

Urban Park Assessment: Inventory/Exploration and Development of
Value Based Landscape Audit Systems

by
Marilyn Gould

A Practicum submitted to the Faculty of Graduate Studies of
The University of Manitoba
In partial fulfillment of the requirements of

MASTER OF LANDSCAPE ARCHITECTURE

Department of Landscape Architecture
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Winnipeg

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FACULTY OF GRADUATE STUDIES

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Abstract

Urban park systems are undeniably a critical part of any urban environment. The physical and mental benefits of social interactions and physical activities in outdoor spaces are well-documented and examined (Jensen, 1995; Kaplan, Kaplan and Ryan, 1998; see also Hanyu, 2000; Hartig and Staats, 2006 & Kaplan and Kaplan, 1989). It is not surprising, then, that the interaction between public accountability, management, maintenance and design need to be effective and efficient. Park audit systems can positively affect these relationships, and because of the connections between on-going audit systems and long-term sustainability, assessments of urban parks are becoming increasingly important in tightening fiscal conditions. Theories regarding visual preferences and landscape assessment have been developed to explore why individuals or societies as a whole tend to select certain visual scenes for tourism, recreation and mental restoration. By exploring these theories; the prospect-refuge theory (Appleton, 1975), the human habitat theory (Kaplan, Kaplan & Ryan, 1982) and cross-cultural preference variations (Dearden and Sadler, 1989), an understanding has been built regarding the broad values preferred by individuals of landscape scenes. The intention of this research has been to make connections between these underlying theories, urban park design, and urban park assessment. The development of the Blended Audit System (BAS) is the culmination of this research, incorporating many of these theories and relationships in the form of the BAS. The BAS is specifically tailored to the City of Saskatoon park system; however, it has also been developed to establish the fundamental components and assessment approaches that may be applicable in varying contexts and scales.

Acknowledgements

This is work that I am proud of, and I have many people to thank for their support in achieving this. I would like to acknowledge the valuable insights from my interview participants; Wayne Briant, City of Saskatoon Parks Branch, Gordon Forsyth, Gordon Forsyth & Associates; Campbell Patterson, Stantec Consulting, and Llyod Isaak, Meewasin Valley Authority. The support I received from Rob Crosby and Arnie Theissen of Crosby Hanna & Associates was much appreciated and I am glad I gave something to help Arnie combat insomnia whilst recovering from illness. I also wish to acknowledge the dedicated and extremely patient assistance from each of my committee members; Professor Alan Tate with the University of Manitoba, Professor Karen Wilson-Baptist with the University of Manitoba and Bill Kalyn, former City of Saskatoon Parks Branch Manager. The countless hours they spent with me and my research was profoundly appreciated, and I believe the final product would not have been complete without each of their expert opinions and comments.

Helpful and frequent discussions with my friends, classmates and co-workers are also appreciated and provided much needed feedback while I was clarifying theories and developing drafts. My professor in Recreation Studies, Dr. Kelly McKay, piqued my interest in the connection between urban parks and tourism. Amanda Lang and Shannon Baxter took the brunt of the consuming theoretical visual preference discussions and Matt Dersken and Jay Hallett provided excellent time management support, although each in a very different way. Evan Hunter, M.Arch., listened intently to my frequent ramblings on all topics and continued to speak to me anyway, and for that I thank him. My support staff, although poorly paid and otherwise known as my family, was dedicated, patient and supportive throughout the entire process and it would not be complete without them. This research began with a process that intrigued me, and because of the support and enthusiasm of my committee, family and friends, this research is finishing with a process that I still find intriguing.

I dedicate this research to my family; Mick
and Marg Gould, Janice, Bryan, Scott and
Teagan Craig and last but not least, my little
big brother Brian Gould.
You are stuck with me for a while now.

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Introduction

This practicum is not intended to answer questions such as “why do people value urban parks?” and “what aspects of urban parks do people value and why?”. There are perhaps no finite answers to these questions, but there are numerous theories and applicable thought processes. This research has been conducted to illustrate various issues prevalent in urban park design and management and the implications of these issues on urban park assessment. These issues include the importance of management and maintenance within urban parks and the relationship between design, management and public accountability. The similarities of urban parks to tourist destinations and the subsequent transfer of knowledge and theories from the realm of tourism studies to landscape value assignment and ultimately urban park audit systems has also been an exploration of this practicum. This research also presents a range of visual preference theories and landscape quality assessment theories, providing a theoretical basis on which to situate the importance of urban park audit systems. Additionally, these investigations have allowed for the development a Blended Audit System (BAS) for the city of Saskatoon, SK that has its theoretical roots situated between the objective North American park assessment systems such as the Parks Inventory and Condition Audit (PICA) and the subjective and socially-based assessment systems of the United Kingdom including the Green Flag Award. In conclusion, this research has been conducted to demonstrate a possible practical application of the information and theoretical ideals of public accountability, visual preference and landscape value assignment as they relate to landscape architecture.

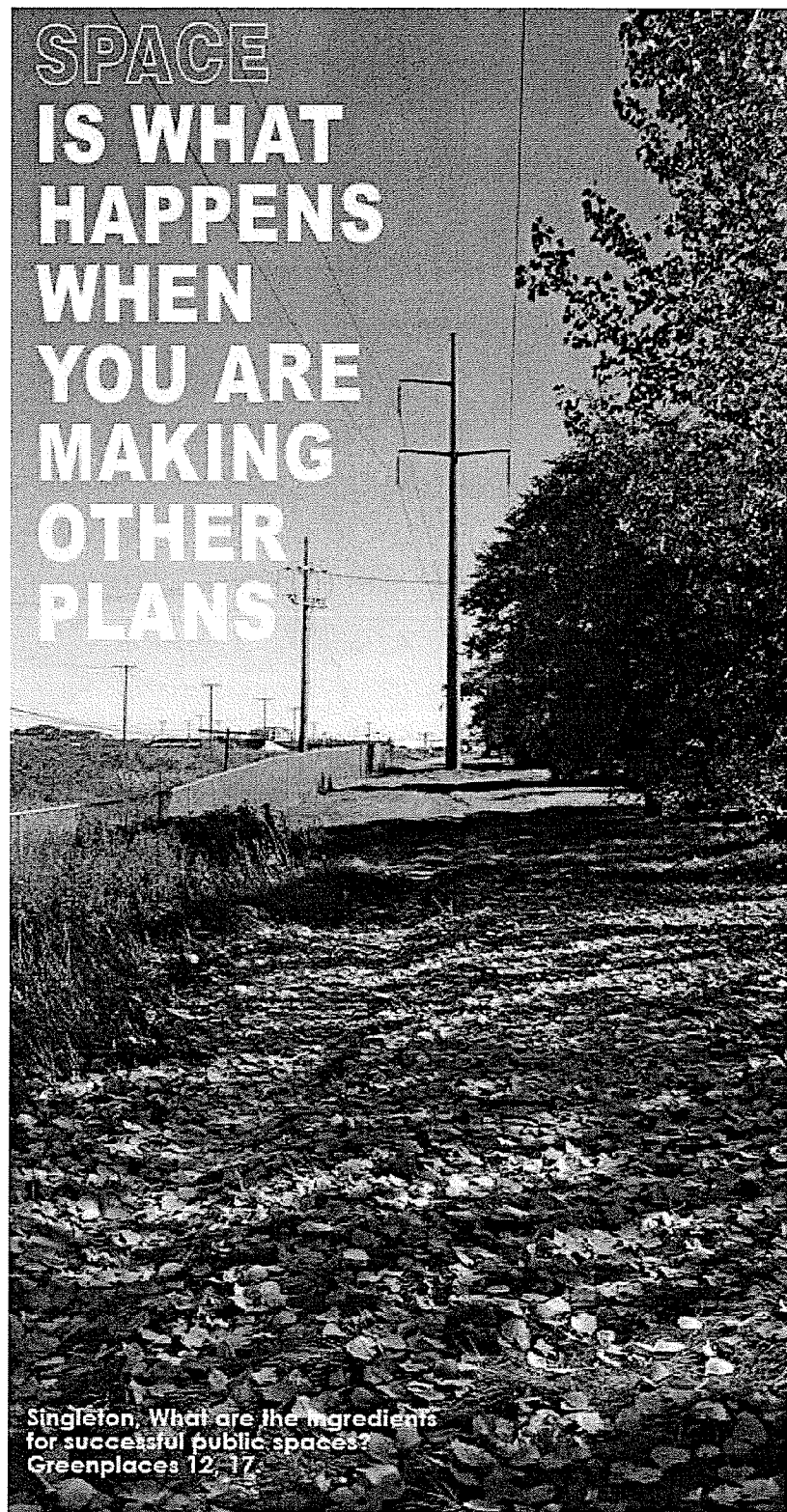


Figure 1. Saskatoon; Henry Kelsey Park.

Chapter One: Urban Park Management

Urban park management plays a significant role in the design, development and daily operation of public green spaces. It also has considerable influence on the evaluation of parks for the purpose of allocating funding. A well-managed park may attract a greater number of users and special programming and events such as public festivals. A clear understanding by designers of the role of management and maintenance in public space development will benefit not only the working relationship between designers and managers, but has the potential to lead indirectly to urban park spaces that are fiscally sustainable and publicly valued. McAnespie (2006, p.18) states; “the quality, satisfaction with, and usage of a site is dependent on the inputs of design, management and maintenance”.

Zanin, dos Santos and Henke-Oliveira (2005) state that urban parks have been considered a public utility, and therefore, are treated as such in regard to design and management. This implies that many of the challenges of acknowledging the ecological importance of urban parks are related to the financial limitations of the public realm and the absence of management plans and ecological policies. Nonetheless, they argue that in recent years, urban parks have begun to have a “more expressive” (p. 647) meaning. This implies that urban parks are beginning to gain recognition as ecosystems, storm water drainage systems, microclimate regulators, noise buffering sites, recreational and cultural sites. These changes in the valued aspects of the urban park have direct implications on the design, maintenance, and management of these parks. Zanin, dos Santos and Henke-Oliveira (2005) also discuss the importance of ecological classification and zoning in relation to urban park space, urban park assessment and urban park management; a research area that they claim is currently underdeveloped. A description of their assessment work is set out and discussed further in Chapter Five.

Issues of park management in relation to urban park funding influencing design have also been discussed by Tate (2006, p. 20); “The modernist mantra that ‘form should follow function’ has given way to recognition that, in the case of urban parks, form generally follows funding”. The “form” of a park does not relate solely to the design and

layout of a public green space; Tate's (2006) statement indicates implications of funding and political decisions for the design, developmental and managerial aspects relating to environmental, cultural and recreational components of an urban green space. Each of these elements plays an important and interactive role, and their individual effects on public green spaces and urban parks can not be separated out from one another (see Figure 2). This notion becomes readily apparent when public accountability studies are conducted regarding park and open space funding and funding allocation; as undertaken by the Urban Green Spaces Taskforce regarding the parks and open spaces of Greater London (CABE Space, 2006). This taskforce highlighted declines in funding as a major reason for park and open space condition and usage declines. When combined with the design intention, management coordination and practices, maintenance and reinvestment issues as highlighted by the CABE Space organization in 2006, this indicates the dynamic connections between management, design and public accountability.

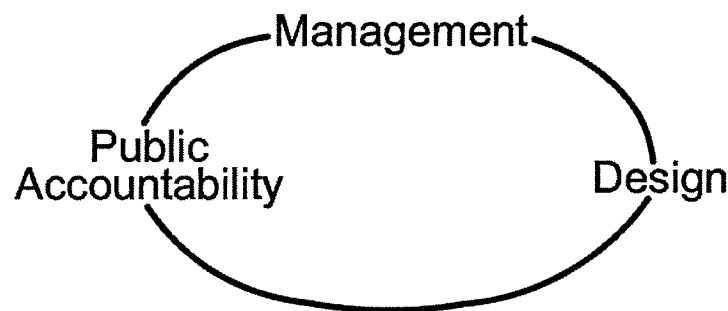


Figure 2. Relationship matrix of public accountability, management and design.

The Relationship between Management, Maintenance and Design

An idealistic relationship between management, maintenance and design has been articulated by Funnell (1992), a landscape architecture and management consultant:

"If the reward from design is creating something new, personal and unique, then that from management must be in guiding natural processes of change towards specific goals....Management is in many ways a closer and longer-term relationship with land and landscape. Hard landscape and earth modeling often give the designer a sense of

fulfillment through achieving compelling and fundamental change. Soft landscape takes time to establish and is forever changing. Without management geared to specific ends, the design objectives, including the intended character, use or function of a place, will not be achieved" (p.35).

Funnell is speaking specifically of the manager and designer roles within the United Kingdom. A main discussion point of this 1992 article is that the line between landscape architect and manager is blurred. Each profession works and makes decisions within the realm of the other. Funnell supports this blurring of responsibilities and boundaries, but suggests that the players must understand and respect the role of each other in order to create a lasting landscape design that is true to its design intentions and continues to satisfy user demands.

Opportunities for Improved Communication

In order to understand and respect each other, management and design professions must communicate effectively. It seems the most obvious and beneficial time to ensure this communication is functioning is at the beginning of any park development process. Internationally, landscape architecture firms are beginning to employ people with a wide range of expertise and interests. This wider spectrum of knowledge has the potential to include individuals with public space management experience. As indicated in Chapter Five, in the case of the Saskatoon Park Inventory and Condition Audit, one of the lead developers was previously an urban parks manager. This knowledge and practical experience played a key role during the audit development and could be of great value during landscape design; not only for public spaces but also for private developments. While design is not often directly relatable to public accountability, the management decisions are; therefore, when a stronger link between management and design exists, the relationship between design and public accountability is positively affected.

Public accountability and maintenance

A discussion of urban park accountability is grounded with the user of the public spaces. It is the users that are ultimately the benefactors of public accountability and the regulatory and budgetary outcomes of this bureaucratic process. Therefore, understanding the users of an urban park system through levels of public accountability is important in determining the opportunities of urban spaces for those user groups.

Urban park users can be broadly divided into two main categories; usage by local residents and usage by tourists (either domestic or international). There are many divisions within each of these categories, which increases the range of user groups to which public decision makers are accountable. Public accountability is described by Dowdle (2006) as being a form of bureaucratized accountability; that is, the accountability of a governing group to a public body depends on the bureaucratic environment. This, in most cases, is a stable environment, with predictable trends and cycles. Problems begin to arise with this form of public accountability when technology and innovations advance quicker than the stable bureaucratic environment. This creates what Dowdle (2006) refers to as “fragmented public accountability”. To situate this discussion within urban park assessment, this fragmentation can occur when the method of a park inventory system, such as the Green Flag Award or the Saskatoon Parks and Inventory and Condition Audit, advances dramatically and becomes more efficient and comprehensive. The public accountability held by the governing bodies of the city park system, in the form of budgetary predictions and restrictions, then becomes inadequate. A disconnect forms between the fiscal commitment now reportedly required to keep the parks at an acceptable level of functionality and the current financial provisions. Ultimately, however, audit and inventory systems are an important form of public accountability. Audits are also methods of measuring the value of parks and park elements in ways that allow for competition and subsequent justification for public funding.



Figure 3. Saskatoon; Pierre Radisson Park.

Chapter Two: Urban Park Design and Links to Tourism

Urban parks play an important role in the daily lives of urban dwellers. In addition to the environmental benefits that urban pockets of greenery can provide (Zanin, dos Santos and Henke-Oliveira, 2005), parks provide sites for recreation, leisure and sport activities. They can also act as social spaces; creating informal community centres that serve a range of demographics. Most often urban parks are associated with outdoor recreation, which provides a host of benefits, ranging from improving personal health to reducing antisocial behaviours and providing personal and community satisfaction and education (Jensen, 2006). However, parks are also seen as places of refuge from a complicated and busy world. It is the latter that most intimately connects urban park design with the realm of tourism and tourism site design. A visit to an urban park has been compared by Tate (personal communication, 19 Feb 2007) to taking a vacation from one's daily routine. It seems relevant then, to examine urban park design and the potential for integrating tourist sensibilities into the design of urban parks and ultimately into the assessment of urban parks. For the purposes of this paper, this link will be established by examining and comparing the recreational experiences themselves and the objectives for both recreational and tourism activities and exploring the commonalities among "successful" tourism sites.

Recreation versus Tourism: Objectives and Experiences

There are similarities and connections between the user objectives and experiences of tourism activities and recreational activities. Researchers have struggled with defining the nature of both leisure and tourism experiences and their relationship to each other. Mannell and Iso-Ahola (1987) ask "Are tourist experiences just a subset of leisure experiences, subject to the same explanatory and descriptive models? Are different needs satisfied by tourist involvements compared to other leisure involvements?" (p. 315). Mannell and Iso-Ahola (1987) indicate that these questions can partially be answered by applying various psychological research techniques, but ultimately it is still very unclear "when and under what conditions tourist experience

becomes leisure experience”(p. 329). However, a way of exploring these questions may be to look at the general objectives for recreational and tourism activities. Jensen (1995) states that the five common objectives of outdoor recreation are: appreciation of nature, personal satisfaction and enjoyment, physiological fitness, positive behaviour patterns and stewardship. One exploration of tourism objectives is presented by Cohen (1979), and investigates possible general objectives of tourism based on “modes of touristic experiences” (p.183), ranging from merely pleasure to the quest for one’s “centre”. These five objectives presented by Cohen (1979) are: pleasure, escape from routine, experience of authenticity elsewhere, undefined search for alternate spiritual centre and finally the defined search for an alternate personal centre. The language used differs between Jensen’s (1995) and Cohen’s (1979) work, but indirect connections can be seen. Jensen’s work loosely addresses seeking out one’s personal “centre” via increasing one’s appreciation of nature, improving one’s personal satisfaction, fitness and behaviour patterns, while Cohen directly relates tourism objectives to the idea of pilgrimage and searching for one’s “centre”.

Many of the experiential classification similarities are related to Clawson and Knetsch’s (1966) outdoor recreational discussion that suggested a series of separate phases of the outdoor recreational experience. This framework has been expanded and explored further in regard to outdoor recreation, but also has been extrapolated and successfully applied to other fields; including consumerism and tourism. Jensen’s (2006) interpretation of Clawson and Knetsch’s (1966) phases for outdoor recreation include four major phases: anticipation, planning, participation and recollection. However, when the framework is expanded to the tourism industry, Pearce (2005) notes five extended phases that are associated with tourism experiences: anticipation, travel, on-site experience, return travel and extended recall. Selby (2004) also presents a series of phases developed by Gunn that are related to this basic framework: destination image phases that trace the formation of destination images for urban tourist locations. These seven phases include: accumulation, modification, decision, travel, participation, return travel and new accumulation. For the purposes of this research, the phases will not be

intimately explored and defined, but it is interesting to note the differences between the experiential phases and the extent to which urban park users fit into both models. The outdoor recreational experience (Jensen, 1995, 2006) separates out the planning of and the anticipation of a recreational event; however, the tourism experience groups these phases into the anticipation stage. Conversely, the Pearce's (2005) and Gunn's (see Selby, 2004) tourism phases place more emphasis on the travel and return travel surrounding the event; the outdoor recreational phases presented by Jensen (2006) place these within the participation phase. All three models, however, acknowledge recollection as an independent phase; an important point when considering the physical and social elements of an urban park that could be included within a potential urban park assessment.

Is an urban park user an outdoor recreation seeker or a tourist?

