raleigh Street and 48th Avenue. The baseball diamonds will be supported by the new angled parking along Killarney Street. The field hockey fields will be supported by their location in close proximity to Killarney High School, as well as by the new field house to be located on the edge of these fields and used for equipment storage.
and for social events.

3. **Provide facilities for the programmatic needs of the community**

![Figure 29: Tai Chi Platform](image)

There are several programmatic needs of the community not addressed by the current park facilities in Killarney Park. While current programs outlined in chapter 4 have been maintained, new programs were identified that were important to the community but were not being addressed by the existing facilities. These needs were identified through observation, informal interview and through consultation with the staff at Killarney Community Centre, in particular with the recreation supervisor.

The current lack of engagement with the landscape reflects a lack of facilities that encourage outdoor activity. The design for Killarney Park seeks to create engaging outdoor community space that demonstrates that landscape and community programming can not only coexist in the urban setting but can enjoy a mutually beneficial relationship in the neighbourhood park.

The large group of tai chi practitioners that uses the site everyday is without an appropriate facility. While the small community building located adjacent to the Kerr Street entrance provides some indoor practice space, outdoor practitioners use the basketball half-courts located on the North wall of the community. This site is heavily shaded (and therefore uncomfortably cold during winter months), lacks shelter from frequent rain storms, and is too small for the large number of practitioners that use the park every day.

The new tai chi facility shall be located in the western portion of the site, opposite the parking lot and fruit and flower market facility. Access to the tai chi centre is provided via a concrete and granite paver pathway leading from the western entrance of the community centre through the parking lot. The centre shall be structured around the existing community building moved from the Kerr Street entrance of the site. The community building will provide indoor space for 56 tai chi practitioners, an administrative office for the running of the tai chi centre, as well as men's and women's washroom facilities.
Several wooden decks of varying sizes will unfold around the community building to provide tai chi facilities of differing scales. One deck measuring 16-metres long by 6-metres wide will be covered in a glass awning and will be flanked on the south side by a wooden screen. This deck will address the morning sun and will provide space for up to 48 users while protecting them from the morning rain. The second deck, measuring 10-metres wide by 16-metres long will be partially covered with a wooden pergola supporting a wisteria vine. This structure will provide some shelter from the mid-day sun but will remain open to the evening sky to the West. It will serve up to 80 practitioners. The third deck will be entirely covered with a wooden pergola that will also support a wisteria vine. It measures 10-metres long by 7-metres wide and provides space for 30 practitioners. These decks shall be interconnected with a system of raised wooden walkways and a collection of dogwood trees and Japanese maple trees with shelter the centre from the summer sun help visually root the site in the landscape.

The tai chi centre will provide a space for community interaction by providing a self-contained, comfortable and inspiring place to practice tai chi and hold events.

Skateboard facilities shall be provided in Killarney Park. These facilities will reflect the close attention paid to addressing the needs of every age group using the park. The skate park will be sited to the East of the community centre, in what will become a hub for the teenage users on the site. Poured concrete structured edged will form the basis for this node, and organization of the facility will respond to the need for facilities geared towards skateboarders of various ages and abilities. Lower, simpler elements will be located around the periphery of the skateboarding site, while larger, more advanced elements will be located towards the centre. Attention will focus on the more advanced skateboarders who presumably will be more comfortable with an audience.

The new basketball half courts shall be located adjacent to the skate park, and the materials used shall reflect their common audience. Three half courts shall be developed, and two courts may be combined to create one full-court. Social interaction shall be promoted with the installation of ample seating on the various seat-walls and seat-steps located around the facility.

A multi-age linear games facility shall be sited adjacent and uphill from the skate and basketball facilities. A pea-gravel bocce court, concrete shuffleboard court and chess and backgammon tables form the border between the basketball and skate facilities and the new field hockey and ultimate Frisbee fields. This adjacency reflects an attitude towards the promotion of age-mixing on the site. The noise created from skateboarding and basketball playing will be dampened by the change in elevation that allows these facilities to be sited 45cm below the adjacent walkway. All of these facilities are flanked by raised planters that provide seating along their edge. Any equipment needed will be available from the community centre.