Looking at the recreational experience, Jensen (2006) defines three major categories of outdoor recreation: resource-oriented, intermediate and user-oriented. Resource-oriented recreation depends on and occurs in conjunction with natural resources. This form of recreation includes activities such as hunting, fishing, biking and boating. Intermediate recreation relies on both natural resources and human infrastructure or programming, which could include downhill skiing, camping, picnicking and swimming. User-oriented recreation is infrastructure and programming-based and occurs in developed areas. Often the natural resources are the "backdrop" (p. 11) of the activities. This type of recreation includes athletic sport fields, outdoor performance spaces, playgrounds, golf, amusement parks and swimming pools. It seems highly appropriate, based on these definitions, that urban parks are situated within this user-oriented recreational type. In regard to the tourist experience, Pearce (2005) very clearly notes that these five phases are related not only to the conventional "tourist", but also to "tourist-facility users from the local region" (p. 5). Urban park users, therefore, can be associated with both the tourist experience and the outdoor recreation experience.

Implications for this research

In summary, the outdoor recreation phases emphasized the anticipation and planning of an event; the tourism phases separated out the phases of travel to a greater degree. Both placed importance on the final stage, recollection. Instead of focusing on the differences between the experiential models of outdoor recreation and tourism, specifically the anticipation and travel phases, this research will explore areas related to the phases common to both recreation and tourism; anticipation, participation and recollection. These experiential phases are directly influenced by urban park management, design and visual and environmental assessment. Part of the intention of this research is to explore ways that these phases can be incorporated into urban park audit systems.

Urban Parks as Vacationscapes

Gunn (1997) coined the term “vacationscape” as a way to give weight to the physical locations and importance to the land on which tourism takes place. Although there are many important factors of tourism - including accommodation, transportation, recreation and marketing - Gunn observed that the land on which these existed was not studied and recorded as an entity in itself. For this reason, he developed a classification of attractions and a series of commonalities that he found to be present in “successful” attractions.

Attraction Classification

Gunn (1997) has classified tourism destinations into two major groups; touring circuit attractions and longer-stay attractions. Touring circuit attractions are brief stopping points within a larger trip. The visitor does not have the time to stay and explore for extended periods of time due to schedule restraints. Some touring circuit attractions include: roadside scenic areas, homes of friends or relatives, unusual institutions, shrines and cultural places, food and entertainment places and historic buildings and sites. The longer-stay attractions are locations that a visitor may visit repeatedly and for longer

during a trip. These include: resorts, camping areas, convention and trade centres, festivals, events and event places, science and technology centres and theme parks. Each of these has differing resources and design requirements that are associated with the length of users' visits.

If utilizing Gunn's classification of tourist destinations (1997), urban parks could fit into either category. Most commonly, urban parks are utilized by visitors as a brief stop in their day, but urban parks can also be (or be transformed into) festival, event and meeting sites (see Figure 4), which may entice the visitor to stay and explore the park in more depth.

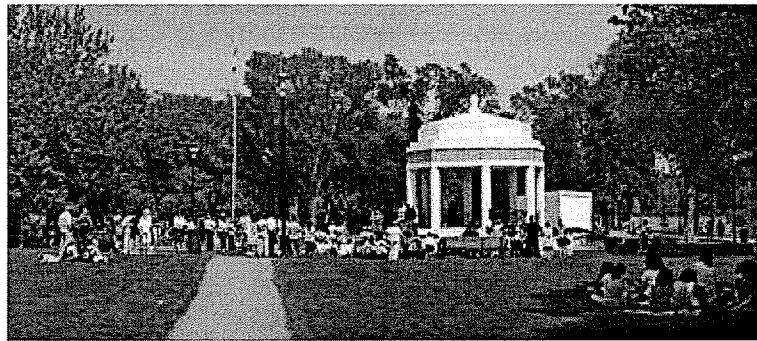


Figure 4. Kiwanis Memorial Park, Saskatoon; Urban parks can be designed to support festivals, gatherings and individual recreational needs.

Urban parks are also sites that are explored repeatedly by local users; this suggests a functional and visual diversity that may not be required for other green spaces, such as roadside picnic spots. The spectrum of uses that an urban park can have makes it difficult to classify urban parks as either short-term or long-term visitor attractions and therefore, design, development and management can be affected. Gunn (1997) noted this difficulty for tourist attractions as well; "the abundance and diversity of travel attractions seem to defy description and certainly complicate their design and development" (p. 47). The hierarchy of classifications, either formally recognized as in the case of Saskatoon city park system or informally recognized as in the case of tourist attractions, also has implications within assessment system development (see Chapter Five).

Attraction Commonalities

Gunn (1997) recognizes six common features that are necessary for attraction renovation or establishment. In no particular ranking:

- 1) easy comprehensibility (common traits),
- 2) basis in environment,
- 3) owner control,
- 4) magnetism,
- 5) capacity to satisfy, and
- 6) result of creation.

Easy comprehensibility refers to the information that an attraction offers a visitor. This can be in the form of visual comprehensibility of the site itself, the composition and legibility of the information featured on interpretative signage or the level of personal instruction provided for featured activities. Gunn (1997) stresses that there is a balance of information that must be maintained to prevent under or over-stimulation. Although he does not explicitly discuss guidelines that prevent over or under-stimulation, bringing awareness to the designer may be sufficient. This feature is a common trait of many tourist attractions; theme parks being one example. Although there is a profuse amount of information being directed to the visitors, and this can lead to a visually complicated scene, there are often common patterns for displaying information. This could relate to the type of benches, on-site lighting, pathway construction, and planting configurations (see Figure 5). The ease of comprehensibility of an urban park or an urban park system can include similar common patterns and can exist on several levels and be a dominant feature of a site.

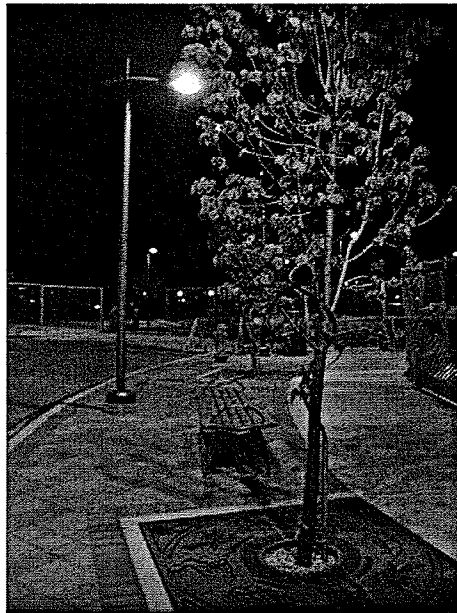


Figure 5. Distinct elements common to a specific park or urban area such as lighting, benches or tree grates provide a layer of comprehensibility that users can readily identify; as shown in this Saskatoon riverbank development.

Basis in the environment refers to the context in which the attraction is set, and how well that attraction responds to the specificities of the context. This term can also be regarded as how well the attraction is intimately linked to the *genius loci*, or spirit of the place. Treib (1995) describes Alexander Pope's interpretation of *genius loci* as "the garden revealed the particularities of its place as well as the profundity of the garden's idea" (p.92). Attractions that respond appropriately to their social, cultural and physical settings are inclined to be more successful. Treib (1995) points out that creating "basis in environment" is not merely acknowledging the past or the elements that used to be on site, but carefully situating "historical nods" within the current context. He uses the example of an urban park being planted with native prairie species. Taken out of its original context and without the proper education, an urban prairie site intervention may be seen as a neglected site, rather than a carefully planned and managed intervention (see Figure 6).

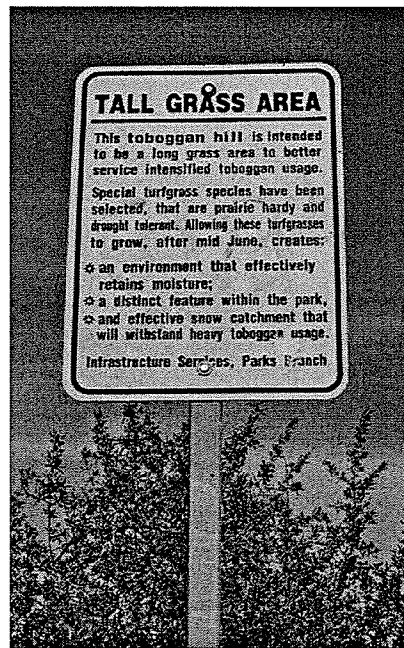


Figure 6. Lakewood Park, Saskatoon. Natural areas often must be accompanied with interpretative signage to ensure public awareness and acceptance of naturalized areas.

Magnetism is briefly explored by Gunn as an attraction commonality that exists in the eyes of the visitor and as a “product of design, development and management of an attraction” (p. 52). This feature is the most difficult of Gunn’s features to discuss in relation to a specific example. The personal preferences and experiences that influence one’s perception of what is “magnetic” can vary greatly. Intuitively it seems more likely that a destination, such as in the case of an entire city, may possess a combination of qualities that can increase its “magnetism” to numerous demographics. A site, however, such as an urban park within a city, may not appeal as strongly to the same breadth of demographics; ultimately a reduction in scale (of programming, recreational opportunities and/or size) will reduce the likelihood of an urban park being classified as “magnetic”. That being said, “magnetic” urban parks do exist within urban environments (see Figure 7).

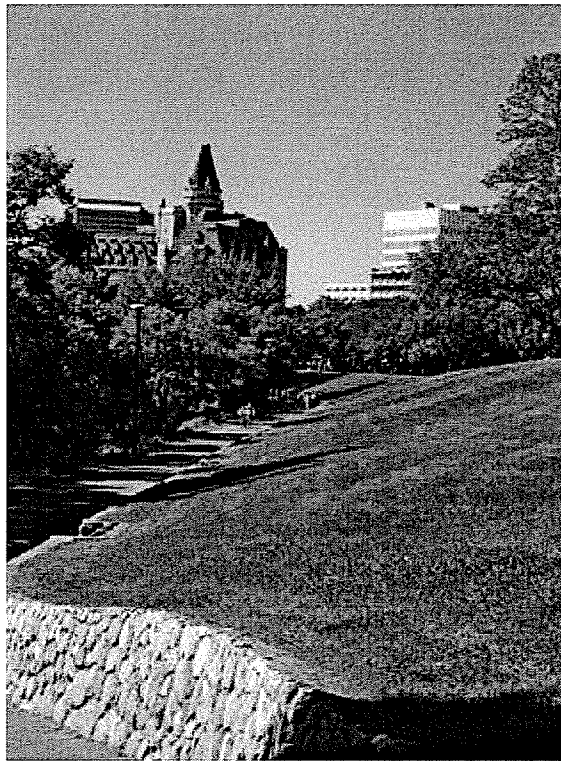


Figure 7. Kiwanis Memorial Park; inarguably one of the most “magnetic” urban parks in Saskatoon.

Owner control refers to the ownership and management of a site by an individual or group; either public or private. Gunn stresses the importance of effective management by owners, but also the crucial role of planners and designers in mitigating the owner’s needs and desires, visitor interests and environmental assets. Jane Jacobs (1992) explored a concept similar to this: the common issue of parks that had been created and designed in a “die-stamped” manner for “die-stamped functions”. Planners and designers have the opportunity and responsibilities to ensure that their design decisions express the interests of not only the owner, but also the potential users and surrounding context. In the case of urban parks, most often the owner, the city, also is directly linked to management decisions, but as discussed in Chapter One, is held directly publicly accountable for all its management decisions and indirectly accountable for the design and development

decisions. The ramifications of this accountability can affect programming and budgetary decisions, therefore having a direct impact on the level of potential park usage.

Gunn hypothesizes that a site must have a *capacity to satisfy* the visitor; a factor that occurs when the market segment targeted is thoroughly understood and provided for. Jacobs (1992) declared that the adoration of neighbourhood parks is due partly to the diversity of the surrounding neighbourhood and the ability of the park's design to accommodate the diverse cultures, functions and activities. This factor may be difficult to achieve for urban parks because of the wide range of individuals and social groups that they serve. Target marketing can be done to some extent, based on a park's urban surroundings, but it remains imperative that urban parks are accessible to the public in its entirety. One target group can not be single-mindedly favored at the expense of another; this can become a fine balancing act when resources and space are limited (see Figure 8).



Figure 8. Princess Street Gardens, Edinburgh, UK; it is especially critical for urban areas with limited space to allow for accommodation of several user groups. (Photo by Evan Hunter - used with permission).

The final factor, the *result of creation*, speaks to the responsibility that designers and operators of tourist attractions have to maintain the resources that are in some way connected to the attraction. Gunn uses the example of natural resource attractions being built on and ultimately degrading the natural resource that was the purpose of the

attraction initially. In the case of the Meewasin River Valley Authority in Saskatoon, Saskatchewan, the South Saskatchewan River and its surrounding natural environments is the keystone of the parks situated along the river and its natural environments (see Figure 9). Gunn (1997) does not directly relate these six common features to any theoretical frameworks or models, but relationships can be found among these features and various other visual preference model systems (see Chapter Five).

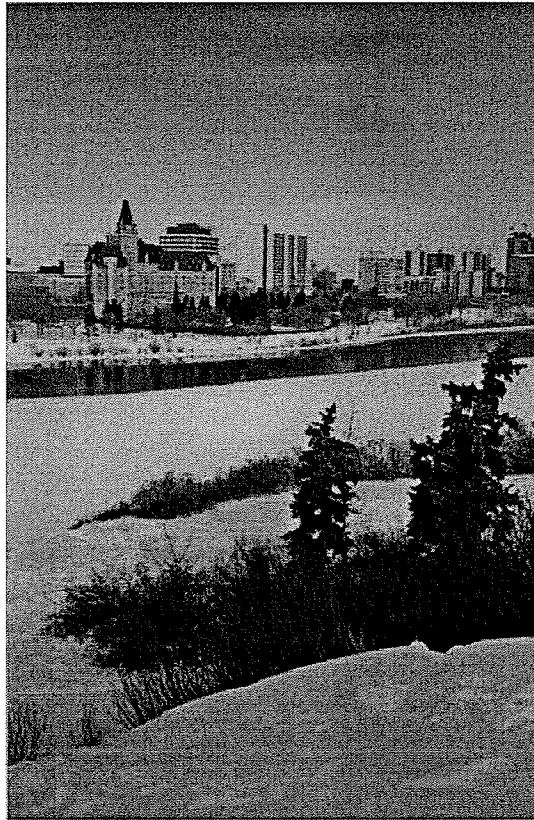


Figure 9. Cosmopolitan Park, Saskatoon. A large portion of park area within the city is associated with the South Saskatchewan River.

These six common features of a successful tourist attraction are similar to Oriens' Habitat Theory as discussed by Tveit, Ode and Fry (2006), which is constructed with nine visual concepts (see Chapter Three). The Habitat Theory is situated within the visual preference and prediction body of research and is also discussed in further detail in Chapter Three.

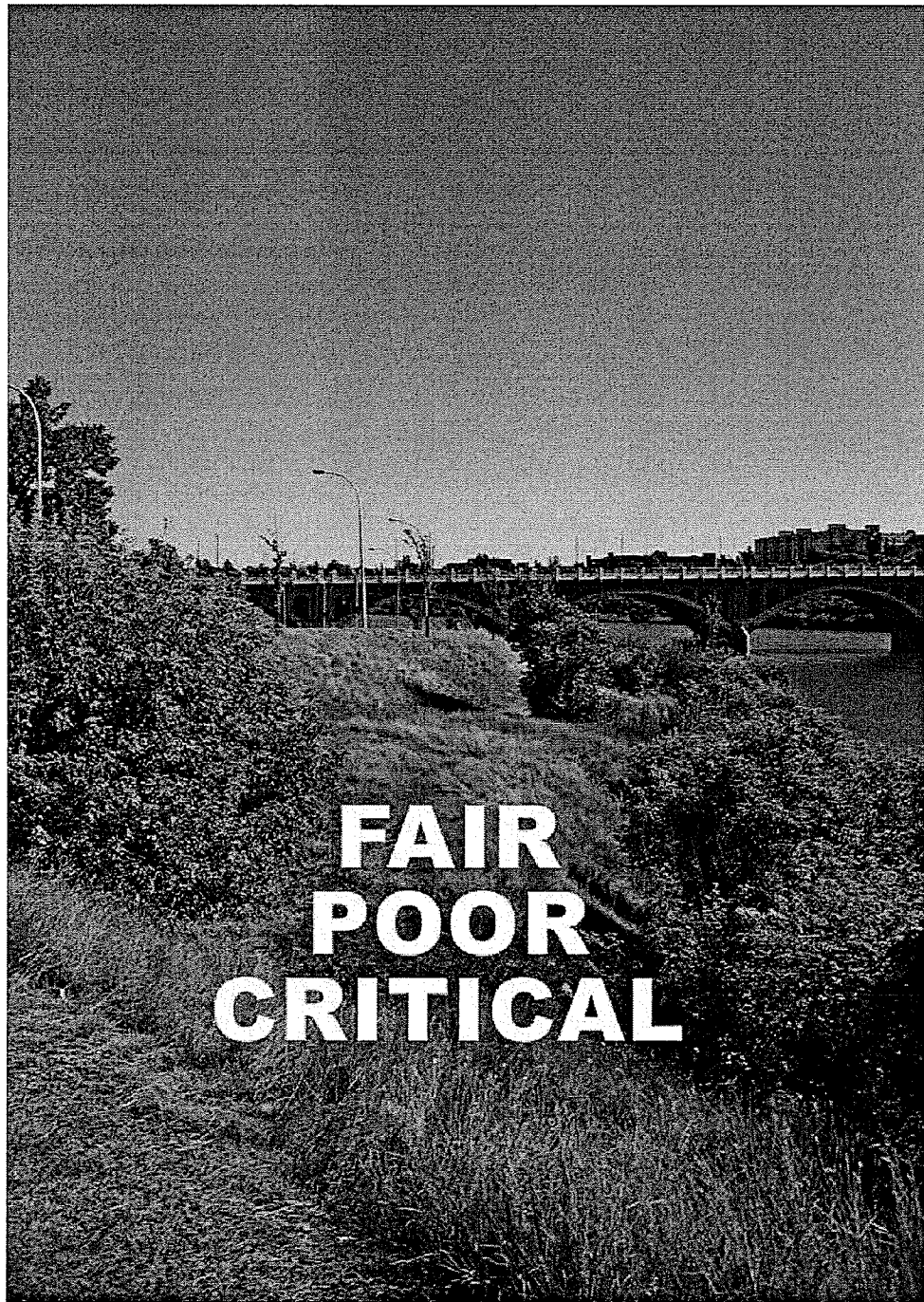


Figure 10. Saskatoon; Kiwanis Memorial Park.

Chapter Three: Visual Preference and Landscape Quality Assessment

Connections to Leisure, Recreation and Social Psychology

In 1980, Neulinger situated leisure and recreation within social psychology by examining the then-current topics of research within social psychology; group structure and dynamics, competition and achievement motivation, socialization, the environment, and culture. Each of these topics can be linked to leisure and recreation and Neulinger (1980) argues that this indicates a link to the research body of social psychology. The objectives of leisure and recreation, therefore, according to Neulinger (1980), have secure grounding within the realm of that discipline. Perhaps not surprisingly, the basic trends of the five aforementioned topics can be picked up within Jensen's (1995, 2006) five main objectives of outdoor recreation: appreciation of nature, personal satisfaction and enjoyment, physiological fitness, positive behavioural patterns and stewardship. The link between social psychology and leisure and recreation activities is significant because research in social psychology allows for further understanding of not only the motivations and objectives behind leisure and recreational activities, but it may also provide insights into why certain venues for leisure and recreation are more popular than others. Visual desirability and preference prediction research are two topics that have validity within social psychology, landscape architecture and leisure and recreational research.