The existence of over 2,000 youth on the site everyday has also been addressed through the programming of spaces that promote sitting and talking, a favourite activity among teenage users. Raised planters located at the main student entrance are located 4m apart and allow small groups to congregate in their midst. Seating slopes and seating walls and steps are provided along the north wall of the high school, in front of the community centre and around the periphery of the basketball courts and skate park. These all provide several seating options at various scales and in various locations, with a range of privacy and visibility.

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Spaces for community gathering and celebration have been layered onto various parts of the site. The fruit and flower market finds its home under a glass awning located on the major north-south pathway through the site. This gathering space provides possibilities for an endless variety of fairs and sales on the site. The local summer festival the “Summer Sizzler” will find a new home in the backyard of the community centre on the wide walkways, in the new amphitheatre and on the grass fields. Basketball shoot-offs, skateboard competitions, a chess tournament and various other fair activities will find room to grow in this new facility.

The space directly adjacent to the rear entrance to the community centre will provide not only an outdoor extension to the community centre programming, but will accommodate summer movie nights, outdoor lectures and community meetings in the new amphitheatre.

These new facilities will reflect an appreciation for the needs and desires of the community of Killarney as expressed through site visits and input from the community centre staff.

4. *Capitalize on the existing topography as a means to define space*

![Figure 30: Site section running south to north](image)

*Figure 30: Site section running south to north*

![Figure 31: Site section running west to east](image)

*Figure 31: Site section running west to east*

Killarney Park slopes down gently to the north and loses 10 metres of elevation in 845 metres. Because many of the programmatic needs of the site require flat surfaces, the elevation change shall be managed through a series of terraces. The changes in elevation between these terraces offer a unique opportunity to create not only grade changes but to create edges that are inhabitable spaces.

The first major elevation change shall be absorbed along the north edge of the high school. The resulting 11-metre wide terrace running along this edge will act as a inhabitable travelway that leads from Killarney Street to the tennis courts and accesses the high school at several points along the way. The slope created by the change in elevation between this terrace and the adjacent parking lot will provide spaces for a terraced grassy seating slope planted with upright beach trees.

The amphitheatre located at the rear entrance of the community centre shall result from the natural amphitheatre existing in that location and resulting from the continuation of the slope running along the north edge of the high school. The siting of
this amphitheatre will not only create a small-scale movie-watching and seating space behind the community centre, but will form a back lawn for the new field house.

As mentioned in the previous section, the change in elevation between the bocce and shuffleboard courts and the skateboard and basketball facilities will help in decreasing the noise disturbance that could arise from this juxtaposition. The design shall capitalize on this elevation change by providing seating steps, walls and slopes along the basketball courts and by providing skate steps and a wave-bowl skate element in the skate park.

The next major change in elevation shall result in the children's playscape being sited on a gently sloping area north of the skate and basketball facilities. This gives rise to the opportunity to run a meandering swale through the playscape that not only adds intrigue to the site but serves to reinfiltrate stormwater on-site. The same slope is absorbed along the north edge of the community centre and shall allow the creation of a series of bleachers that will separate the pool-side decking from the running track and will provide seating for events taking place on the new running track and turf soccer field.

By concentrating grade changes into terrace edges, the design for Killarney Park capitalizes on the existing topography of the site to define legible spaces and reminds the park user of the hilly landscape in which they reside.

5. **Use a consistent palette of materials that reflect and promote imageability in the context of the community of Killarney, Vancouver, and British Columbia**

The use of materials can send a strong message about the character and impression of a site. The city's greenway system runs across the northern edge of the site. One of the objectives of the design for Killarney Park is to create a site that is integrated with the bikeways and greenways of the city of Vancouver. As such, the materials used in the design will be inspired by those used in the design of the city's greenway system. Mainly characterized by granite pavers and blocks, large boulders and river stones, wooden beams, poured concrete, glass and painted metal, these materials will help frame the site and its structures in clean lines and consistent colours. While the permanence of natural rock will lend a timelessness to the site, its juxtaposition with the manufactured and sleek nature of poured concrete, glass and metal will lend to the site a contemporary flair.

The choice of materials for the various uses on the site will be determined by several factors. Functionality and durability shall be extremely important. As such, skateboard-friendly areas will be treated with poured concrete edges and metal rails, whereas places where skateboarding might be inappropriate will be treated with granite and may be notched or studded to deter conflicts between users.

The tai chi centre will be given a naturalistic treatment with extensive use of wooden decking that will appear serenely located in a grove of Japanese maple and dogwood trees. Main entrances will entice the passers-by with their signage cut from sheet metal mounted between cedar 100mm by 100mm beams. These beams will be supported by pediments faced with granite slabs, giving them an impression of permanence.

While some choices of material will be reflective of an aesthetic attitude, others will reflect a functionality inherent in the material chosen. Grass and gravel pavers chosen for the treatment of the parking lot arose out of a desire to allow reinfiltiration of stormwater.
on-site. Granite and concrete pavers were also chosen for their ability to be set in sand, rather than concrete. The resultant runoff from this treatment will be less abundant than that of pavers set in concrete.

Figure 32: Glass awnings (by author)

Figure 33: Paving pattern (Peter Walker website)

Figure 34: Simple railing (Peter Walker website)

Figure 35: Granite slabs used as benches (by author)

Figure 36: Existing palette of materials from Greenway (by author)

Figure 37: River-stone lines bottom of drainage swales (by author)
5.2.2 COMMUNITY

5.2.2.1 Primary Objective

The facilities at Killarney Park should provide a framework to promote community programs and interaction.

5.2.2.2 Strategies

1. Identify and address those community needs not currently provided for by the present programming of the park

The community needs identified as lacking facilities at Killarney Park are the following:

- Tai chi facilities
- Youth-oriented facilities such as:
  - Skateboard facilities
  - Hang-out areas
  - Outdoor youth group meeting places/gathering places
- Sports-viewing facilities
- Seating areas

2. Enhance the facilities for the community needs already provided for in the park

Encourage the viewing and celebration of sports by ensuring that every sports facility is supported by viewing stands and/or viewing areas. Encouraging the celebration as well as playing of sports encourages the athlete's community and family to get involved in their sporting endeavours. Youth who have the support of their community and family are more likely to stay involved in sports and are more likely to grow up into adults that stay active. Supporting community sports supports a healthy community. The specific ways in which sports viewing is enhanced are described in section 5.2.4.

3. Identify, support and enrich community programs provided through Killarney Community Centre and Killarney High School and provide a landscape in which the community can get involved

Create an environment on which people can make visible change or read signs of others' activity, past and present (Raporport 1977, p.374). That environment shall be designed for community programs that express a sense of ownership and a sense of belonging to the community of Killarney.

Programs that encourage the community to get involved in the landscape include the following:

- the planting, harvesting and maintenance of the orchards on-site
- amphitheatre located at the eastern entrance to the community centre provides a venue for outdoor community meetings, political discussions, summer movie nights, community talent shows and a variety of other social events.
- Basketball half-courts have removable basketball hoops that allow the area to be turned into a dance floor for dances and dance classes.
• Fruit and flower market not only provides an opportunity for the community to get together but shall offer opportunities for volunteer setup, tear-down and organizational committees, and shall also allow the community to sell produce and flowers grown on their own properties.

• Numerous clinics offered through the community centre or high school including
  • Hoop shooting clinics
  • Learn to skateboard clinics
  • Numerous sports leagues

• Night school classes including
  • Fruit tree pruning
  • Organic fruit growing

• End of term picnics in any one of several locations throughout the site

4. maximize connections between the site to the surrounding street network to reinforce Killarney Park’s role as the heart of the community

Main entrances to the site will be located at major intersections. Planting and curb treatments will extend across the street to reach into the surrounding neighbourhood. Streets crossings at these locations will consist of raised concrete pavers that will ensure that automobile traffic must slow down before driving over the bump. The change in paving treatment will also create a visual cue for drivers to slow down. In his book, “Building Cities that Work”, Fowler suggests that details in the landscape that often go unnoticed by adults can be important qualities in the experience of the child. As such, he suggests that,