Visual Preference and Environmental Assessment Theoretical Frameworks

The discussion of management and design decisions based on management practices or possible recreational motivations that shape urban park systems, leads to a discussion of the value that society places on urban parks. More specifically, what visual aspects of a park or public space are deemed valuable and why? Visual desirability and its components are areas in which a considerable amount of research has been conducted by researchers such as Bernáldez, Gallardo and Abelló (1987), Kaplan and Kaplan (1982 and 1989), Schroeder (1987), and Tveit, Ode and Fry (2006).

Landscape quality assessment and visual preferences are two of the aspects of public spaces that have the potential to influence societal value. By studying various landscape quality assessment frameworks, visual preferences and trends in visual preferences reveal themselves. These preferences give glimpses into the values placed on the physical attributes and the psychological attributes of the landscape by the global population and why those values have developed. There are opportunities to acknowledge a wide range of social and physical open space attributes within urban park audit systems.

It has been hypothesized that environmental and scenic preferences reflect objective goals such as environmental functionality and safety; it has also been hypothesized that these preferences reflect subjective qualities such as individual preferences. Lothian (1999) declares that landscape quality assessment is contradictory within its development and testing; with both subjective and objective paradigms being utilized in landscape quality assessment. Lothian (1999) believes that the paradox of landscape assessment develops from each of the underlying principles of the contrasting methodologies; one assumes that beauty is inherent within the physical attributes of a site, the other believes landscape quality is a human construct. Dearden and Sadler (1989) clearly differentiate between the methodologies:

An objectivist stand predisposes methodology toward concentration on landscape - beauty is inherent in object and the goal, therefore, is to assess these objects - a subjectivist stand leans heavily towards examination of individual preference, beauty being in the eye of the beholder (p.41).

Using the methodologist terminology, the objectivist stance includes theories such as Appleton's (1975) prospect-refuge theory and Kaplan, Kaplan and Ryan's (1982) information processing theory. These two widely known theories hypothesize that certain landscape attributes are more valuable than the other for biological survival and the cognitive processing of such attributes is inherently linked to the physical conditions of the site. Numerous conceptual frameworks have been developed and visual concepts linked with indicators have been presented utilizing the basic concepts presented in both

the prospect-refuge theory and the information processing theory (Bernáldez, Gallardo and Abelló, 1987; Tveit, Ode and Fry, 2006; Hagerhall, 2000, 2001; Herzog, 1989, 2005; Hagerhall, Purcell and Taylor, 2004). The subjectivist paradigm includes cultural, art and personal experiences as influences on visual preference. Personal experiences also include exploration and familiarity. Lothian (1999) further differentiates the objectivist paradigms from the subjectivist paradigms of landscape quality assessment. The objectivist, or physical methodology, regards landscape value as an intrinsic notion; the value of the landscape is inherent in the physical properties of the landscape. The subjectivist, or psychological paradigm, is summarized as landscape quality being derived “from the interpretation by the mind behind the eyes” (p. 178).

Nested Hierarchy

Dearden (from Dearden and Sadler, 1989) has presented a nested hierarchy (see Figure 11) of societal landscape preferences that illustrates the various objective and subjective influences of visual preference rating. He notes that this nested hierarchy presents a set of variables, but that each of these variables is not more important than any other. He also states that each variable does not influence preference more than any other variable, but they can interact in numerous ways. These caveats do seem somewhat contradictory to the concept of a “nested hierarchy”, which in itself implies a system of placing relative importance on each component of the hierarchy. Nonetheless the variables presented by Dearden (1989) do provide a comprehensive overall framework in which to situate most, if not all, visual preference and visual prediction research.

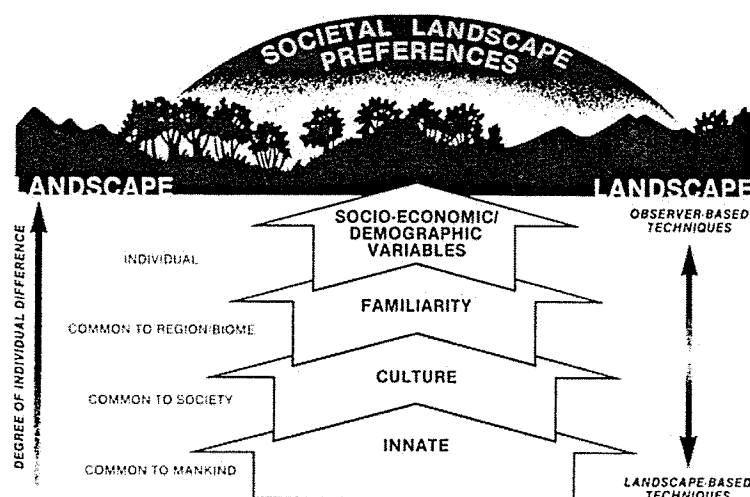


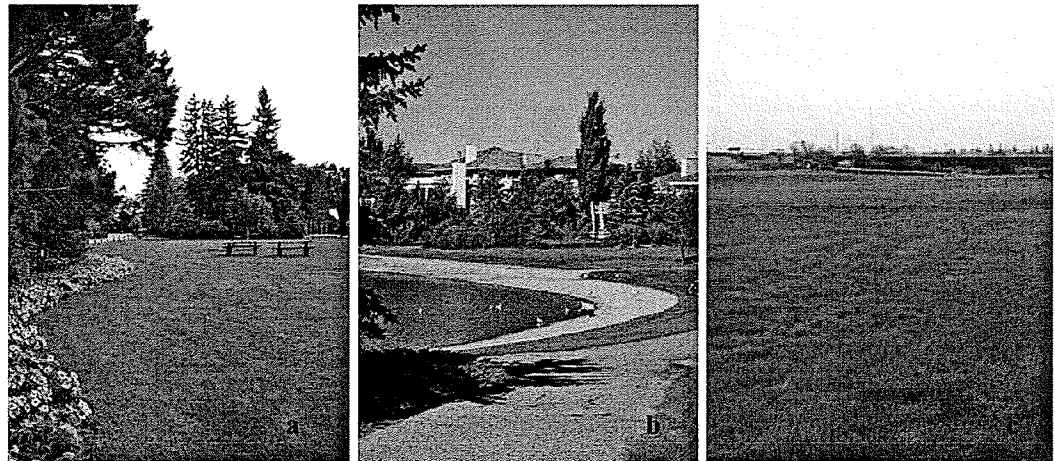
Figure 11. Dearden's (1989) nested hierarchy of societal landscape preferences. (Used with written permission of the author).

In the following text a discussion of theoretical frameworks, predictor variables and variations of value assignment will be discussed and compared and it should be noted that each of these will (in some capacity) fit within this nested hierarchy, which allows for both objectivist and subjectivist methodologies.

Prospect-refuge theory

The prospect-refuge theory (Appleton, 1975; see Table 2), supports the notion that the visually-preferred landscapes are favored based on their conditions that are beneficial for human or animal biological survival. Hagerhall (2000) concisely summarizes Appleton's prospect-refuge theory as: 'Appleton (1975) argued that the ability to see (prospect) without being seen (refuge) was an intermediate step in the satisfaction of biological needs, and that an environment that seemed to ensure the fulfillment of those needs would be a source of immediate aesthetic satisfaction' (p. 83). Appleton (1975) relates the sub-conscious method of aesthetic approval of a site by a human to that of an animal being wary of its immediate surroundings until the conditions for protecting itself from danger have been achieved. Those ideal conditions include, as mentioned previously, the ability to see without being seen. He situates this theory within the habitat theory, which states that "aesthetic pleasure in landscape derives from the observer

experiencing an environment favourable to the satisfaction of his biological needs” (p. 73). The prospect-refuge potential of a site is seen as meeting certain biological needs, such as food, water and shelter (see Figures 12a, b & c).



Figures 12a, b & c. In assessing for prospect-refuge potential, scenes “a” and “b” may hold the most opportunity; scene “c” has limited potential for “refuge”.

Objectifying this theory, according to Appleton (1975) is possible to a degree. He states that objects or groups of objects possess quantifiable symbolism that allows for meaningful assessment of an object’s value as a refuge or a prospect symbol. It is cautioned that this symbolism and the associated terminology is discipline-oriented, and existing frameworks directed towards geography, biology, sociology, planning and architecture are equally valid. This symbolic framework is presented by Appleton as merely one of many functioning theoretical concepts.

Information processing theory

The ability to process landscapes visually and draw conclusions regarding the relative security and optimum survival conditions has also been theorized by Kaplan and Kaplan (1989) to be a genetically-inherent ability that is present as an evolutionary trait in human kind. This notion, the information-processing theory, implies that all humans have a selection of commonly-favored landscape characteristics for which they visually evaluate (Tveit, Ode and Fry, 2006; see Table 2). These environmental preferences have been linked with four informational factors: coherence, complexity, legibility and

mystery (Kaplan and Kaplan, 1982). Coherence and complexity relate to the present or immediate processing of the visual scene that one is presented with, while the legibility and mystery of a scene relate to the future or longer term potential for the user as they process the visual scene (see Table 1 and Figures 13a, b and c). Each of these components can be present in any one scene in a variety of combinations; complex and coherent, legible with elements of mystery, coherent and mysterious, etc.

Table 1. Kaplan & Kaplan's (1982) preference framework (p.81).

	Making Sense	Involvement
Present or immediate	Coherence	Complexity
Future or promised	Legibility	Mystery



Figures 13 a, b & c. The information-processing theory (Kaplan & Kaplan, 1982) implies that each of these scenes are processed by the viewer in regard to immediate or future potential to fulfill biological needs.

Hagerhall, Purcell and Taylor (2004) acknowledge the extensive research that has taken place in the field of visual desirability and possible motivations for visual preferences, but point out that the actual physical attributes identified are not clear. They feel that the descriptions of physical attributes such as “natural” may be interpreted differently between individuals. While it may be an obvious comparison between a purely urban scene and a purely natural scene, this comparison begins to become blurred as man-made and natural elements begin to coexist. They propose an empirical method of analyzing the silhouette outline of a scene that may allow for connections between a horizon and the description of “naturalness”. Within this research, a significant

relationship was found between the fractal dimension and the preference of a scene. This may indicate that analysis of horizon fractal dimensions (discontinuous nature of the horizon) may have the ability to provide an explanation of the consistent preference for natural elements.

Cross-cultural studies often demonstrate that, while there may be differences, the degree of acceptance of a scene between locals and tourists or people of varying ethnicities or cultures, often the most preferred or least preferred visual scenes or sites are common for the majority of participants (Kaplan, 1989, 1998; Hagerhall, Purcell and Taylor, 2004; Hull and Revell, 1989; Wong and Domroes, 2005; see also; Evenson, Sarmiento, Macon, Tawney and Ammerman, 2002; Wilbur, Chandler, Dancy, Choi, and Plonczynski, 2002).

Further Explorations of Cognitive Processing

Herzog (1989) tested the efficacy of the information processing theory (Kaplan and Kaplan, 1982) by conducting an analysis of the environmental preferences that focused on cognitive processes that are important to evolving beings. The two primary cognitive processes that are stated to be linked in environmental preference are understanding and exploration.

Exploration is a pronounced component of the prospect-refuge theory. Exploration allows for an increased awareness of one's surroundings which can lead to valuable awareness of both prospect and refuge situations. Several researchers have placed weight for visual scene selection with the possibility of exploration of a visual scene (Appleton, 1975; Bernáldez, Gallardo and Abelló, 1987; Hanyu, 2000; Kaplan and Kaplan, 1982; Tveit, Ode and Fry, 2006). Bernáldez, Gallardo, and Abelló (1987) support this theory by hypothesizing that some aspects of children's landscape preferences are related to perceived security and exploration possibilities of the site. This study also suggested that the factors that were described as frightening by younger children are seen as more exciting and mysterious by older children and therefore less frightening, deeming certain visual scenes more appealing to older children than younger children.

Human Habitat Theory

Nine visual concepts put forth by Tveit, Ode and Fry (2006) suggest that there are growing trends in current research of visual landscape preferences that provide guidelines for preference ratings (see Table 2). These concepts are:

- 1) stewardship
- 2) coherence
- 3) disturbance
- 4) historicity
- 5) visual scale
- 6) imageability
- 7) complexity
- 8) naturalness
- 9) ephemera.

Each visual concept is discussed in relation to a hierarchy of abstractness that can be used to determine its presence in a scene; ranging from concept to physical attributes to indicators of its presence. Tveit, Ode and Fry situated each of these nine visual concepts within the context of pastoral field sites in the U.K. as a function of the research direction. For the purpose of this work, the discussions of the concepts are directed toward the attributes that relate to urban park sites.

1) *Stewardship* can be described as the caring for a site and the environment in which it exists. Evidence of stewardship indicates that human intervention has been initiated to maintain or establish a certain level of upkeep. Stewardship can be discussed in ecological terms (Scarfo, 1988) or in terms of the intended use or programming of a site (Tveit, Ode and Fry, 2006). In the case of visual assessments of urban parks, general formal upkeep such as maintained pathways, mowing, clipped hedges and other indications of human interventions to prevent disrepair, are considered forms of stewardship (see Figure 14). The human habitat theory developed by Oriens and discussed by Tveit, Ode and Ryan (2006) argues that visible cues of management, such as mowing, infrastructure upkeep and cleanliness, contribute to visual quality ratings. Indicators of the presence of stewardship within an urban park setting include: the

infrastructure within the site and adjoining sites being in good repair, regular mowing, maintained pathways and the absence of litter or vandalism.



Figure 14. Graffiti “tags” are seen as indicators of less-frequent surveillance and possibly less-frequent stewardship; these conditions may dissuade visitors from exploring or stopping at this site.

2) *Coherence* is visually represented by the presence of discernible patterns and unity. This concept may also represent the dialogue between the current intention for the site and the surrounding context. The landscape attributes that can be looked at for indications of this quality include; land use, water and land (and vegetation) patterns. Indicators of coherence range from the presence and condition of water features, repeating colours, patterns and textures, and current layout and site programming in relation to usage patterns and trends (Tveit, Ode and Fry, 2006).

3) *Disturbance* is related to the coherence of a site; this term refers to the “lack of contextual fit and coherence” (p. 240, Tveit, Ode and Fry, 2006). This concept can be represented in landscape attributes such as the presence of man-made objects or natural phenomena of disproportionate scale compared to their surroundings. Buildings, towers, freeways, fires and floods are examples of visual indicators of disturbance (Tveit, Ode and Fry, 2006) that may be present in or adjacent to urban parks.

4) *Historicity* includes the concepts of historical continuity and historical richness of a site. A sense of meaning within the past and present may be attached by users which in turn may lead to a more favorable visual assessment of a site that exhibits historicity.

Physical landscape attributes of historicity are related to the presence or absence of historical layers, tradition and culture. Indicators in an urban park scene may include aged historical elements (see Figure 15), traditional land patterns, design and vegetation (Tveit, Ode and Fry, 2006).

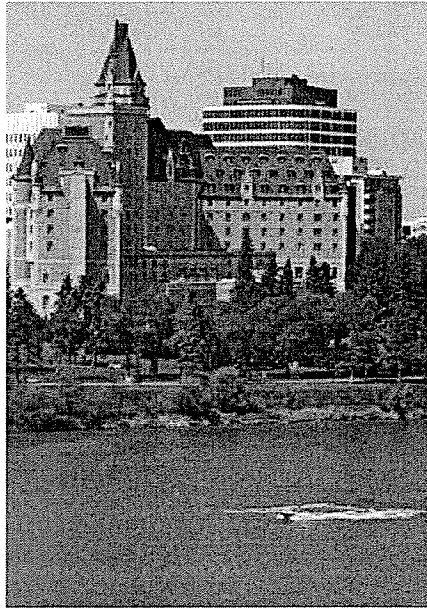


Figure 15. The presence of the Bessborough Hotel and the adjacent park which was developed in conjunction with the hotel, Kiwanis Memorial Park, indicate historical layers within Saskatoon.

5) *Visual scale* has links to the evolutionary theory of prospect-refuge (Appleton, 1975) because scale relates directly to line of sight and the viewable areas of a site. Landscape attributes such as vegetation, topography and man made infrastructure have much to do with a scene's visual scale. Obstructing obstacles and objects that are disproportionate to their surroundings can increase the sense of exploration or mystery (Tveit, Ode and Fry, 2006).

6) *Imageability* has much to do with creating memorable landscapes. This concept relates to the genius loci or the spirit of the place. Landscape attributes that this concept includes are landmarks, panoramic views and iconic elements. Indicators of imageability

inherently include landmarks such as the presence of historic elements, water bodies and discernible land use patterns (Tveit, Ode and Fry, 2006).

7) *Complexity* is a common term in visual preference studies. Complexity refers to the range of assortment and richness of physical elements of a scene (Kaplan and Kaplan, 1989). Generally, the landscape attributes that relate to complexity include land form, land cover (refer to Figure 16) and infrastructure. Indicators of complexity range from diversity of infrastructure to land use divisions to flora diversity indices (Tveit, Ode and Fry, 2006).



Figure 16. Vegetative complexity of the parks adjacent to the South Saskatchewan River have the potential to increase visual preferences.

8) *Naturalness* defined by Tveit, Ode and Fry (2006) refers to the “closeness to a preconceived natural state” (p. 244). In this sense, the landscape attributes that may be indicators of naturalness include any natural feature, such as vegetation, water bodies or topographical formations. The indicators may be vegetative indices that focus on intact vegetative cover, edge conditions, and present state of vegetative population, or may involve the health and present conditions of the water bodies present and the undisturbed condition of the topographical attributes (Tveit, Ode and Fry, 2006). Hartig and Staats (2006) are two of many researchers who have presented further research that indicates

that visual preference studies predominantly show preference for natural, open landscapes over “urban, dry, or enclosed” landscapes.

9) *Ephemeria*, or time variability, focuses on the natural elements that fluctuate with season and weather (refer to Figure 17). Landscape attributes therefore include any biological elements in the scene and land use patterns and programming usages.

Indicators include seasonal change of vegetation, water, animals and the visitor usage and activities (Tveit, Ode and Fry, 2006).



**Figure 17. Heritage Park, Saskatoon, SK;
Designing parks for winter usage and winter
maintenance techniques is important in
prairie climates.**

Variations in Value Assignment

The effects of one's culture, familiarity, previous experiences and general demographic traits has not been overlooked in the growing body of visual preference and prediction studies. Several research projects have found some variation in preference that may correlate with subjective factors such as art, culture and personal experiences. Tveit, Ode and Fry (2006) state that

“All human beings enter the world with a specific genetic make-up, but the genetically based preferences are, however, challenged and changed

by cultural influences and experience, such that landscape preferences reflect a combination of the forces of nature and culture” (p. 232).

It has become a mainstream concept that one's visual landscape preferences and value placements are in some way dependent on inherent tendencies as well as cultural and experiential influences. Hagerhall (2001) stresses the importance of exploring the variability of visual landscape preference. Without fitting explanations of the differences into theory or without a systematic practical approach to exploring these variations, Hagerhall (2001) feels that all information on preferences will be deemed untrustworthy. Therefore, empirical studies that focus on “within-landscape variability” (p. 83) have the potential to strengthen landscape perception theory.

Cultural Influences

Dearden and Sadler (1989) support the notion that cultural and artistic forces have influenced human perception of landscape “aesthetics” (the term “aesthetic” as used here, referring to the visual component of a scene). They approach the prediction of visual preference research, through a geographer's sentiments, with the research question ‘why is this place more appealing than that place?’ (p. 34). They propose five traditions of the visual aesthetic that may allow for some insights into this research question (see Table 2):

- 1) rational
- 2) picturesque
- 3) sublime
- 4) realist
- 5) surrealist

These traditions are seen as distinct and have existed separately throughout history to influence and guide the cultural and artistic preferences of society. These notions are not foreign to landscape architecture and design; *picturesque* scenes and *sublime* landscapes are highly-sought-after notions that were coined as a result of the Industrial Revolution and the emergence of the newly wealthy. Designers and theorists such as Edmund Burke, ‘Capability’ Brown, Humphry Repton and John Nash, were key

players in the exploration and establishment of *picturesque* and *sublime* within landscape architecture and garden design terminology (Tate, 2000).

The *rational* tradition, according to Dearden and Sadler (1989) is said to have led to the notions of symmetry, hierarchy and utility as preferred visual elements; the *picturesque* tradition was deeply influenced by the literate bourgeoisies and they founded the quest for a natural but imaginative landscape. The *sublime* tradition pushed forward the concept of human frailty and the raw power of nature, the *realist* tradition, situated within the arts and crafts movement, reinforced regionalism, utility and “new naturalism”. Finally, the *surrealist* tradition aims to broaden the emotional response one has to one’s surroundings, ranging from the fantastic to the grotesque. Each of these traditions, combined with experiential influences or on their own, has the capability to influence an individual’s or a segment of society’s visual preferences and visual information processing capacities.

Table 2. Summaries and comparisons of major visual preference and environmental assessment theories.

Theory or Theory Group	Reason for Visual Assessment of Scene	Factors/ Elements Influencing Preference Rating of Scene	Mode of Determination
Prospect Refuge; <i>Appleton, 1975</i>	Can the scene meet the biological needs of the viewer?	Food Water Prospect (to see) Refuge (without being seen)	Genetically inherent.
Information Processing; <i>Kaplan & Kaplan, 1982</i>	Can the scene meet the short term or long term biological needs of the viewer?	Coherence Complexity Legibility Mystery	Genetic inheritance towards informational processing of scenes.
Human Habitat; <i>Tveit, Ode & Fry, 2006</i>	Can the scene meet the biological, social and experiential needs and desires of the viewer?	Stewardship Coherence Disturbance Historicity Visual Scale Imageability Complexity Naturalness Ephemera	Genetic inheritance and experiential history allows for informational processing of scenes.
Visual Aesthetic Traditions; <i>Dearden & Sadler, 1989</i>	Is this scene appealing?	Rational tradition Picturesque tradition Sublime Tradition Realist Tradition Surrealist Tradition	Cultural influences affect informational processing tendencies.

Familiarity

Familiarity within the visual assessment research field can refer to familiarity with a specific scene, or familiarity with a type that is presented. Specific site familiarity was used in the case of Hartig and Staats (2006) to assess the restorative benefits of urban green spaces. It is believed that feelings of familiarity with a specific location or type can, to a certain point, induce stronger reactions; the viewer's cognitive processes are simplified in the processing of familiar scenes. This simplification of processing, however, implies that the mind does not process information it does not need to. In that way, familiarity can lower preference ratings if the viewer has negative associations with that particular scene or the 'typology' (type of scene) or if the viewer feels that an alternate scenario is of higher value (Kaplan and Kaplan, 1982). The Kaplans note that curiosity and mystery, discussed in Table 1, are important elements in the determination of preference. Hanyu (2000) also links familiarity with reduced curiosity by stating that familiarity is positively related to disorder and is considered to reduce arousal, or curiosity. Kaplan and Kaplan (1982) also note the notion of familiarity as 'typology' in the work done in Woodcock's 1982 study of biome preference which presented the hypothesis that the savanna environment was the most aesthetically (in the visual sense) preferred, due to the positive associations with the prospect-refuge theory.

Possible Urban Park User Motives & Assessment Implications
Landscapes for Recovery from Attentional Fatigue

Attentional fatigue is a common state in today's world because of the high levels and extended durations of information overload that occur daily. "Getting away from it all" is a universal sentiment in both travel and leisure motivation, as humans attempt to seek refuge from the overbearing amount of stimulation they continually receive. Traveling provides one form of respite, but leisure and recreational activities within one's daily life have the potential to provide a significant reduction in mental fatigue (Kaplan, Kaplan and Ryan, 1998). Kaplan, Kaplan and Ryan (1998) quoted Martin J Rosen, the president of the Trust for Public Land who eloquently stated:

It is not just sensational or extraordinary landscapes - the Yosemite and Grand Canyons - that deserve respect and protection. We recognize the importance of ordinary, close at hand landscapes. The pond in your local neighbourhood may not be as famous as Walden Pond, or your local waterfall may not be Niagara Falls, but these places nourish us on a daily basis (p.X).

The *psychological distance* or mental distraction required by a mentally-nourishing site depends, according to Kaplan and Kaplan (1989), on three major components:

- 1) extent
- 2) fascination
- 3) compatibility

Areas of limited *scope or extent* are believed to be less restorative than scenes that provide a more complete scope. This component is quite clearly influenced by personal experience as a complete extent (biologically or socially) for one person may not be considered complete by another (refer to Figure 18).

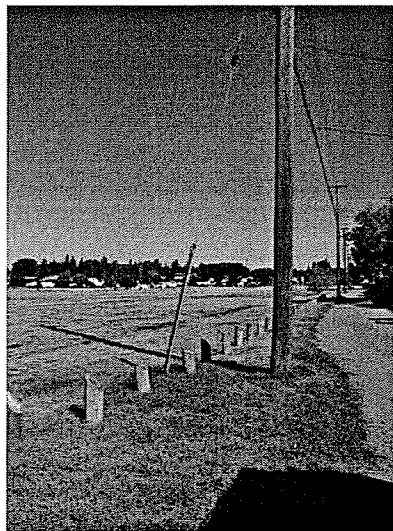


Figure 18. Henry Kelsey Park, Saskatoon. Scenes similar to this one may have less restorative potential partially due to the “limited scope” of biological or social factors.

Fascination, an essential component of attentional fatigue recovery, provides much of the psychological distance from one's regular mental routine (refer to Figure 19). This component does not rely on the physical removal from a person's surroundings, but on the redirection of their mental state. Redirection can be triggered by the processing of the visual scene around them.



Figure 19. Although “fascination” may differ for each viewer, according to Kaplan and Kaplan (1989) it plays a key role in the restorative benefits of a site.

Compatibility refers to the agreeableness between a person's aptitude and the environmental circumstances. Much of a person's mental fatigue develops as a result of information that is incompatible with their daily life (refer to Figure 20) (Kaplan and Kaplan, 1989).



Figure 20. Parks have an ability to reduce mental fatigue, but according to Kaplan and Kaplan (1989), must successfully limit the amount of incompatible information that the user is exposed to; which the above scene may not have successfully done.

These components are the foundation of a conceptual theory otherwise known as Attentional Restoration Theory – ART (Kaplan and Kaplan, 1989). ART has been used to characterize urban environments in their capacity to allow for recovery from mental fatigue (Hartig and Staats, 2006). Participants in a Swedish study indicated that they were more likely to experience attentional fatigue recovery while walking through a natural environment than in an urban environment. This study also indicated that participants felt as though more social interaction would take place with other open spaces users in a natural environment rather than an urban environment. Similar results have been presented utilizing American and European participants (Hartig and Staats, 2006). Kaplan, Kaplan and Ryan (1998) also linked fear and the implications of a lower fear level on visual preferences of restorative scenes. Design implications of ART have been hypothesized by Kaplan, Kaplan and Ryan (1998), largely based on possible design solutions to lowering the level of fear towards a site or a site type. Increasing visual access, enhancing familiarity, increasing signs of human presence, encouraging coherent design elements, including areas of smooth ground and gently increasing the sense of mystery and exploration with depth, pathways and openings are possible design methods proposed by Kaplan, Kaplan and Ryan (1998).

Distinct versus Unique

Berman (2006) discusses the importance of unique and distinct sites in appealing to and attracting tourists. He states that “a site lacking visual distinctness is less likely to attract tourists” (p. 3) and that truly unique sites are becoming rarer. The terms “unique” and “distinct” have notable differences that are critical in a discussion of visual assessment.

Berman (2006) states that distinct is “what is noticed and discernible”. In other words, distinctness relies on the environment being observed, but is also influenced by the sensitivity of the viewer to the attributes. A region or site can be distinct but may still be a common entity. An example of this is the presence of the former Canada Milling Plant within the Toronto Central Waterfront (see Figure 21). This large remnant from the industrial era of the waterfront exists now as a distinct entity and is clearly discernible from the surrounding waterfront condominiums and recreational sites. This type of post-industrial remnant, although it is distinct in this context, is not an uncommon building type or scenario. Numerous other post-industrial sites similar to this one exist within urban and even waterfront areas. However, because it is visually different from its surroundings and this difference is fairly easily discernible by viewers, it is distinct.



Figure 21. Former Canada Milling Plant, Toronto, ON. The old industrial facility is a distinct feature of the Toronto Waterfront.

The term unique has a similar base meaning, but is differentiated from the term distinct because of its relationship to larger spheres of existence. Uniqueness is more closely linked to rarity, but is also strongly linked to an individual’s preferences and experiences. Unique visual characteristics are much more subjective than distinct

characteristics (Berman, 2006). Returning to the example of the Canada Milling Plant on Toronto Central Waterfront, the building itself is distinct in relation to its context, but not unique when compared to larger, more global spheres of existence. However, if the individual visiting the site has no knowledge or experience of other instances of this type of industrial building, then it may seem unique to that individual. Conversely, an individual with knowledge of this type of scenario in other global or national sites or with limited interest in post-industrial architecture will not consider it unique. Level of interest does play into the relative uniqueness of a site. If the Canada Milling Plant was to be converted into a freshwater aquatic research centre, visitors with an interest in freshwater aquatics may value it as a unique facility in relation to the larger global context because the instance of this type of programming being retrofitted within an industrial building is rare.

It is very important to be aware of the goals of a public space in terms of distinctness and uniqueness when developing assessment criteria that will affect maintenance, policy, budget and design. Is it a goal of establishing a neighbourhood park in a neighbourhood to create a distinct space, a globally unique space or either? These two extremes have very different implications. Assessment criteria for a globally unique space are not and should not be directly transferable to a locally distinct but globally common space.

Assessment Implications: Packaging

It is notable that while tourists and visitors do seek a certain level of visual distinctness, numerous attempts to achieve distinctness within one city can lead to confusion and lack of focus. This can be detrimental to tourist and visitor usage in terms of mental fatigue. Urban parks are often intended to reduce these conditions, not add to them. Berman asserts the importance of trying to achieve a “theme” without creating oversimplified and uninspiring sites. “Packaging” sites within one unit by a common factor such as function or cultural importance may be a way to connect sites of varying usage (Berman, 2006). The concept of packaging travel opportunities has existed within the tourism business since the development of traveling caravans consisting of eager

European tourists by Thomas Cook in the late nineteenth century (Berman, 2006; Bulter, 1999; Bohn-Gmelch, 2004). There may also be opportunities to allow for an assessment system to lend itself towards distinct, but unified, public goals that are effectively contained within public park systems. Tangible examples of unified cultural goals that allow for positive social behaviour are allowing for outdoor meeting spaces for locals or providing community garden areas within public park land. Assessment systems could potentially be tailored to promote inclusion of these values within park design, development and maintenance.

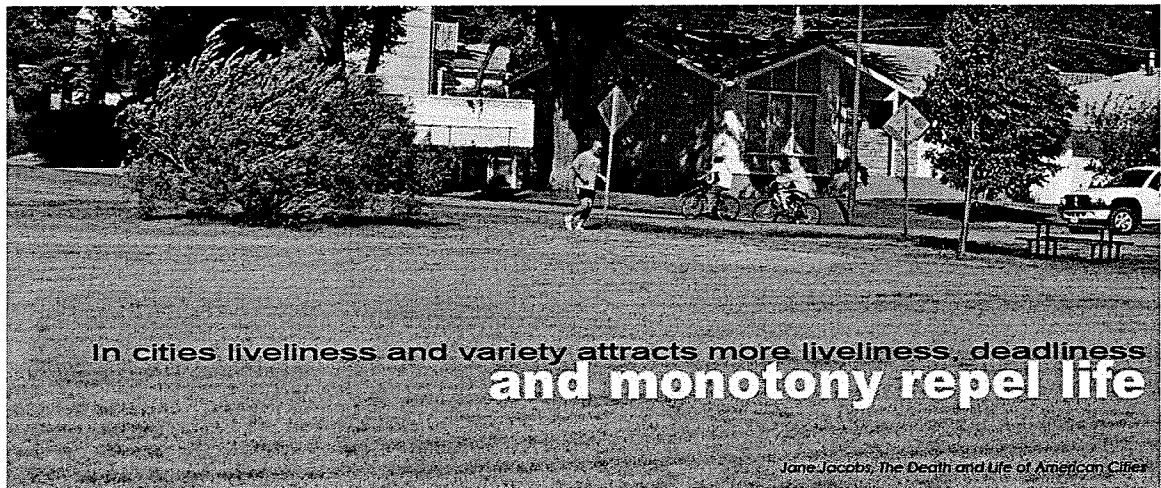


Figure 22. Saskatoon; Scott Park.

Chapter Four: Urban Public Parks Systems: Overviews of Selected Cities

In order for an exploration and analysis of urban park assessment systems to be complete, an understanding of the environment in which the system operates, or is planned to operate, is paramount. No two cities or regions are alike and for this reason, no two audit systems can be identical. An effective audit system must be tailor-made to operate within and for its surroundings. While audit systems can be established to encourage change within park systems at various levels; such change is implemented with the political, fiscal, design and managerial decisions made in response to the findings and determinations of the audit. This change is not encouraged by introducing an audit system that does not 'understand' or respond to its surroundings. The Saskatoon city park system and the United Kingdom national park system and their respective systems can be compared because, whether at a local or national level, each responds to and is created for the environment in which it operates.

Saskatoon City Park System

The Role of City of Saskatoon Parks Branch (COS)

The City of Saskatoon Parks Branch "is responsible for preserving the City of Saskatoon's investment in its civic grounds. This is accomplished through policy development, conceptual planning, design and construction inspection for civic parks and open spaces, as well as project management" (taken from COS park branch website, available at <http://www.saskatoon.ca/org/parks/index.asp>).

Park Hierarchy System

In addition to managing cemeteries and the urban forestry program, the COS Parks Branch is responsible for more than 150 city parks, ranging from neighbourhood, to district, to multi-district, to special use parks encompassing over 730 hectares (1800 acres) (PICA Final Report, 2005). As of 2005 (COS Urban Parks Map) there were 116 neighbourhood parks (including pocket, core and linear parks), 26 district parks, 7 multi-

district parks, 4 industrial parks and 22 special use parks. These numbers do not account for the parks established in new housing developments, which most often incorporate both neighbourhood and district parks. Programming has much to do with the designation of a park; refer to Table 3 for further details.

Table 3. Summary of general purposes, programme elements and anticipated area of usages of the various COS park classifications. Information summarized from COS Park Development Guidelines, 2002.

Park Classification	Purpose/ Programme Elements	Anticipated Area of Usage
Neighbourhood Pocket	Provide green space, passive adult recreation, aesthetic appeal and children's play opportunities	A portion of one (1) neighbourhood
Neighbourhood Core	Provide active and passive recreation needs of catchment populations, including sportsfields for youth and active leisure programs such as spray pads	One (1) neighbourhood; 5000 to 8000 users
Linear	Provide safe and aesthetically pleasing routes through urban environment, conservation of heritage and natural features	Links neighbourhoods/districts
District	Provide active and passive recreation opportunities, supports structured city-wide sports activities and active leisure programs, such as tennis courts	Four (4) or five (5) neighbourhoods
Multi-District	Provide active and passive recreation opportunities, including structured sports at competitive levels, community centres located within park boundaries	Four (4) or five (5) districts
Industrial Park	provides passive recreational opportunities for workers in industrial area, responds to site circumstances	City-wide
Special Use	Provides programming specific to site conditions and demands, less detailed development guidelines than other parks	City-wide

These numerous parks are managed in cooperation between the City of Saskatoon Parks Branch, Facilities Management Branch, Electrical Department and the Water and Engineering Department. Each year, these departments employ numerous seasonal maintenance employees and several full-time permanent managers and maintenance workers as well as several contracted seasonal specialty workers in order to provide the entire range of services that is required to support each park. Regular maintenance employees employed by the Parks Branch are assigned to several parks in an area. These employees are managed by a senior maintenance worker or area manager who is responsible for several parks across a wider area. These managers are accountable to a parks manager, often someone with broad horticultural knowledge and practical experience in parks maintenance. There are also crews of employees who work in a larger range of parks, most often related to specialty trades, such as irrigation, arboriculture, sports fields and pest control. Each of these crews is also accountable to managers within the Parks Department. Ponds, on-site lighting, children's play structures, paddling pools and splash pads, fountains and waterworks, paving and park buildings and structures are all managed and maintained by other departments including Facilities Management, Electrical and Water and Engineering. This complexity of managerial responsibilities can potentially be very cumbersome and inefficient unless effective communication and integrated management plans are practised.

To add to this level of complexity, within the 150 city parks, twelve are also considered the jurisdiction of separate governing body the Meewasin Valley Authority (MVA). Although the MVA managed parks constitute only 8% of the number of Saskatoon parks, their combined area accounts for almost 25% of the total park area in Saskatoon. The extraordinary relationship between the City of Saskatoon and the Meewasin Valley Authority is a critical component of the entire urban park system in the city.

The Role of Meewasin Valley Authority (MVA)

The Meewasin Valley Authority is a governing body for approximately 60km of South Saskatchewan riverbank within the City of Saskatoon and the Rural Municipality

of Corman Park. The authority was legislated into existence in September 1979 in response to recommendations made by a Saskatoon environmental advisory committee in 1970. The MVA directs and closely monitors any and all development within its allocated lands, promotes and directs conservation projects and is responsible for development of extensive public access points, parks and trail systems with the City of Saskatoon (MVA State of the Valley, 2003 and L. Isaak, personal communication, June 19, 2007). The MVA states:

'Meewasin' is the Cree word for beautiful.

The Meewasin Valley Authority is a conservation organization dedicated to conserving the natural and cultural heritage resources of the South Saskatchewan River Valley in Saskatoon, Saskatchewan and area. With the support of the Province of Saskatchewan, the City of Saskatoon and the University of Saskatchewan, Meewasin undertakes programs and projects in river valley education, development and conservation. By creating opportunities for public awareness and enjoyment, Meewasin strives to increase understanding and to ensure a vibrant and healthy river valley (Meewasin Valley Authority, <http://www.meewasin.com/about>).

The 2003 State of the Valley Report discusses the importance of the three major themes of the mission statement; health, balance and vibrancy. 'Health' refers to the state of the habitat within the South Saskatchewan River riverbank system. The presence of flora and fauna species is considered the indicator of the 'health' of the valley. 'Balance' refers to the combination of usage of the valley by humans for cultural events and the usage of the land for natural processes. The goal for the 'balance' component is to have approximately half of the land available for human usage and the other half for natural habitat usage. 'Vibrancy' refers to the amount of green space that is available for passive and active recreational usage, with a variety of trail systems and access points for users (MVA State of the Valley, 2003). Conceptually, there are connections found between these three major themes and the attraction commonalities of tourist attractions (Gunn,

1997) as presented in Chapter Two; basis in environment, owner control, magnetism, capacity to satisfy and result of creation.