_The texture of the floor or street is a strong component of the experience of a three-year-old._ (Fowler 1992, p.101)

This statement suggests that adding richness to the landscape even at a small scale can be very important in creating a place that is memorable and loved by the community. Extending this richness into the surrounding neighbourhood will increase the presence and visibility of Killarney Park in the lives of the community of Killarney. A connection to the Elementary School located directly across 45th Avenue will be made using the same raised-paver technique. This connection will be accompanied by the installation of a new gate that penetrates the fence along the north side of 45th Avenue. A double row of orchard trees will find its way into the elementary school property, paralleling the double line of fruit trees on the north side of the street. This visual connection will signal a connection and encourage elementary school participation and use of Killarney Park as an outdoor classroom for academic subjects as well as physical education.

Entrance signs will be located at major entrances (on 45th Avenue, Raleigh Street, 49th Avenue and Kerr Street). These will measure 3.5-metres in height and will form a gateway across the pathway with which they are associated. Materials found inside the site will be used in the design of all signage. Refer to section 5.2.1.5 for a description of materials used in signage.
5.2.3 ECOLOGY

5.2.3.1 Primary Objective

The design for Killarney Park shall enhance the ecological health of the region as well as provide a framework with which to promote the role of the public park in enhancing that health.

5.2.3.2 Strategies

1. ensure that all stormwater that falls on the site is infiltrated back into the groundwater system on-site

Public parks are the city's connections to the natural world. They are one of the best places to facilitate the reinfiltration of urban stormwater back into the water table, and an important way to maintain the health of the ecosystem. There are three main systems in place in the design for Killarney Park that will ensure the reinfiltration of all stormwater on-site. The reinfiltration of stormwater in the design of Killarney Park has been expressed at a conceptual level.

- Slopes throughout the site will direct stormwater to a swale system that will collect excess water shed by hard surfaces and water that seeps downhill under the surface of the ground.
- Stormwater falling on Killarney Community Centre and Killarney High School shall be first allowed to evaporate back into the atmosphere. Stormwater left after natural evaporation will be collected, filtered and transferred to the swale system running through the site. While running down this swale system, stormwater will slowly seep back into the ground water system. Any stormwater not naturally reinfiltrated will reach a gravel pit that will act as a sink for the remaining stormwater.

Materials will be chosen for their infiltration ability. Grass and gravel pavers will be used as surfaceing for the parking lot. These will reinfiltrate most of the stormwater falling on the parking area, while any excess stormwater will drain into drainage swales running between parking aisles. Where granite and concrete pavers are used as pathway material, these will be set in sand and will be capable of reinfiltrating much of the stormwater that falls on their surface.

Figure 38: Grass and Gravel Pavers used in permeable parking
(Netlon website)
2. **use the site drainage system to reveal the hydrological functioning of the site**

   The swale system will not only act as a drainage system for the site but will also provide a visual cue as to the hydrology of the site. As the water levels in these swales naturally rise and fall, site users will be reminded of the role the site plays in re-infiltrating stormwater back into the natural system.

   Signage in the parking area will indicate to the park user the benefits of grass and gravel parking in maintaining a natural hydrological cycle on-site. Revealing the natural functioning of the site will remind the public that the city is in fact part of a larger ecosystem.

3. **use the drainage system to help guide the site’s design**

   The main drainage swale that will collect and re-infiltrate stormwater from the high school and from the western side of the site will meander its way through the site before reaching the large detention basin at the northern-most end. This swale system will help anchor the site visually and will provide a setting for the tai chi centre.

   The entrance to the site from Killarney Street and 45th Avenue shall be centred around the existing seating/ stormwater infiltration area. Located at the end of the centre swale system, this seating area presents the user with a beautiful, informative and ecologically useful face upon arrival.

   On the eastern portion of the site, a swale will collect stormwater from the basketball courts and skate park. This will form the central structure of the new children’s playscape, providing an opportunity for children to interact with the landscape while learning about the hydrological cycle.