Implications of Provincial Governance

The Meewasin Valley Authority has legislative jurisdiction as provided by Statute of Saskatchewan M-11.1, created in 1979 and amended at several points afterwards, the last being in 2004 (Meewasin Valley Authority, 1979). This statute declares the lands of jurisdiction, the powers of the authority, the board structure, the relationship of the MVA with the City of Saskatoon, the acceptance of the MVA development plan, methods of acquisition, expropriation, enforcement and appeal processes. The incorporation of the MVA Act within Provincial Legislation has allowed for a remarkable level of riverbank protection and management that otherwise may not have occurred.

Urban Park Implications of the relationship between COS and MVA

The complex and inter-related web of governance that is responsible for the urban parks in Saskatoon, not surprisingly, impacts their design, development and maintenance. A high level of transparency and communication at all levels of operation is critical to the parks' successful functioning (W. Briant, G. Forsyth, C. Patterson, L. Isaak, personal communication, June 19, 2007). However, it is difficult to analyze accurately possible associations of this complex set of relationships without some form of framework within which to situate implications. By reviewing and comparing the tourism, environmental, cultural, educational and recreational uses of parks, it becomes apparent that this complex relationship can lead to programming and design benefits that may not have existed under the control of only one governing body.

Tourism

Much of the tourist marketing and targeting is related to the South Saskatchewan River. The Meewasin Valley Authority is very active in the promotion of the trails and the riverside natural areas. The City of Saskatoon promotes all city parks as tourist attractions, and is actively involved and responsible for many festivals and events that take place within parks. These include the Jazz Festival, the Taste of Saskatchewan, the

Children's Festival, Ukrainian Day in the Park, Shakespeare on the Saskatchewan, dragon boat races, speed boat races, jet ski competitions and the Saskatchewan marathon¹. The City also promotes the Forestry Farm Park and Zoo, the numerous sporting fields and outdoor pools as tourist attractions. While some of these events do occur in land-locked parks, most of the major festivals and events occur in riverside parks. Meewasin Valley Authority is therefore also attracting visitors to many of the same amenities that the City is promoting, but often for educational or environmentally-related events. This allows for, in some cases, substantially more marketing resources to promote a broader range of tourist usage than if only one regulating body was involved.

Environment

Much of the Meewasin Valley Authority's mandate has to do with conserving and preserving Saskatoon's riparian zones and river valley ecosystems along the South Saskatchewan River. Environmental issues, including those related to the riparian zone, are included to a lesser degree in the City's maintenance program. Although many of the environmental issues are related to the riverbank sites, there is evidence of environmentally-focused programs in the interior parks via the city's 'urban forestry' program and many of the naturalized plantings incorporated into some park designs.

Culture

The planning for and promotion of the cultural amenities of parks is almost exclusively done by the City departments, with both interior parks and riverside parks being considered for cultural programming and design.

Education

The MVA stresses the role of education within their long term vision and day to day functions (*Meewasin Valley 100 Year Plan*, 1975 and L. Isaak, personal communication, June 19, 2007) and the role of education and interpretational elements are evident in the design of the parks (see Figure 23). Although there are some interior parks in which the City has implemented interpretive elements, such as the Forestry Farm

¹ Information from the *City of Saskatoon Tourism* webpage, <http://www.tourismsaskatoon.com/>, accessed May 22, 2007

and the naturalized plantings of Lakewood and Heritage Park, the riverside parks have a much stronger presence of interpretative signage. This is managed separately by MVA.



Figure 23. Interpretative signage and maps are evident throughout the Meewasin Valley parks system.

Recreation

Both the MVA and the City of Saskatoon promote the use of parks for recreational purposes. However, the City has recreational programming as one of its foremost goals. The recreational programming developed by the City includes: sportsfields, pools and splash pads, skateboard and bike parks, walking and biking trails, picnic areas and barbeques, equestrian trails, running and cross country ski trails, mountain biking trails access to the river for powerboating, jet-skiing, paddling routes and competitive rowing (see Figures below).

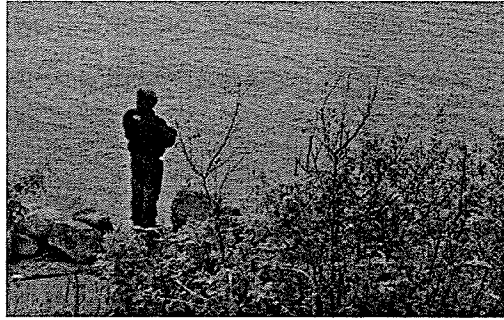


Figure 24. Weir Interpretive Site, Saskatoon. Fishing is permitted and encouraged along the South Saskatchewan banks, although the best spots seem to be off the beaten path.

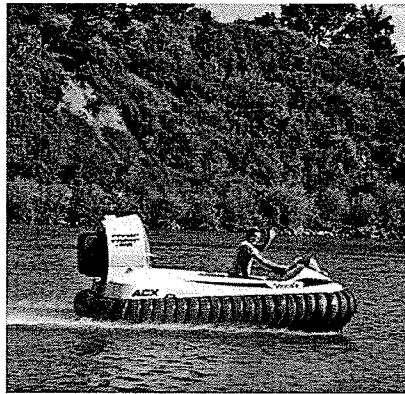


Figure 25. Various types of boating are encouraged on the South Saskatchewan River.

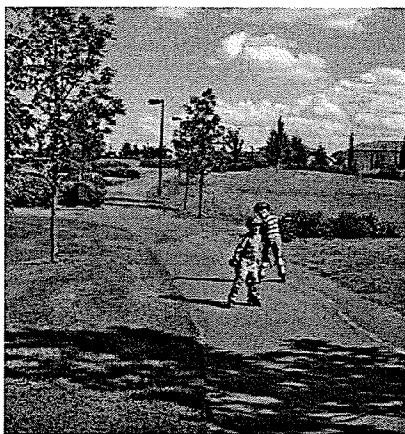


Figure 26. Briarwood Park, Saskatoon. Active recreation such as rollerblading and cycling are integral parts of the park programming.

Drawbacks and Benefits

Inherently, the presence of two governing bodies over parts of one urban park system can have its drawbacks. Problems can arise with design and development if efficient communication is not achieved. But conversely, the end product has the potential to be a more diverse and well-rounded site that can be enjoyed in a variety of different ways by many sectors of society. The intended relationship between MVA and the City of Saskatoon is a symbiotic one; each group complements and strengthens the other. For the most part, this is apparent in the riverside parks of Saskatoon and in the sentiments of both private, COS and MVA designers and managers (W. Briant, G. Forsyth, C. Patterson, L. Isaak, personal communication, June 19, 2007). It also may be the case that the environmental and educational elements provided by the MVA have positively affected the design, programming and management of several interior parks (W. Briant, personal communication, June 19, 2007).

Park and Public Green Space Systems of the United Kingdom**The influences of international and national governance**

The Green Flag system is an initiative that has allowed for the creation of a national database and an effective audit system that can be applied in a variety of cities and a range of urban parks. This broad application of the Green Flag criteria works at a national level because of the manner in which parks are managed across the U.K.. Although each local authority makes its own regulations regarding urban parks, a great amount of detail about how parks are to be developed, designed and maintained is supplied at international and national levels; specifically Agenda 21 as sponsored by the United Nations and Planning Policy Guidance 17 presented by the United Kingdom's Office of the Deputy Prime Minister, now the Communities and Local Government.

Agenda 21

Agenda 21, developed and released by the United Nations Department of Economic and Social Affairs (United Nations, 2005), is a document that promotes the General Assembly resolution 44/228 of 22 December 1989. This resolution addresses current humanitarian, developmental and environmental objectives for the state of the

global community. Agenda 21 promotes “the fulfillment of basic needs, improved standards for all, better protected and managed ecosystems and a safer, more prosperous future”(Agenda 21, Section 1.1) for all individuals. Addressing and improving developmental and environmental concerns are also objectives of Agenda 21, with promotion of broad public participation via non-government organization involvement. The programme of Agenda 21 is intended for use, within the “full respect of the principles contained in the Rio Declaration on Environment and Development” (Agenda 21, Section 1.6) in a variety of different situations and capacities. The Green Flag Awards have embraced these principles and notions. These are evident within some of the major elements of the award criteria including accessibility, sustainability, community involvement and management. These award criteria are discussed in greater detail within Chapter Five.

Planning Policy Guidance 17: Planning for open space, sport and recreation

Planning Policy Guidance 17 (PPG17) was produced in 2002 by the then Office of the Deputy Prime Minister (ODPM), now known as the Department of Communities and Local Government, and “sets out the policies needed to be taken into account by regional planning bodies” (ODPM, 2002). Basic planning objectives set out in PPG17 include supporting attractive, clean and safe urban environments, supporting rural renewal, promotion of social inclusion and community opportunities, health and well being, promoting more sustainable development by ensuring accessible sites and programmes.

PPG17 states that open space and recreational standards are best set by the local governments, and therefore does not govern the local open and recreational spaces, but allows district and community governments to develop and implement their own standards and regulations. However, PPG17 does also state mandatory requirements for standards, including quantitative elements, which outline the quantity of provisions that is needed, qualitative elements, which are used to measure the need for enhancement of facilities, and finally, the accessibility of facilities, which includes distance thresholds and costs of development.

PPG17 also sets out a series of “National Planning Policies” (ODPM, 2002) that outlines a requirement that all local and district councils undertake assessments of the sporting needs for an area, which fit within larger assessments including sports and recreation and assessment systems such as the Green Flag Awards (The Civic Trust, 2007). This ensures, according to PPG17, that the local needs of the communities are known and therefore can be addressed with appropriate development and management strategies (ODPM, 2002). It is not surprising then to note the strong development of organizations, public bodies and documents within the U.K. that research and monitor the design, development and assessment of open spaces including: Edinburgh’s OPENspace research centre (OPENspace website available at: <http://www.openspace.eca.ac.uk/>), the pedestrian demand modeling research by London’s Centre for Advance Spatial Analysis (CASA, 2003) and CABI Space’s 2006 *Urban parks: Do you know what you’re getting for your money?* and numerous other CABI Space publications.

PPG17 also includes documentation regarding recommended audit information, strategies and scoring systems. *Audit information* (Annex D of PPG17, available at: http://www.communities.gov.uk/pub/73/AnnexDAuditInformation_id1144073.pdf) lists suggestions of open space attributes that should be included in audit systems; including location, classification, size, ownership, policies, special features, usage, qualitative elements and management strategies. The major components of the Green Flag Awards also include these, as well as other related attributes. A sample scoring system (Annex C of the PPG17, available at: http://www.communities.gov.uk/pub/69/AnnexBScoreSystem_id1144069.pdf) provides basic descriptions and attribute prioritizing using score assignments that may be incorporated into a larger and more complete audit system. These attributes and descriptions are also reflected in the Green Flag Award major components, as outlined in Chapter Five.

Urban Space Hierarchy Systems: A sample from London

In 1991, Tom Turner, an academic at the University of Greenwich, presented a strategy for open spaces and green chains to the London Planning Advisory Committee that reviewed and provided recommendations for London’s Green Space Strategy

(Turner, 1991). Although it was not adopted, Turner recommended that a new and revised “Green Strategy” be adopted Greater London in lieu of the existing “Abercrombie Plan” that had been developed in 1944 and supported in the 1976 Greater London Development Plan (GLDP). The Abercrombie Plan, as summarized by Turner, consisted of a network of recreational and public open spaces that allowed for pedestrian movement from the perimeter (and Green Belt) to the centre of the city via park and open spaces. The GLDP did not support all of the notions put forth by Abercrombie, including the recommendation for 1.62 ha (4 acres) of open space per 1000 residents or the incorporation of a network of interconnected green spaces, but instead extrapolated the basic notions of park hierarchy: “garden to park, from park to parkway, from parkway to green wedge and from green wedge to Green Belt” (Turner, 1991, section 2.2). This led to the development of the GLDP’s hierarchy of parks (see Table 4) which still forms the basis of London’s park system today. Although the hierarchical system of each local park authority may differ slightly, the Abercrombie Plan was of great significance across the United Kingdom’s park systems and traces of it may still be found in a great number of cities and regions; making it an important influence for the current criteria of park audit systems.

Table 4. Park hierarchy system of the Greater London Development Plan, developed from the basis of the 1944 Abercrombie Plan. (Table modified from Turner, 1991. Available at: < <http://www.landscape.gre.ac.uk/lpac.htm>>).

Park Designation	Size
Metropolitan Parks	60 ha
District Park	20 ha
Local Parks	2 ha
Small Local Parks	>2 ha

General Park Satisfaction: How can audits help?

The City of Saskatoon annually contracts independent research companies to conduct civic surveys (Pulse Research, 2006). These surveys are conducted via telephone over the course of a month and the key issues researched include: quality of life, important core issues for residents and ranking of the core services provided by the City of Saskatoon. Of the core services identified, park access and park maintenance were the

services that related to the topic of urban parks. Interestingly, for the past five years residents of Saskatoon have rated park maintenance higher than park access. However, the survey also indicated that residents feel that the city does not adequately fulfill its park maintenance duties, but more than fulfills its park access duties. The public appears to acknowledge and appreciate the number and location of the urban parks, but feels that maintenance of the parks is more important than the number of parks available.

The Commission for Architecture and the Built Environment (CABE Space, 2006) acknowledges the important role of audit systems in England as a way to define the quality of parks and urban green spaces, but cautions that it is very difficult to set quantifiable and 'objective' standards. Nevertheless, systems such as the Best Value Indicators, the Comprehensive Performance Assessment, user and non-user surveys, PPG17, and the Green Flag Awards are a significant step in this direction (CABE Space, 2006).

Conducting urban park assessments on a regular basis, annually or biannually, has the potential to lessen the disconnect between the level of maintenance required and the level of maintenance currently received as understood by the public in Saskatoon. Public space assessments, whether the focus is pedestrian, cyclist, environmental or parks, are critical for supplying information on which to base financial, design, development and management decisions that meet the current needs and desires of park users.

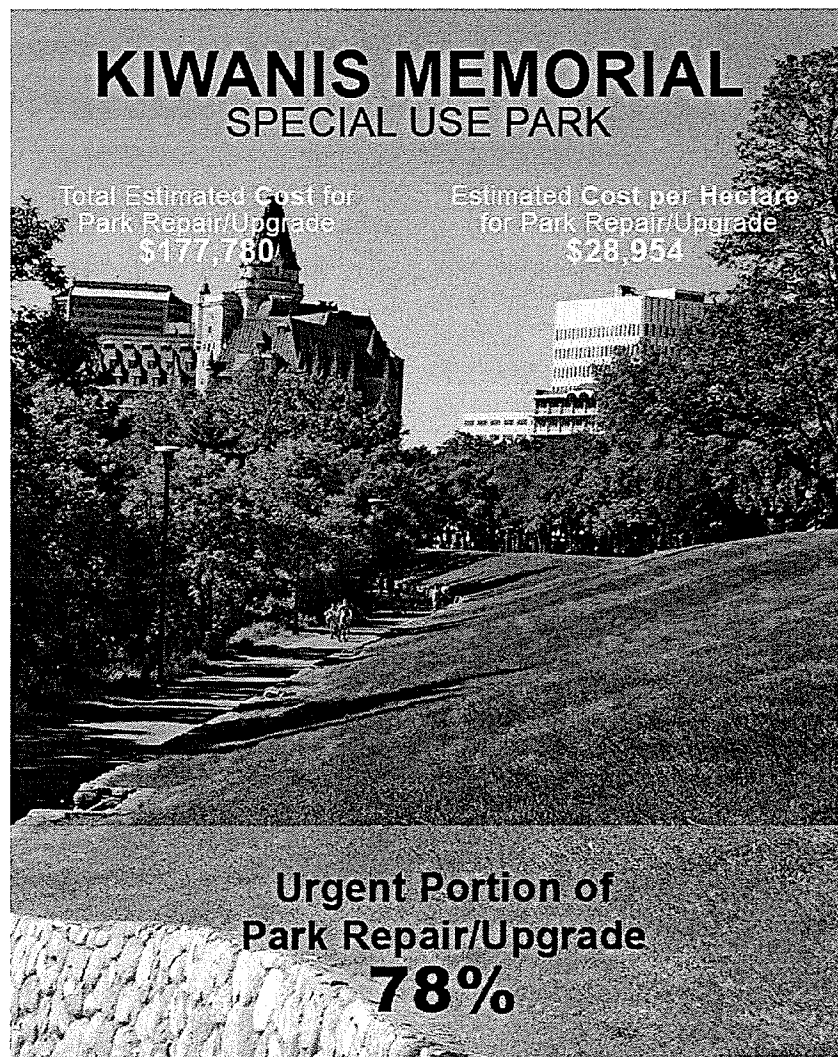


Figure 27. Saskatoon; Kiwanis Memorial Park with PICA repair summary.

Chapter Five: Public Space Rating and Assessment Systems

The development and use of audit systems to establish baseline conditions of existing services for pedestrian, cycling and park levels of service is becoming a common exercise. Established and regular audit systems allow for increased public transparency within the development and maintenance of public services and spaces. Urban park audit systems can be tailored to establish the level of service provided by the urban parks and urban parks system in regard to a variety of issues, including; infrastructure and horticultural conditions (PICA, 2005), pedestrian services (Burden, 2006), cycling services, recreational infrastructure and services, physical activity promotion (Pikora *et al.*, 2002; see also Humpel *et al.*, 2004), physical and social accessibility (The Civic Trust, 2007; see also OPDM, 2002), design influence, financial management, general management practices and maintenance techniques. In regard to the general composition of park audits, Planning Policy Guidance 17 appropriately states:

“Audits should consider both the quantitative and qualitative elements of open space, sports and recreational facilities. Audits of quality will be particularly important as they will allow local authorities to identify potential for increased use through better design, management and maintenance” (OPDM, 2002).

Basic principles of assessment good practices are identifiable within the body of assessment research. The Landscape Institute (2002) outlined basic principles of successful audit systems. These principles include clear methodology, repeatability, the avoidance of generalizations, inclusion of impartiality, presence of advice and opinions of related disciplines, openly acknowledging limitations, and consideration of the worst-case scenarios. The CASA institute (2003) sets out a series of requirements for pedestrian usage and flow models; some of which are transferable to assessment systems. These include the assessment being modeled on the best practice standards, empirically testing the system, allowing the system to be scrutinized and independently verified, allowing the system to be flexible and modifiable based on its surroundings and finally, contriving the system to be applicable at a city-wide scale.

Assessment Systems, Methodologies & Theories

Visual Assessment

The prediction of visual preferences and the establishment of visual indicators and concepts that can be utilized within landscape assessment systems has demonstrated landscape evaluation to be a layered and complex process. Dearden and Sadler (1989) articulate the notion that the response by evaluators within the discipline of geography must be equally layered and receptive to the complex relationships that exist within each system. They outline two major underlying questions of landscape assessment that allow geographers to be highly qualified for landscape assessment. The first issue relates to the “aesthetic intentionality in man’s role in changing the face of the earth” (p. 4). The second matter involves the “ugliness” of suburban and urban areas and the ability of the geographer to deliberately distinguish between “the good, the bad and the ugly” and provide suggestions for criteria requiring “discrimination” (p. 5). In the years since this work, the knowledge set of the landscape architect has expanded these issues outward to also have applicability to a range of landscape architecture-related disciplines: evaluators, managers and designers. A great deal of the theoretical research regarding visual preference has been conducted by landscape architects and landscape managers and discussed in Chapter Three (Dearden and Sadler, 1989; Hanyu, 2000; Lothian, 1999; Tveit, Ode and Fry, 2006; Ulrich, 1986 and Zanin,; and dos Santos & Henke-Oliveira, 2005).

Environmentally-Focused Assessment

The development of systems that can be used to assess the ecological components of an urban park may bring about increased environmental and social benefits of urban parks, green spaces and tree cover. An environmental assessment carried out by Zanin, dos Santos and Henke-Oliveira (2005) includes environmental characteristics, the landscape sub-units, the ecologically important species present and the risks to and threats of the ecological biodiversity. The assessment system in this case relies on a combination of existing maps and aerial photography, biological characteristics, legal and zoning principles and Global Positioning System (GPS) technologies. This assessment

system not only includes the Longines Malinowski Municipal Park, an urban park in Brazil, but also the surrounding area. Recommendations and classifications are made on the basis of the potential for direct or indirect control of public use.

Li and Will (2005) also accept the common view that visual assessment is difficult to conduct and they consequently present a new approach to analyzing views for the purpose of assigning more accurate property values to high density condominiums in Hong Kong. They believe that wrong predictions of views from planned buildings can lead to inappropriate design decisions and price allocations. The system they developed called the “fuzzy logic” system is based on Zaheh’s “fuzzy set theory” and utilizes the major factors they feel affect preferences, data compilation and mathematically based data analysis systems and mapping functions. The factors that they see as major determinants for visual preference are: distance between observers and surrounding buildings, proportions of the built area, green area, sea and sky. They do acknowledge that cultural differences may affect preference also, but do not include these factors within their research set.

Assessment for Physical Activity

Pedestrian audit systems are directly applicable to the development of urban park systems and useful in determining factors that may negatively influence a park visitor to walk and explore urban parks and green spaces. The importance of the pedestrian has been, according to Desyllas, Duxbury, Ward, and Smith (2003), underplayed in the planning, engineering and design of urban environments. They note that part of this undervalued state of pedestrian movement through urban environments has to do with neglect of walking in transport policy and planning. Gemzoe has been quoted by Desyllas, Duxbury, Ward, and Smith (2003) in regard to the state of pedestrian importance in cities:

“ ...there is no city that has a ‘pedestrian department’ recording the numbers, flow and behaviour of people on foot on the same regular basis as traffic departments record the vehicular traffic, so the

pedestrians tend to be invisible in the planning process – because there are (sic) no data about them” (p.2).

Clifton, Smith and Rodriguez (2007) have also recognized the need for reliable audit and assessment systems to collect information regarding pedestrian environments and present a “complete environmental audit methodology” (p. 96). Because of the use of handheld geographic information system (GIS) technology, it is possible to include data that has been collected in the audit area, rather than merely relying on readily available information from secondary sources such as census bureaus. Additionally, official “pedestrian level of service” reports have been published by several large cities, including Perth, London and New York. Notably, these audit systems were tailored to audit urban street environments, and the information collected ranged from larger, city-wide pedestrian network scale to the micro scale including sidewalk conditions. The New York City “Pedestrian Level of Service Study; Phase I” (Burden, 2006) clearly indicates that the purpose of the study was to collect quantitative data as a tool for planners and engineers to analyze the current pedestrian facilities and gauge their effectiveness. This “Phase I” report also notes that it is not the intent of the report to collect or present qualitative data including attractiveness, comfort and safety.

Just as the New York pedestrian study (Burden, 2006) examined readily quantifiable data, so did Pikora *et al.* (2002) in their development of an audit system that measured the physical environment for physical activity. However, in addition to rating elements such as roadway and pathway width and condition, volume of pedestrian/cycling traffic, they also rated and attempted to qualify other factors. These factors include looking at whether routes are adequately lit, have opportunities for passive security or safe pedestrian crossings. They also considered the quality of views, attractiveness of facilities, quality of maintenance and whether or not the area was considered ‘attractive’ for walking and cycling. The purpose of their study, however, was to determine whether consistent opinions were held across varying demographics, rather than attempting to actually assess the factors as systems like PICA and the Green Flag Awards do.

For the purposes of their study, Clifton, Smith and Rodriguez (2007) focused on micro scale data collection due to the increased awareness of these elements when one is walking through an environment. The major informational components of their Pedestrian Environmental Data Scan (PEDS) collected with hand held GIS units and data collection software were:

- 1) land use
- 2) presence and conditions of walking paths
- 3) presence, elements and conditions of vehicle-pedestrian interaction zones
- 4) lighting, views, architecture and enclosures that influence safety and appeal
- 5) subjective determination of safety and visual appeal.

In addition to the informational components of the audit, a major factor that influenced the results of the audit was the experience and training of the auditors. For that reason, the authors commented extensively on their training program for the auditors. PEDS also utilizes global positioning system (GPS) technology to track and record the location where the information is collected. This allows for direct application of the collected information for maintenance and managerial decisions, which is a valuable element of any audit system.

Parks Inventory and Condition Audit - Saskatoon, SK

Overview

The major goal of the Parks Inventory and Condition Audit (PICA) as outlined by the City of Saskatoon (COS) at the initiation of the project is to create a repeatable method of collecting, analyzing and presenting data regarding the COS parks and their current states. The PICA system has been developed specifically to meet these needs. The final report of the inaugural audit completed in 2005 makes a series of recommendations to improve the overall condition of the parks and the parks system as a whole. As an inaugural audit system for the city of Saskatoon, the PICA system provides a solid baseline of information that can now be compared against subsequent audits as they are undertaken. However, no audit system is without weaknesses and a compilation of the

strengths and weaknesses is provided for this and the other featured audit systems of this research within Appendix A.

Major Assessment Components

The major assessed components of the parks include: turf areas, sports fields, pathways, bollards, trees, naturalized areas, shrubs, flowerbeds, and irrigation (PICA, 2005). Please see Appendix A for a detailed account of each assessed component and the terms of measurement.

Turf areas

Within the turf assessment section, there are six sub components that were determined as pertinent to assessment. Eight turf (30 cm X 30 cm) quadrants were evaluated in each park, taking care not to include turf samples from sportsfields (see sportsfields).

- 1) turf condition: number of weeds present in each quadrant
- 2) turf density: thickness of leaf layer and state of thatch layer
- 3) thatch: presence or absence of a healthy thatch layer
- 4) grading: in reference to safety issues or plant growth
- 5) irrigation: problems caused by irrigation system
- 6) turf wear: presence and extent of excess wear patterns (see Figure 28)

Turf condition evaluates the number of weeds present in each quadrant, intuitively, less weeds are better. Turf density rates the thickness of the leaf layer by taking into account the uniformity and density of the grass blades. Thatch refers to the layer of dead grass that has accumulated (or not) on the surface of the soil. Grading issues of the turf areas are categorized as either safety issues or plant growth issues and recorded accordingly. Irrigation turf issues were only recorded if a problem was found including dry or excessively wet areas, damaged or to control boxes, heads or valves. Normal irrigation practices were not examined. Turf wear relates to both pedestrian and vehicular wear patterns caused by excessive use, operation of maintenance vehicles on the turf or unlawful entry into the park with vehicles.



Figure 28. An example of a pedestrian wear pattern in turf.

Sportsfields

The sportsfield rating accounted for soccer pitches, football fields and baseball diamonds. The rating criteria included goal areas, centre fields, skinned infield surfaces, grading and overall turf conditions.

Soccer pitches and football fields:

- 1) goal areas: turf quality (see Figure 29)
- 2) centre field: turf quality
- 3) overall turf: weed density, turf density, thatch
- 4) field problems: ground squirrel damage, irrigation, grading

The turf rating criteria are similar to the general park turf rating criteria - please refer to “Turf Areas”.



Figure 29. Example of PICA “fair” soccer pitch goal turf rating.

Ball Diamonds

- 1) infield condition: layout, weed growth, surfacing material and grading
- 2) outfield turf condition: weed density, turf density, thatch, ground squirrel damage, irrigation and grading

The infield condition rating of a ball diamond relates to, as summarized above, both infield and outfield conditions. The type of infield surfacing, proper layout and size requirements and the grading affect the rating of a ball diamond's infield. Shale infields that are routinely scarified and have a properly graded pitching mound are rated more favorably than gravel or dirt infields that are not scarified routinely (see Figure 30 and Figure 31). Amount of usage is not considered in this rating.



Figure 30. Within PICA, shale ball diamond infield surfacing is preferred.



Figure 31. Aggregate/soil ball diamond infield surfacing receives a "poor" rating in PICA.

Pathways

The assessment of the pathway systems relates to identifying the problem areas. Pathways in good condition and of standard width (2.4m, COS 2005 Parks Standards) are not identified. The problem areas are rated on the basis of the type of pathway material.

- 1) asphalt: aggregate looseness, surface roughness, cracking (see Figure 32 and Figure 33)
- 2) brick/unit pavers: cracking, heaving, edge condition, weed density (see Figure 34)
- 3) concrete: cracking, chipping, flaking
- 4) aggregate: grading, drainage, size and evenness of aggregate distribution



Figure 32. Example of a “good” PICA pathway rating; clear edges, surface intact, pathway at least 2.4m wide.

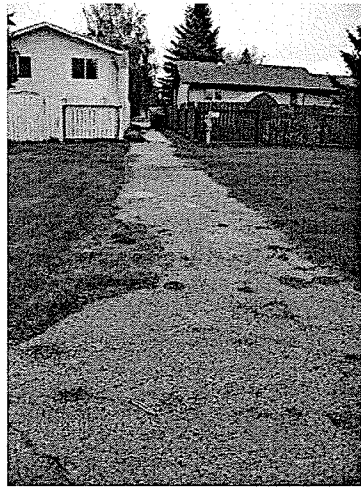


Figure 33. Example of a “critical” PICA asphalt pathway rating; unclear edges, uneven and damaged surface, invasion of plant material into pathway, pathway less than 2.4m wide.

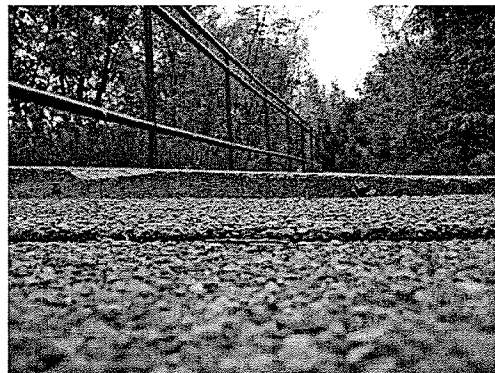


Figure 34. Example of “critical” unit paving PICA rating; heaving more than 5mm from original position.

Bollards

The condition of the individual bollards and the overall effectiveness of the bollards as a barrier is rated on the basis of the presence of problem areas. Bollard systems that are intact and functioning are not identified. Two basic rating criteria are applied:

- 1) ineffective: bollards system adheres to intended design alignment but some individual units are missing or damaged

- 2) required: bollard system does not conform to original design intent, two or more units are missing or damaged

Trees

The assessment and condition audit of the trees present in urban parks or in boulevards adjacent to urban parks is completed based on tree canopy health. Tree counts from the most current City of Saskatoon tree inventory are cross-compared to results and locations of problem areas. Individual trees are located and rated if an issue of damage to the tree is noted. These issues might include:

- 1) trunk damage: broken bark, girdling
- 2) root damage: shallow and exposed roots, roots exposed by cultivation and roots exposed and damaged by excavation

Naturalized Areas

Naturalization of plant material is assessed on a scale separate from that of conventionally designed and maintained ornamental tree and shrub planting areas.

Naturalized areas are rated on the basis of:

- 1) grass/herbaceous vegetation: continuity of vegetative growth, plant species variety
- 2) trees and shrubs: species variety and naturalizing means of propagation
- 3) native plant stands: deadfall areas, re-growth, weed/invasive species Infestation (see Figure 35)



Figure 35. Naturalized areas incorporated within urban parks are evaluated differently from ornamental shrub beds.

Shrubs

Assessments are made according to each individual shrub bed; in the case of large shrub beds, ratings are done roughly every 10 linear metres on the basis of:

- 1) general condition: thinning requirements, branching density, leaf cover, dieback
- 2) density: density of overall canopy
- 3) weed growth: presence or absence of weeds

Flowerbeds

Both annual and perennial flowerbeds are assessed using the following criteria (see Figure 36):

- 1) soil condition: informal visual and tactile review of sand, silt and clay content
- 2) edging: around entire perimeter
- 3) weed population: density
- 4) effectiveness of design: impacts of colour, spacing of plants, location in park



Figure 36. Flowerbeds are rated by PICA in regard to soil, plant density, variety and weed population.

Irrigation

Irrigation is assessed on a problem basis, with only visible problems noted.

Execution

The inaugural 2005 PICA was conducted by a private consultant firm, Crosby Hanna and Associates, for the City of Saskatoon. Subsequent audits are to be undertaken by the COS. Horticultural, information technology and managerial experts were consulted and employed for the development and the execution of the audit. The assessment data are compiled into a database which is programmed to handheld computers with integrated GPS and image technology. The auditors then conduct the audit with the hand-held computers (see Figure 37) and the user-friendly database collection system. The audit visit is not at a pre-arranged time and is undertaken without park staff or management present. Each time a data point is identified on the GPS-linked aerial map by an auditor, the user was prompted to select the general factor and specific condition ratings that are associated with that GPS location. The information is then transferred to the larger database for analysis and the results are summarized and reported. The informational and software technology utilized for this project include ArcPad, ArcView GIS, Microsoft Access and Microsoft Excel (Crosby Hanna and Associates, 2005).

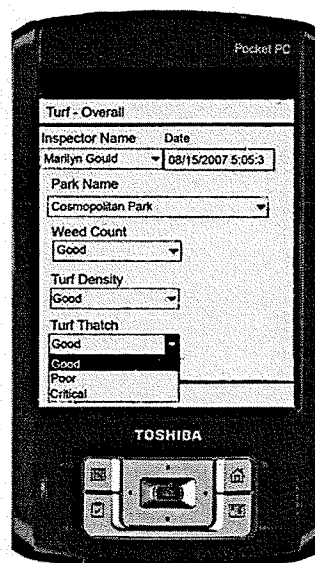


Figure 37. Typical drop-down menu screen on utilized by park auditors.

Green Flag Awards - U.K.

Overview

As discussed in Chapter Four there is currently no statutory national governance regarding park and open space standards in the U.K. and therefore, there are no mandatory assessment standards. However, one of the most popular and well-documented assessments currently being utilized is the Green Flag Awards of the United Kingdom. This is a voluntary assessment process that allows for recognition of parks and open spaces of high quality in design, maintenance and management. Often, parks with Green Flag honours receive higher private and public funding; so while the Green Flags are not directly related to budgetary decisions, the award of a Green Flag honour positively influences fiscal resources. This increased financial incentive as well as awareness and concern for supplying park facilities that are more environmentally sustainable and physically and socially accessible, has increased the application numbers from 174 in 2002 to 420 applications in 2005; roughly an increase in applications of 58% each year (The Civic Trust, 2007a). This adoption success is outlined with other strengths and weaknesses within Appendix A.

Major Components

The major assessed components are partially impacted by the planning policy guidelines and partially determined by the values and goals of the Green Flag Awards. The major components include: a welcoming place, health and safety, sustainability, conservation and heritage, community involvement, management and marketing. Each of these components is described in greater detail in Appendix B and within the Green Flag Award Manual (The Civic Trust, 2007a).

A Welcoming Place

The extent to which a park is welcoming is based on ratings of the entrance signage, interior and surrounding neighbourhood signage, physical and social accessibility and aspects of design that encourage exploration and use. Park entrance signs are rated based on their clarity, condition and inclusion of appropriate information such as owner information, park guidelines, maps and emergency information. The signs

within the park are also rated on the design aspects and whether they complement the ‘feel’ of the park and whether the message is clearly and concisely stated (see Figure 38).

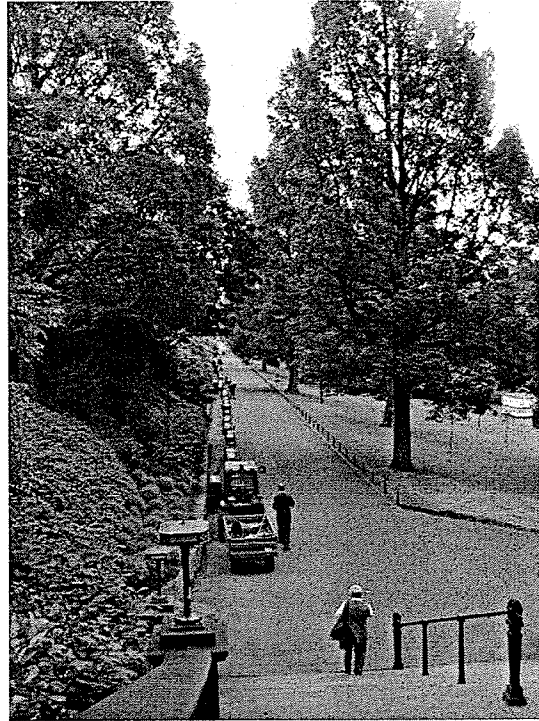


Figure 38. Princess Street Gardens, Edinburgh, U.K. The Green Flag Award system rates elements such as the park entrance points. (Photo by Evan Hunter - used with permission).

The signage and marketing of the park in the surrounding area is also noted for consideration. The physical accessibility is rated with regard to distance to transit services and pedestrian links and the extent of accessibility on-site with bicycles and vehicles. Social access is gauged by local social requirements and desires, as well as common social elements, such as placement and quality of benches and semi-private resting places (The Civic Trust, 2007a).

Healthy, Safe and Secure

The health, safety and security of parks are assessed in regard to a set of ‘quality of life’ indicators of high level of transportation, health and environmental issues. Health issues are rated with the presence of fitness trails (see Figure 39), promotion of the park as a sports venue and encouragement for young children to play actively.

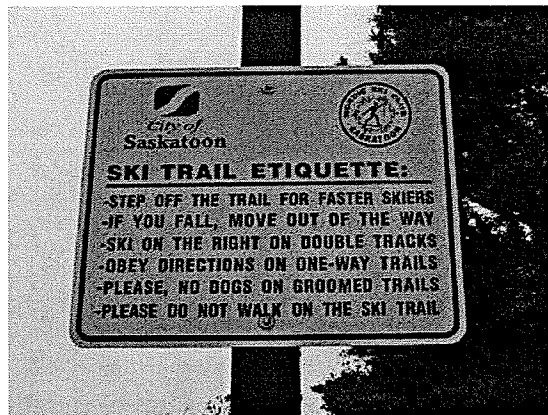


Figure 39. A variety of fitness trails is encouraged by the Green Flag Awards.

The equipment and facilities need to be in accordance with local safety standards and supplied in the appropriate condition. Security is rated in connection with supervision of parks and play areas, promotion of safe play areas in which adults can only be present if they accompany children, and coordination with governments to provide adequate security and security rating. The health and safety policies of the park are rated also, usually requiring them to be in accordance with the most recent laws and bylaws. Control of dogs and adherence to local laws regarding dog litter is also recommended (The Civic Trust, 2007a).

Maintenance and Cleanliness

The general maintenance and cleanliness of parks is rated according to the presence of high standards of litter and waste management, grounds maintenance, building maintenance, infrastructure and other facility maintenance and equipment maintenance for staff and public. These areas of maintenance include regular trash removal, high standards of horticultural, building and infrastructure maintenance, involvement of public in maintenance of small, special areas, specific area allotment for machine maintenance and regular visual and technical inspections of equipment that is used by the public (The Civic Trust, 2007a).