4. **use the site to produce food that can be consumed locally**

   The design proposes that extensive orchards be planted on the site, reflecting on the large amount of fruit orchards that existed on the site early in the late 19th and early 20th centuries. These orchards will not only provide a wonderful setting for picnics and community banquets, but will present the opportunity for extensive community involvement. The planting and management for these fruit trees shall be left in the care of the community and with an appropriate management plan, their bounty will be secured. Duties shall be divided among several groups and opportunities for education and community involvement will result from these orchards.

   The orchards will become a centre of community involvement. Children from the local elementary and high school, as well as members of the community shall participate in the yearly harvest and in the planting of the original trees. Volunteer organizations that collect and redistribute fruit from privately-owned fruit trees in the city could spearhead the management of the orchard. The orchard could become a wonderful outdoor classroom for local biology classes studying various subjects from pollination to agro-ecology. Fruit not consumed locally (in community harvests, preserving and pie-making) could be sold at the fruit and flower market or redistributed to local food banks.

   While vandalism is a concern, regular harvesting and an assurance that fruit will only occasionally accumulate on the ground will reduce the likelihood that fruit will end up through the teacher’s lounge window.
Local food production will not only close the gap between food production and food consumption, but will be a cause to mark the seasons and celebrate the harvest.

5. **create a fruit and flower market facility that encourages the consumption of locally produced goods**

The 10-metre wide pathway flanking the western edge of the parking lot shall be covered on the eastern edge with a 5-metre wide glass awning. This will provide shelter for the weekly fruit and flower market that will take place in this location. This market will complement the farmers market held at Trout Lake every Saturday from May to October.

Tables stored in the community centre will be set up along the length of the pathway, leaving a 6-metre wide aisle down the middle for circulation. Fruit grown on the site as well as fruit and flowers from local farms will be featured at this market. Its location adjacent to the parking lot will allow vendors to pull their vehicles up to the edge of the market space for easy loading and unloading. The market will not only become a centre for the community on a weekly basis, but will provide a community project that will encourage the purchase and consumption of locally farmed produce and flowers.

6. **provide for as much local recreation as possible as to reduce the distance the community must commute to recreate**

The above-mentioned recreation facilities will reduce the chance that community members drive elsewhere to find recreation. Providing more reasons for the community to visit the park will increase the chance that the community will visit this park on their next trip. Not only will this reduce the chance that fossil-fuels will be consumed for the purpose of recreation but will also make the community of Killarney more lively by encouraging people to recreate in their own neighbourhood.

7. **promote the use of the city's greenway system by integrating this system with Killarney Park**

The City of Vancouver Greenway system is a network of bike and pedestrian paths that run throughout the city and connect the city of Vancouver with the surrounding municipalities. This system of traffic-calmed streets planted with a palette of drought-resistant native vegetation was designed to integrate the city with a collection of "green fingers". The Ridgeway greenway, extending across the length of the city, bypasses the site along 45th Avenue. The design for Killarney Park shall ensure that the park appears as a bulge in the linear park system that is the greenway system. The Greenway will be welcomed into the site by an entrance accessible by bicycle, wheelchair and on foot. The entrance (developed from the existing seating area at 45th Avenue and Killarney Street) will mark the beginning of the main north-south pathway of the site. The same palette of materials will be used along this pathways (and indeed throughout the site) in order to encourage users to read the site as a cohesive entity, united with the Greenway system.
5.2.4 PLAY

5.2.4.1 Primary Objective

The design for Killarney Park should promote exploration and learning by providing a playful environment to accommodate the needs of the whole community.

5.2.4.2 Strategies

1. provide an extensive skateboard-friendly environment

   The provision of a skatepark was a mandate generated from an examination of the needs and desires of the community. One of the reasons behind the popularity of skateboarding has had in the past years is that it can be done in many different environments. Conflicts arise because settings that are appropriate to skateboarding are also often appropriate for other more passive activities such as sitting and walking.