Sustainability

Sustainability of urban parks are rated according to environmental management, resource conservation, recycling, horticulture and arboriculture practices, pollution reduction and water efficiency. Some methods of rating the sustainability of these issues include: ensuring low emission machinery is used when possible, energy efficient lighting is used throughout the site, water resources are efficient and promote use of rainwater and waste water, and reducing pollution whenever possible; including avoiding burning waste and avoiding generating excessive noise (The Civic Trust, 2007a).

Conservation and Heritage

The assessment of conservation and heritage broadly covers many areas of concern: cultural landscapes, water management, woodland and trees, grasslands, fauna, geological and physiographic features, conservation of the landscape, built environment and historical character and artifacts (see Figure 40). The rating of cultural landscapes adheres closely to the English Heritage guidelines as well as taking cues from the Department of Culture, Media and Sport. The assessment of water management and water efficiency take into account the attractiveness, general health, wildlife value and efficient water use of water features. It is recommended that wildlife and wildfowl populations be controlled to exist within an allowable number for the water feature. Woodlands, grasslands and other habitats are rated according to the presence of indicators of general good health and high quality management plans, ranging from the designation of high value ecological areas, mown grass along pathways, high diversity of appropriate plant material (see Figure 41) and a high diversity of fauna inhabiting the system. Geological and physiographic features and conservation of landscapes, the built environment and historic artifacts are rated with regard to the success of incorporation of the feature within the design of the park, and the protection of the feature through a management plan (The Civic Trust, 2007a).



Figure 40. Princess Street Gardens, Edinburgh, U.K. Preservation of historical buildings and landscapes is of high importance within the Green Flag Award system. (Photo by Evan Hunter - used with permission).



Figure 41. Incorporation of locally native and ecologically appropriate plant species are encouraged in the Green Flag Award criteria.

Community Involvement

Community involvement is assessed via several channels; patterns of use, community involvement in the design, maintenance and management of the park, facilities present, structure and design of children's play areas and universal accessibility. Assessment of pattern of use information is in regard to whether or not the information is collected for the park, how it is collected and the incorporation of the results in the management plans. User and non-user information can be obtained via usage counts, simple questionnaires on-site and mail-in surveys. Green Flag rating of community involvement is straightforward; volunteer involvement and community involvement in programmes and facilities such as children's play areas, boating lakes, wildlife areas, horticultural therapy, community gardens (see Figure 42), sports facilities, youth shelters and street sport sites (The Civic Trust, 2007a).



Figure 42. Community involvement is rated for the Green Flag Awards by the presence and usage of indicators such as community gardens.

Facilities that lead to a higher community involvement rating include basketball courts, barbeque facilities, community centres, educational centres, galleries, skate and bike tracks and health and fitness facilities. Children's play areas that induce higher levels of community involvement promote active children's play areas throughout the park, involve children in the development of the park and the presence of a management

policy regarding play. The presence of universally accessible facilities and landscape features also is high in regard to community park involvement.

Marketing

According to the Green Flag Award Manual (The Civic Trust, 2007a), marketing is critical in creating a high-quality and desirable green space. Therefore, the assessment of current marketing strategies is included in the Green Flag assessment process.

Marketing strategies looked upon favorably by the assessment system include the circulation of newsletters, annual reports, summaries of park history, wild life information and promotion of park attractions.

Management

The management plan is not only assessed by examination of the management plan itself, but also by the presence of indicators within the park of adherence to and active use of the management plan. This ranges from the statement of purpose for the park being evident at design, maintenance and budgetary levels, timetables related to development being observed, and a framework for decision making being utilized.

Execution

The entire Green Flag Award process takes almost a year. Applications are accepted from February to October for the following year. The application consists of an online application form, three photographs of the open space or park and two 250 word statements outlining why the applicant feels the park or green space should receive a Green Flag Award and a publicity statement describing the space, should an award be received (Civic Trust, 2007c). Two site visits and one management plan rating take place; one site visit on a prearranged date during April to May, the other site visit and the management plan rating takes places without notice to park management or staff any time during the year. Successful Green Flag Award applicants have achieved a minimum of 50% on the desk assessment and 60% in the field application. The assessments are carried out by two judges that rate parks on the basis of the Green Flag Award Judges' Handbook

(Civic Trust, 2007b). Scores are assigned based on the condition or presence of each required component according to the judges' findings (see Table 5).

Table 5. Scoring assignments for the Green Flag Award components (Civic Trust, 2007d).

0 - 1	2 - 4	5 - 6	7	8	9	10
Very Poor	Poor	Fair	Good	Very Good	Excellent	Exceptional

Each component is scored out of ten and receives at least one qualifying sentence in an online score sheet. The averages of the field assessment and desk assessment are determined and added together for a final score which allocates the award status of the applicant park. All applicants are then notified and given feedback regarding their application and award status.

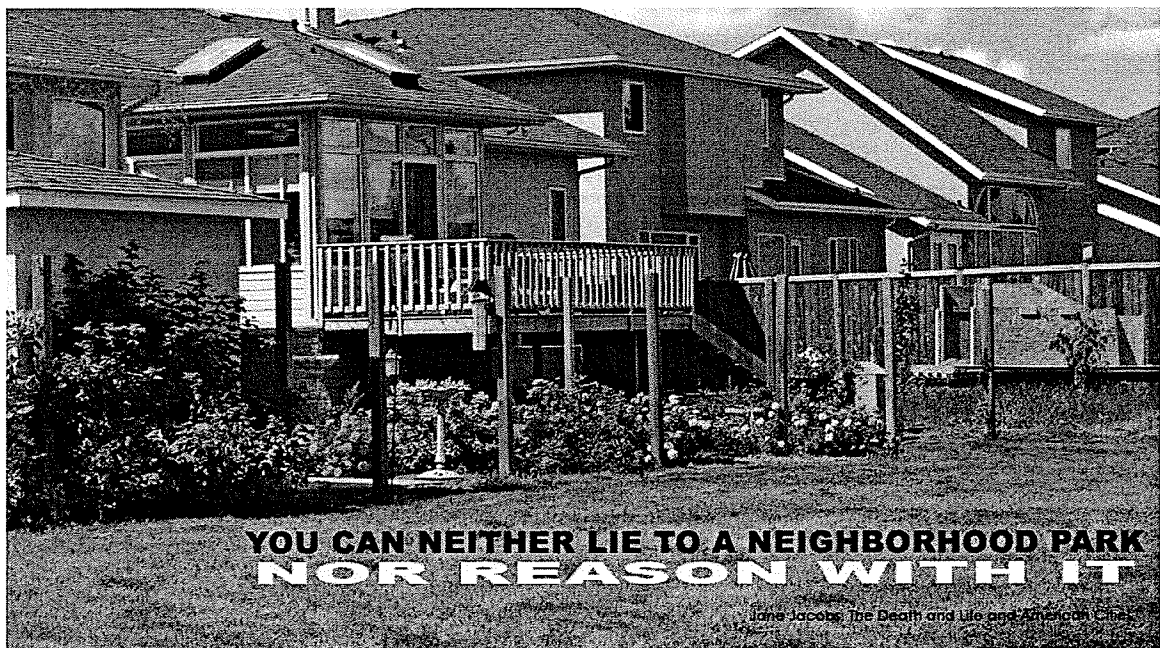


Figure 43. Saskatoon; Forest Linkage Park.

Chapter Six: Blended Audit System Development

Intended Application and Sites

The Blended Audit System has been developed in response to the specific conditions of urban parks in Saskatoon. It is not the intention of this proposed audit system to be directly applicable to other urban parks systems, nor is it appropriate for any audit system to be considered universally applicable. It is also not intended to point out specific maintenance workers or crews for reprimand; but to highlight issues that may be resolved with training and a more effective management plan regarding maintenance practices. Maintenance practices are indicative of management and are therefore included within the audit. The literature review, theory exploration and investigation of precedents are intended to directly, or indirectly, influence the final product of this research, the Blended Audit System. Table 6 describes and outlines each component, Appendices D and E illustrate a sample score sheet and a sample park audit, respectively. The score sheet has been developed with the intention for use in the field or adapted for use with GPS-supported PDA technology similar to that utilized in PICA, as outlined in Chapter Five. In addition to this layer of influence from the literature review, the BAS also combines the valuable first-hand knowledge available from the directors, designers and managers of the featured urban park system and the physical infrastructure and entities within the park. However, a balance is required between the monitoring of readily quantifiable physical elements and the somewhat elusive qualitative social and managerial elements of urban parks. The Blended Audit System (BAS), which has been developed as a result of this comprehensive research, attempts to find an appropriate balance for the City of Saskatoon between these very different spectrums; to record and monitor both the objective and the subjective in a reliable, repeatable and efficient way.

General Audit Components

The major components of the BAS have been segregated and listed by general chronological assessment order and how often each major component would be assessed. Due to the large scope of the audit it is anticipated that the resources and time required to complete such a large, comprehensive audit on a yearly or biyearly basis would be an unreasonable and unnecessary task for some components. Therefore, the frequency with which the components would be audited has also influenced the composition of the major groupings and components. The entire comprehensive audit would ideally be completed once every five to seven years, with some components being audited only once in that period, whereas some components would be audited every year.

Main Entrance

The main entrance of a park is rated based on the signage present and the entrance location. The sign is rated for placement, legibility and condition; it must be prominent, easy to read with appropriate information supplied and in good repair. The access point to the park is ideally well-situated within its surrounding context; that is, the park entrance point is not located as a stand alone feature. There should be a sidewalk connection or roadway connection that allows for ease of park user movement through the entrance. This portion of the audit should be completed annually.

Boundaries

Boundaries of a park can refer to gates, hedges, fences and bollards. The quality of gates as a boundary is determined by the physical condition and the hours of accessibility. Hedges are rated as a boundary with a physical condition rating. Fences are rated as per the construction material, being wood or metal, and by the fence's state of repair. Bollards are rated by the condition and continuity of the bollard system. This portion of the audit should be completed annually.

Hard Surfaces

The pathways, pathway/roadway intersection points and parking are assessed within this category. In regard to pathways, material type, condition and maintenance

information is collected as well as the function of the pathway. Possible pathway functions include walking, cycling, combined walking and cycling and equestrian use. Each material type (asphalt, bricks, concrete and wood) is assessed for general condition of the surface and edge conditions. Assessment of pedestrian bridges is also included in this category. Pathway/road intersection points are rated based on the posted speed limit for vehicles, the presence of traffic control devices and visual cues for both the vehicular traffic and pedestrian traffic. The rating of parking, either vehicular or cyclist, takes into consideration surface conditions of each possible surface material type and the parking capacity. This portion of the audit should be completed annually.

Landscaped/Horticultural Areas

This category includes all plant material that is maintained with conventional horticultural techniques. This includes trees, shrubs, flowerbeds, turf, turf maintenance and grading issues related to plant growth. The trees are rated on the basis of range of species, health, mulch and damaged trees. Shrubs are also rated on the basis of range of species, health, weed growth and quality and quantity of surrounding mulch. Flowerbeds, again, are also rated on plant variety, plant health and weed growth, but also on the state of edging. Turf ratings are based on weed count, overall turf quality, maintenance techniques, aeration, fertilization, pest control and irrigation performance. Grading problems are recorded for inventory purposes as they relate to plant growth. This portion of the audit should be completed annually.

Natural Areas

The inventory and audit of the natural areas of a park include planting schemes or naturally occurring vegetation that require specialized maintenance techniques. The origin and possible value to the park of each naturalized or native plant population is recorded for inventory purposes. The type of vegetative area including riparian, multi-layer canopy and the single-layer canopy is noted as well as the species variety, re-growth, weed infestation and continuity of cover. This portion of the audit should be completed biannually.

Sportsfields and Activity Areas

Sportsfields are rated according to type of field (turf sportsfields, ball diamonds, football/soccer field, basketball, skatepads, off-leash dog areas and children's play areas) and the conditions of the turf, hard surface and/or other physical infrastructure related to the sportsfield. This portion of the audit should be completed once every two years.

Infrastructure

Physical infrastructure that is rated includes trash bins, benches/seats, washrooms, lighting and parking. These physical entities are rated based on the number of available units within the park as well as the repair of these entities. This portion of the audit should be completed once every three years.

Special Features

Not every park will have special features, and rarely, if ever, will a park have all of the outlined special features; historic structures, art displays, observation decks, amphitheatres, vendor's sites, fountains and storm retention ponds. These special features are rated based on their physical condition and usability. This portion of the audit should be completed once every three years.

Community Involvement

Community involvement is rated via a variety of factors; management awareness, surveys, the presence and success of community gardens, festivals and educational facilities. This rating also takes into consideration the social and physical accessibility of the park. This portion of the audit should be completed once every five years.

Marketing

Marketing of a park is rated by examining levels of marketing and promotional information that is available regarding the park and its programmed events. This information is collected after the field component of the audit, with a collection of all

related promotional material that has been distributed since the last audit period. This portion of the audit is ideally completed every five years.

Management

The management plan of a park is rated by considering management experience, inter-personal communication, budget, public service, and management plan implementation. This portion of the audit is conducted after the field component has been completed and is undertaken through an interview process of managers and maintenance crew leaders that is completed every five years.

Scoring

A point system has been established in an effort to represent some of the common elements that society places value on, as explored throughout the theoretical discussions of the previous chapters. The points system calculates the total possible points for each park based on classification and park components (See Table 6, Appendices D and E). Therefore, the percentage of the points accumulated by each component will be used to demonstrate overall park quality. For instance, if Sample Park A scores 78 out of a possible 112 it receives an overall rating of 70%. The city, therefore, could establish various levels of urgency for park upgrades and funding decisions based on the overall park rating percentage. This rating percentage is independent of the cost required to correct issues, which allows for a rating system that is comparable between past audits. The point system would also allow for trends and areas of concern to be identified in each of the main component areas. Management staff would have the ability to locate “hot spots” for certain issues such as pathway deterioration, horticultural challenges and safety issues and allocate funding and staff accordingly. Ultimately, this audit system in conjunction with the point system, aims to allow for efficient and effective allocation of funds and time, at design, maintenance and management levels. Strengths and weaknesses of this system are outlined in Appendix A.

Blended Audit System Rating Criteria

Table 6. BAS rating criteria and points assignment.

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Park Name	n/a	n/a	n/a	n/a	Audit	n/a	Choose a name of park off list; allows for data points to be associated with park	n/a
Park Classification	n/a	n/a	n/a	n/a	Pre-audit	n/a	Automatically assigned based on name selection; Multi-District, District, Industrial, Neighbourhood: this selection will influence particular audit questions.	n/a
Park Jurisdiction	n/a	n/a	n/a	n/a	Pre-audit	n/a	Automatically assigned based on name selection; COS Park or MVA Park	n/a
Park Size	n/a	n/a	n/a	n/a	Pre-audit	n/a	Automatically assigned based on park name selection	n/a
Main Entrance	Signage	Placement	One (1) per major entrance	Visual	Audit	Yes	Easy to find	3
						No	Not easy to find and/or absent	1
		Legibility	One (1) per major entrance point	Visual	Audit	Yes	Legible, includes owner info, address	2
						No	Not legible, and/or missing owner info and/or address	1
		Condition	One (1) per major entrance point	Visual	Audit	Good	Sign is stable, vertical, secure, finish is intact and in good repair.	2
						Critical	Sign is unstable, not vertical, finish is not intact and/or in poor repair.	1
	Access point	Coherence to context	One (1) per major entrance point	Visual	Audit	Yes	The entrance relates to the surrounding context (e.g. lines up with sidewalks, etc.)	2
						No	The entrance point has no or little relation to the surrounding context (e.g. does not line up with sidewalks, etc.)	1
	Boundaries	Gates	One (1) per set of gates	Visual	Audit	Good	Gates in good condition and clearly maintained	2
						Poor	Gates in poor condition and no clear maintenance	1
		Accessibility	One (1) per set of gates	Visual	Audit	Yes	Gates are open during park hours and hours clearly posted	2
						No	Gates are not open during park hours and/or hours are not posted	1
		Hedges	One (1) per 100 lin. Metre)	Visual	Audit	Good	Hedge in good condition and clearly maintained	3
						Fair	Hedge in clearly maintained, with breaks within the row.	2
						Poor	Hedge in poor condition and no clear maintenance	1
		Fences	One (1) per 100 lin. Metre)	Visual	Audit	Wood	The majority of fence is wood	1
						Metal	The majority of fence is metal	3
		Condition	One (1) per 100 lin. Metre)	Visual	Audit	Good	Fence is in good condition and clearly maintained	2
						Poor	Fence is in poor condition and no evident recent maintenance	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Boundaries (cont.)	Bollards	Condition	As needed and/or one (1)/ 100 lin. Metres	Visual	Audit	Good	All bollards vertical and secure, none missing	4
						Fair	In 100 lin. metres, less than 3 bollards are not secure or vertical, no more than one in a row missing	3
						Poor	In 100 lin. metres, less than 5 bollards are not secure or vertical, may be more than one in a row missing	2
						Critical	In 100 lin. metres, more than 5 bollards are not secure or vertical, may be more than one in a row missing; design intent of bollards not upheld	1
Hard Surfaces	Path Function	Function	One (1)/ 100 lin. Metre)	Visual	Audit	Walking	Pathway is used for walking	n/a
						Cycling	Pathway is used for cycling	n/a
						Walking/ Cycling	Pathway is used for walking and cycling	n/a
						Equestrian	Pathway is used for equestrian	n/a
		Accessibility	One (1)/ 100 lin. Metre)	Visual	Audit	Yes	Pathway is 2.4m wide or more	3
						No	Pathway is less than 2.4m wide	1
		Cleanliness	One (1)/ 100 lin. Metre)	Visual	Audit	Yes	Pathway clean and free of debris	2
						No	Litter and/or dog fouling present	1
	Path Type/ Condition	Asphalt	One (1)/ 100 lin. Metre)	Visual	Audit	Good	Aggregate is uniformly held together, no loose particles or cracks	4
						Fair	Aggregate is uniformly held together, some loose particles, cracks up to 3mm wide	3
						Poor	Aggregate is not uniformly held together, numerous loose particles, cracks over 3mm wide, some weed invasions along edges	2
						Critical	Aggregate is loose, surface gravelly, cracks over 3mm wide, extensive weed invasion at edges	1
		Bricks/Unit Pavers	One (1)/ 100 lin. Metre)	Visual	Audit	Good	Surface even and continuous	4
						Fair	Surface starting to crack, chip and/or misalign	3
						Poor	Surface has several cracks, chips and/or is misaligned up to 10mm, some weed invasions	2
						Critical	Surface is uneven, cracked, chips and/or misaligned more than 10mm, numerous weed invasions	1
		Concrete	One (1)/ 100 lin. Metre)	Visual	Audit	Good	Surface and alignment intact	4
						Fair	Surface starting to crack, chip and/or misalign	3
						Poor	Surface has several cracks, chips and/or is misaligned more up to 10mm, some weed invasions	2
						Critical	Surface is uneven, cracked, chips and/or misaligned more than 10mm, numerous weed invasions.	1
		Aggregate	One (1)/ 100 lin. Metre)	Visual	Audit	Good	Surface even and continuous	4
						Fair	Surface may show some uneven areas, deviations less than 10mm deep, some weed invasions along edge	3
						Poor	Surface may show some uneven areas, deviations no more than 20 mm deep, some weed invasions along edge	2
						Critical	Surface uneven and discontinuous, deviations more than 20mm deep, numerous weed invasions along edge	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Hard Surfaces (cont.)	Path Type/ Condition (cont.)	Wood	One (1)/ 100 lin. Metre)	Visual	Audit	Good	Surface even and continuous, board spacing and pattern intact	4
						Fair	Surface may show some uneven areas, deviations less than 10mm deep, some weed invasions along edge and in gaps	3
						Poor	Surface may show some uneven areas and/or loose boards, deviations less than 20mm deep and/or intensive weed invasions along edge and in gaps	2
						Critical	Surface is uneven with loose or missing boards, surface deviations greater than 20mm deep and/or intensive weed invasions along edge and in gaps	1
		Pedestrian Bridge	One (1) per bridge	Visual	Audit	Good	Exit and entrance points even, does not present any pedestrian access issues, bridge stable with no obvious shifting or cracking	4
						Fair	Entrance/exit points may be uneven, deviation no more than 10mm deep, some cracking or unevenness may be evident in surface material or structure	3
						Poor	Entrance/exit points may be uneven, deviation no more than 20mm deep, some cracking or unevenness is evident in surface material or structure	2
						Critical	Entrance/exit points are uneven, deviation greater than 20mm deep, cracking or shifting is evident in surface material or structure	1
	Pathway/ Road Interaction	Posted Speed Limit (Vehicles)	One (1) per interaction	Visual	Audit	Good	Less 35kph	4
						Fair	35-45 kph	3
						Poor	45-55 kph	2
						Critical	over 55 kph or not posted	1
		Traffic Control Devices	One (1) per interaction	Visual	Audit	Yes	Presence of traffic control devices; roundabout, speed humps, pedestrian crossing, narrowed curbs	3
						No	No traffic control devices	1
		Visual Cues (Vehicular)	One (1) per interaction	Visual	Audit	Yes	Presence of signs or road surface changes to indicate approaching important intersection	2
						No	No signs or road surface changes to indicate approaching important intersection	1
		Visual Cues (Pedestrian/ Cyclist)	One (1) per interaction	Visual	Audit	Yes	Presence of signs or pathway surface changes to indicate important intersections	2
						No	No signs or pathway as indications of important approaching intersections	1
	Parking	Parking Function	One (1) per parking lot	Visual	Audit	TPP:		12
						Vehicular	Parking lot is for vehicular traffic	n/a
		Asphalt Surface Condition	One (1) per 100 sq. metre	Visual	Audit	Bicycle	Parking area is for cyclists	n/a
						Good	Aggregate is uniformly held together, no loose particles or cracks	4
						Fair	Aggregate is uniformly held together, some loose particles, cracks up to 3mm wide	3