The skateboard facilities in the design of Killarney Park strive to accomplish two things:

   • provide skate facilities that mimic popular urban skate features
   • provide skate elements outside the bounds of the "skatepark"

   The skatepark, located adjacent to the basketball half-court, provides stair, wall, rail, tabletop and bowl elements for all ages and skill levels. More advanced elements are located towards the centre of the skatepark, while elements geared towards beginners are located on the periphery, away from the more intense levels of activity. An inherently social activity, the skatepark is equipped with several viewing options, including a seating mound in the centre, and leaning and seating walls. The material used in the skatepark consists mostly of poured concrete. The landscape features located adjacent to the skate park (in the basketball half court and along the pathway leading to the skatepark) are also made mostly of poured concrete and create a network of skate elements that double as seating walls and steps when not in use by skaters. As such, a large portion of the site is geared towards enjoyment by both skaters and non-skater alike, and where conflicts might arise between skaters and non-skateboard users, features have been rendered unattractive to skateboarders by notching or studding their edges.

2. promote sports viewing and celebration

   The design of Killarney Park provides sports facilities for a variety of different sporting events. The design supports the promotion and celebration of these events by providing ample, comfortable and aesthetically pleasing facilities to watch and cheer for the local players. A set of poured concrete bleachers built into the existing slope run the length of the 100-metre dash along the running track; these are also well positioned for the viewing of events on the Astro-turf soccer fields. Bleachers are also included with both baseball diamonds. The field house, a small wood-frame structure located adjacent to the field hockey and ultimate Frisbee fields will support sporting events by providing equipment storage space, change rooms and washrooms and by providing a space for small receptions and events. The amphitheatre with stage located at the east entrance to the community centre will act as an awards ceremony location, with the stage providing a good location for awards podiums.

3. provide facilities for "adult games"
The Bocce court, shuffleboard lanes and built-in chess tables, while not intended exclusively for use by adults, are sited apart from other activities to allow these facilities to remain quieter and more contemplative for the practice of these slower-paced games. Ample seating is provided adjacent to each activity to provide a resting spot between shots. The large number of older adults using the facility will undoubtedly appreciate this attention to detail.

4. incorporate children's playscape into the landscape

The children's playscape is intended to act as a landscape that promotes creative play. Not resembling a traditional playground of swing sets and slides, the children's playscape winds its way down the slope beneath the skate park and basketball courts. It aims to provide local children with a medium for interaction with the landscape while promoting creative play in an environment that is both safe and challenging. Several elements created from simple wood and earthworks are incorporated into an adventure trail that winds its way down the slope like a braided river.

Children first encounter a low wooden bridge that crosses the swale at the top of the slope. The path over the bridge leads past the metal slide and granite boulder steps built into the side of a berm. The path splits and leads on the right to a set of low (maximum 30cm) balance beams arranged in two concentric semi-circles. Children can walk along these 100x100mm beams and jump the short distance from one to the next. Children's endlessly creative minds may turn these beams into the seats on a school bus, wild horses or any number of other possibilities.

The wobble walk lies on the left-hand fork in the same path. 100x100mm beams set on 100x100mm posts set in the ground at different heights are separated by a three cm gap that allow small feet to walk along the top of the structure without getting stuck within it. This structure may be used for walking, sitting, rolling balls along its length or any number of activities imagined by the child.

Another bridge leads back across the swale to two sets of mounds. One for bike-riding has a simple dirt trail that runs the length of the camel-hump bumps and the other, for walking has a trail of boulder-stepping stones running along it ridge.

The children's playscape is characterized by a collection of trees chosen either for their unique-looking features that will be memorable and identifiable to the young mind; or for other interesting qualities such a remarkable-looking cones, good climbing branches, strange-looking seed-pods, or edible berries.

5. create spaces adjacent to community centre and high school that incorporate activities into the outdoor landscape

In order to encourage users' interaction with the landscape, strong connections have been created that link Killarney Community Centre and Killarney High School with the surrounding landscape. Promoting an improved interaction with the landscape will encourage users' appreciation and respect for that landscape and will foster an improved connection with Killarney Park.

The area directly adjacent to the eastern entrance to the community centre will act as an outdoor plaza and entrance area that lead people both into the building and out into the landscape. This area contains built in ping pong tables, amphitheatre and stage shaded by the dappled shade created by the trees sited in raised seat-wall planters.

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Through this area, community centre users are led towards the bocce and shuffleboard courts, chess tables and basketball half courts. This area of the site is designed to feel urban in nature and to act as an extension of the indoor community centre space. Fitness classes will find an outdoor home below the amphitheatre steps, and the amphitheatre itself can act as a meeting point for groups practicing outdoors.

From the western entrance to the community centre, the visitor is directed under a canopy of red maples that shroud the new "green" parking lot, along a raised walkway of concrete pavers into the western portion of the site. The threshold created by the linear roof of the fruit and flower market marks the entrance to the orchard in which the new tai chi centre is located. The strong nature of this direct route ensures that visitors not only see, but are enticed by the presence of the tai chi centre.

A new connection between community centre and the landscape is created by the pool renovation that includes a glass façade along the north side of the pool area. Punctuated by several access doors, this new glass façade becomes not only visually but physically permeable to the visitor. The pool deck then extends out onto the adjacent pool platform that lines the edge of the running track and is partially covered by a glass awning.

Killarney High School also finds a new connection to the surrounding landscape on the eastern edge of the physical education facility where an entrance and grand staircase descends from the main gymnasium through a pear orchard to the new field house and field hockey and ultimate fields. This change will encourage physical education teachers to take their classes outside and will facilitate school spirit events to spill onto the adjacent field.

6. **strengthen the connection between Killarney High School and Killarney Community Centre**

Killarney High School and Killarney Community Centre have been stitched together through the creation of strong pathway systems linked visually with the consistent use of materials. Walkways run the length of both buildings and are covered at intervals with glass awning that provide both the pick-up and drop-off zone of the community centre and student entrance and seating area of the community centre with shelter from the rain, while allowing sun to shine through on sunny days. The pathway leading along the eastern edge of the community centre crosses the access road at the southern end of the parking lot via a raised concrete paver pathway to join the sidewalk flanking the parking lot on the south end. This provides a safe pedestrian route from community centre to high school and vice versa. The stairs leading from the student entrance of the high school down to the parking lot have been widened to 20 metres to strengthen this connection both visually and physically. Allowing these community facilities to interact more closely will not only encourage the high school students to become involved in the community centre activities, but will remind the public that Killarney High School and its community programs are at their disposal as well.
5.3 DRAWINGS

Figure 39: Detail of Fruit and Flower Market

Figure 40: Detail of Permeable Parking and Community Centre pick-up and drop-off

Figure 41: Section through Fruit and Flower Market

Figure 42: Section through Permeable Parking and Community Centre pick-up and drop-off

Figure 43: Elevation of Fruit and Flower Market
Figure 48: Detail of Basketball courts at Kerr Street Entrance

Figure 49: Detail of Skatepark at Kerr Street Entrance

Figure 50: Section through Basketball courts looking west towards Community Centre

Figure 51: Section through Skatepark looking northwest

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Figure 52: Detail of Children’s playscape

Figure 53: Sections through Wobble Walk

Figure 54: Section through Children’s Playscape, looking north-west

Figure 55: Section through Children’s Playscape, looking west
Figure 56: Detail of Ping Pong Tables in Community Centre Backyard

Figure 57: Typical Entrance Sign
(this one located at Kerr Street entrance, looking west)

Figure 58: Section through Community Centre backyard and amphitheatre, looking south

Figure 59: Detail of Games Alley at Kerr Street Entrance
Figure 60: New High School Students' entrance with seating slope

Figure 61: Tai Chi centre, looking through orchard

Figure 62: Running Track and bleachers along new pool
6.1 CONCLUSIONS AND FINDINGS

Through a re-evaluation of the specific needs of the community and a commitment to the layering of uses on the land, the traditional neighbourhood park can be transformed into a centre for the community. Through recreation and play, communities can be built and made stronger, and an appropriate landscape structure can be the ideal vehicle with which to achieve this goal.

6.2 FIVE GUIDELINES FOR THE FUTURE

1. create a strong visual character integrated with the surrounding neighbourhood that makes the site legible both from within and without.
2. capitalize on the existing and past landscape to create a unique and spatially differentiated landscape that will engage and inform
3. integrate ecological site functioning into design to reveal ecology and educate users
4. create facilities for the celebration of sport and play
5. program layered spaces for community social events
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please see associated CD for site analysis