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Hard Surfaces (cont.)	Parking (cont.)	Asphalt Surface Condition (cont.)	One (1) per 100 sq. metre	Visual	Audit	Poor	Aggregate is not uniformly held together, numerous loose particles, crack over 3mm wide, some weed invasions along edges	2
						Critical	Aggregate is loose, surface gravelly, cracks over 3mm wide, extensive weed invasion at edges	1
		Aggregate Surface Condition	One (1) per 100 sq. metre	Visual	Audit	Good	Surface even and continuous	4
						Fair	Surface may show some uneven areas, deviations less than 10mm deep, some weed invasions along edge	3
						Poor	Surface may show some uneven areas, deviations no more than 20 mm deep, some weed invasions along edge	2
						Critical	Surface uneven and discontinuous, deviations more than 20mm deep, numerous weed invasions along edge	1
		Park Capacity	One (1)/park	Visual	Audit	Good	Parking provided within or adjacent to park, adequate spaces, signage readily apparent	4
						Fair	Parking provided within or adjacent to park, less than adequate spaces, signage readily apparent	3
						Poor	Parking provided within or adjacent to park, less than adequate spaces, signage not apparent	2
						Critical	Parking not provided or very limited within or adjacent to park	1
Landscaped/Horticultural Areas	Trees	Tree Variety	One(1) rating per park	Visual	Audit	Yes	More than three (3) varieties of trees present	3
						No	Less than three (3) varieties of trees present	1
		Tree Health	One(1) rating per tree or One(1) rating per 40sqm of canopy	Visual	Audit	Good	10% or less disease or dieback in canopy	4
						Fair	10 to 25% disease or dieback in canopy	3
						Poor	25 to 50% disease or dieback in canopy	2
						Critical	More than 50% disease or dieback in canopy	1
		Mulch	One (1) rating per bed	Visual	Audit	Good	Mulched recently, between 50 and 100 mm thick, few to no weeds, soil or grass clippings	4
						Fair	Mulch over 100mm thick, showing evidence of excessive moisture or between 10 and 25mm thick, and/or some weeds, soil or grass clippings	3
						Poor	No evidence of recent mulching and/or profuse weed growth	2
						Critical	No evidence of recent mulching and patches of bare soil due to low mulch levels	1
		Trunk Damage	As required	Visual	Audit	Fair	Bark broken, but cambium layer not exposed	n/a
						Poor	Bark broken, cambium layer exposed around a portion of trunk	n/a
						Critical	Bark damaged around entire circumference of trunk or trunk is broken and/or tree missing	n/a

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Landscaped/Horticultural Areas (cont.)	Trees (cont.)	Root Damage	As required	Visual	Audit	Fair	Roots are damaged due to either shallowness or outside force	n/a
						Poor	Roots are damaged due to either shallowness or outside force, resultant suckering in some places	n/a
						Critical	Roots are damaged due to either shallowness or outside force, severe resultant suckering and/or stability of tree may be affected	n/a
	Shrubs	Shrub Variety	One(1) rating per park	Visual	Audit	Yes	More than three (3) varieties present	3
						No	Less than three (3) varieties present	1
		Shrub Health	One(1) rating per bed or 20 sq m	Visual	Audit	Good	Plants require thinning, less than 25% disease or dieback	4
						Fair	Plants require thinning, 25% to 50% disease or dieback	3
						Poor	Plants too thin, 25% to 50% disease or dieback	2
						Critical	Evidence of stem/root rot, over 50% disease or dieback	1
		Weed Growth	One(1) rating per bed or 20 sq m	Visual	Audit	Yes	More than five (5) weeds per one (1) sq metre	1
						No	Less than five (5) weeds per one (1) sq metre	4
		Mulch	One (1) rating per bed	Visual	Audit	Good	Mulched recently, between 50 and 100 mm thick, few to no weeds, soil or grass clippings	4
						Fair	Mulch over 100mm thick, showing evidence of excessive moisture or between 10 and 25mm thick, and/or some weeds, soil or grass clippings	3
						Poor	No evidence of recent mulching and/or profuse weed growth	2
						Critical	No evidence of recent mulching and patches of bare soil due to low mulch levels	1
	Flower-beds	Plant Variety	One(1) rating per bed	Visual	Audit	Yes	More than three (3) varieties present	3
						No	Less than three (3) varieties present	1
		Plant Health	One(1) rating per bed or 20 sq m	Visual	Audit	Good	Plantings showing no signs of stress	4
						Fair	Plants showing subtle signs of over watering or underwatering	3
						Poor	Few plants distressed, cause unknown	2
						Critical	Several plants dead or distressed	1
		Weed Growth	One(1) rating per bed or 20 sq m	Visual	Audit	Yes	More than five (5) weeds per one (1) sq metre	1
						No	Less than five (5) weeds per one (1) sq metre	4
		Edging	One(1) rating per bed	Visual	Audit	Yes	Edging line clean and clear, provides clear distinction between bed and surrounding area	3
						No	Unclear edging line, portions of it may not provide clear distinction between bed and surrounding area	1
	Turf	Irrigation Type	One(1) each sample area	Visual	Audit	Irrigated	Irrigation present	n/a
						Dryland	Dryland turf	n/a
		Weed Count	300mm by 300mm/ Six (6) per sample area (park or each dryland or	Visual	Audit	Good	No broadleaf weeds present	4
						Fair	Up to 5 broadleaf weeds	3
						Poor	5 to 10 broadleaf weeds	2
						Critical	over 10 broadleaf weeds	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Landscaped/Horticultural Areas (cont.)	Turf (cont.)	Turf Quality	300mm by 300mm/ Six (6) per sample area (park or each dryland or irrigated section)	Visual	Audit	Good	Thick and continuous cover, grass leaves dark green and flat	4
						Fair	Cover interrupted by worn, bare or weedy patches, dark green and flat leaves	3
						Poor	Cover thin; worn, bare or weedy patches up to 50% of test surface area, and/or grass blades needle-like and yellow or brown	2
						Critical	Cover thin to nonexistent; worn, bare or weedy patches over 50% of test area, individual grass plants visible, and/or grass leaves needle-like and brown.	1
	Turf Maintenance	Mowing	One (1) per grassed area	Visual	Audit	Good	Cut cleanly, grass clippings evident only when grass leaves brushed aside, length of clippings between 10 and 20mm	4
						Fair	Cut cleanly, grass clippings evident only when grass leaves brushed aside, length of clippings outside acceptable range (10 to 20mm)	3
						Poor	Cut quality poor, grass clipping accumulation or low levels of accumulation under turf cover, length of clippings outside acceptable range (10 to 20mm)	2
						Critical	Cut quality poor, grass clippings plainly visible or non-existent, length of clippings outside acceptable range (10 to 20mm)	1
		Aeration	One (1) per grassed area	Visual	Audit	Yes	Evidence of aeration practices	2
						No	No evidence of aeration practices	1
		Fertilization	One (1) per grassed area	Visual	Audit	Yes	Evidence of fertilization	2
						No	No evidence of fertilization	1
		Pest Control	One (1) per grassed area	Visual	Audit	Yes	No pest damage present	2
						No	Pest damage present	1
		Irrigation Performance	One (1) per grassed area	Visual	Audit	Good	Even coverage, all heads functioning, no signs of excessive or limited moisture	4
						Fair	Uneven coverage, all heads functioning, signs of excessive moisture or limited moisture due to valve/head misplacement	3
						Poor	Uneven coverage and/or heads not functioning, signs of extensive or limited moisture due to system damage and/or improper placement of valve/head	2
						Critical	Irrigation system not being utilized or extensive damage to heads	1
	Grading Problems	Turf Wear	As required	Visual	Audit	Pedestrian	Evidence of excessive wear caused by pedestrian usage	n/a
						Vehicle	Evidence of excessive wear caused by vehicle or equipment usage	n/a

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Landscaped/ Horticultural Areas (cont.)	Grading Problems (cont.)	Irrigation Problems	As required	Visual	Audit	Head damage	Irrigation head damaged	n/a
						Valve damage	Irrigation valve damaged	n/a
						Control box damage	Irrigation control box damaged	n/a
						Sensor damage	Irrigation sensor damaged	n/a
						Moisture	Non-visible source of ponding water	n/a
Native/ Naturalized Areas	Characteristics	Origin	One (1) rating per area	Visual	Audit	Natural	The area naturally occurring, unplanned and unplanted	n/a
		Value	One (1) rating per area or per 20 to 40sqm	Visual	Audit	Manmade	The area planned and planted	n/a
						High	Naturally occurring stand, well-established and aged; mature growth	4
						Medium	Naturally occurring stand or planted stand, younger stand, majority of plant material not mature	3
						Low	Naturally occurring stand or planted stand, majority of plant material not mature, location and size of natural area not significant in design or function of park	2
	Tree/ Shrub Naturalized Areas	Type	One (1) rating per area	Visual	Audit	Riparian	The area existing adjacent to or along a waterbody	n/a
						Inland multilayer canopy	The area does not have a relationship with a waterbody, consists of at least two types of vegetation types: trees, shrubs, understory (grasses and herbs)	n/a
						Single Canopy	The area does not have a relationship with a waterbody, consists of only one of the possible vegetation types: trees, shrubs, understory (grasses and herbs)	n/a
		Species Variety	One (1) rating per area or per 20 to 40sqm	Visual	Audit/ Post-Audit	Good	75% to 100% (or >7 species if naturally occurring) of species from plant list are present and growing	4
						Fair	50 to 75% of species (or 5-7 species if naturally occurring) from plant list are present and growing	3
						Poor	25% to 50% of species (or 3-5 species if naturally occurring) from plant list are present and growing	2
						Critical	Less than 25% of species (or 1-3 species if naturally occurring) from plant list are present and growing	1
		Re-growth	One (1) rating per area or per 20 to 40sqm	Visual	Audit	Good	75% to 100% of species from plant list are displaying natural propagation techniques at least once	4
						Fair	50% to 75% of species from plant list are displaying natural propagation techniques at least once	3
						Poor	25% to 50% of species from plant list are displaying natural propagation techniques at least once	2
						Critical	Less than 25% of species from plant list are displaying natural propagation techniques at least once	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Native/ Naturalized Areas (cont.)	Tree/ Shrub Natural- ized Areas (cont.)	Weed Infestation	One (1) rating per area or per 20 to 40sq m	Visual	Audit	Good	Limited and in small areas, less than 1 metre dia., visual indication of recent weed management	4
						Fair	Limited and in small areas, less than 1 metre dia., but with no visual indication of weed management	3
						Poor	Limited but in larger areas greater than 1 metre dia., regardless of weed management indications	2
						Critical	Evident throughout and/or in several large areas, greater than 1 metre in dia., regardless of weed management indications	1
	Grassland/ Wetland/ Herbac- eous Areas	Type	One (1) rating per area	Visual	Audit	Riparian	The area existing adjacent to or along a waterbody	n/a
						Inland Multilayer Canopy	The area does not have a relationship with a waterbody, consists of at least two types of vegetation types: trees, shrubs, understory (grasses and herbs)	n/a
						Single Canopy	The area does not have a relationship with a waterbody, consists of only one of the possible vegetation types: trees, shrubs, understory (grasses and herbs)	n/a
		Establishment of Boundaries	One (1) rating per area	Visual	Audit	Yes	The area has a clear established boundary (e.g. mowing strip)	3
						No	No clear boundary of area	1
		Species Variety	One (1) rating per area or per 20 to 40sq m	Visual	Audit/ Post- Audit	Good	75% to 100% of species from plant list are present and growing	4
						Fair	50 to 75% of species from plant list are present and growing	3
						Poor	25% to 50% of species from plant list are present and growing	2
						Critical	Less than 25% of species from plant list are present and growing	1
		Ground Cover	One (1) rating per area or per 20 to 40sqm	Visual	Audit	Good	Plant material uniformly covering area, with only a few or no gaps no less than 1 metre in dia.	4
						Fair	Plant material uniformly covering area, with several gaps no less than 1 metre in dia.	3
						Poor	Plant material not uniformly covering area, with several gaps greater than 1 metre in dia.	2
						Critical	Plant material not uniformly covering area, with several gaps greater than 1 metre in dia.	1
Sportsfields	Type of Field	n/a	n/a	n/a	Audit	n/a	Choose one: Ball Diamond, Football/Soccer, Frisbee, Skateboarding, other	n/a
	Sportsfield Turf Areas	Irrigation Type	General sportsfield/ One	Visual	Audit	Irrigated	Irrigation present	n/a
						Dryland	Dryland turf	n/a
		Weed Count	300mm by 300mm/ Four (4) per field	Visual	Audit	Good	No broadleaf weeds present	4
						Fair	Up to 5 broadleaf weeds	3
						Poor	5 to 10 broadleaf weeds	2
						Critical	over 10 broadleaf weeds	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Sportsfields (cont.)	Sportsfield Turf Areas (cont.)	Turf Quality	300mm by 300mm/ Four (4) per field	Visual	Audit	Good	Thick and continuous cover, grass leaves dark green and flat	4
						Fair	Cover interrupted by worn, bare or weedy patches, dark green and flat leaves	3
						Poor	Cover thin; worn, bare or weedy patches up to 50% of test surface area, and/or grass blades needle-like and yellow or brown	2
						Critical	Cover thin to nonexistent; worn, bare or weedy patches over 50% of test area, individual grass plants visible, and/or grass leaves needle-like and brown.	1
		Turf Wear	General sportsfield/ one (1) per field	Visual	Audit	Yes	Evidence of excessive wear on field	1
						No	No evidence of excessive wear on field	2
	Sportsfield Turf Maintenance	Mowing	General sportsfield/ One (1) per field	Visual	Audit	Good	Cut cleanly, grass clippings evident only when grass leaves brushed aside, length of clippings between 10 and 20mm	4
						Fair	Cut cleanly, grass clippings evident only when grass leaves brushed aside, length of clippings outside acceptable range (10 to 20mm)	3
						Poor	Cut quality poor, grass clipping accumulation or low levels of accumulation under turf cover, length of clippings outside acceptable range (10 to 20mm)	2
						Critical	Cut quality poor, grass clippings plainly visible or non-existent, length of clippings outside acceptable range (10 to 20mm)	1
		Aeration	General sportsfield/ One	Visual	Audit	Yes	Evidence of aeration practices	2
						No	No evidence of aeration practices	1
		Fertilization	General sportsfield/ One	Visual	Audit	Yes	Evidence of fertilization	2
						No	No evidence of fertilization	1
		Pest Control	General sportsfield/ One	Visual	Audit	Yes	No pest damage present	2
						No	Pest damage present	1
		Irrigation Performance	General sportsfield/ One (1) per field (as required)	Visual	Audit	Good	Even coverage, all heads functioning, no signs of excessive or limited moisture	4
						Fair	Uneven coverage, all heads functioning, signs of excessive moisture or limited moisture due to valve/head misplacement	3
						Poor	Uneven coverage and/or heads not functioning, signs of extensive or limited moisture due to system damage and/or improper placement of valve/head	2
						Critical	Irrigation system not being utilized or extensive damage to heads	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Sportsfields (cont.)	Sportsfield Turf Maintenance (cont.)	Irrigation Problems	As required	Visual	Audit	Head damage	Irrigation head damaged	n/a
						Valve damage	Irrigation valve damaged	n/a
						Control box damage	Irrigation control box damaged	n/a
						Sensor damage	Irrigation sensor damaged	n/a
						Moisture	Non-visible source of ponding water	n/a
	Ball Diamond Infield	Layout	One (1) per field	Visual	Audit	Yes	Layout is proportionally correct: refer to COS 2007 parks standards	3
						No	Layout is not proportionally correct	1
		Weed Growth	One (1) per field	Visual	Audit	Yes	Weed growth present in infield	1
						No	No weed growth present in infield	2
		Surface material	One (1) per field	Visual	Audit	Good	Shale	3
						Fair	Screened aggregate/sand/soil mix	2
						Poor	Soil	1
		Grading	One (1) per field	Visual	Audit	Good	Grade is uniform; evidence of recent scarification	3
						Fair	Grade is uniform except for worn running paths and worn base areas, evidence of scarification	2
						Poor	Grade is uneven with worn running paths and worn base areas, no evidence of scarification	1
	Football/Soccer	Layout	One (1) per field	Visual	Audit	Yes	Layout is proportionally correct: refer to COS 2007 parks standards	3
						No	Layout is not proportionally correct	1
		Goal Post	One (1) per field	Visual	Audit	Good	Posts secure and straight, paint or surfacing intact	4
						Fair	One or both posts not straight and/or paint or surfacing not intact	3
						Poor	One or both posts not secure and/or straight	2
	Basketball	Layout	One (1) per court	Visual	Audit	Yes	Layout is proportionally correct: refer to COS 2007 parks standards	3
						No	Layout is not proportionally correct	1
		Basketball Hoops	One (1) per court	Visual	Audit	Yes	Hoops are horizontal, secure and intact	3
						No	Hoops are not horizontal, secure and/or intact	1
	Skatepad	Layout	One (1) per field	Visual	Audit	Yes	Layout is proportionally correct: refer to COS 2007 parks standards or is true to design intent	2
						No	Layout is not proportionally correct or true to design intent	1
		Surface material	One (1) per field	Visual	Audit	Good	Concrete in good repair; no visible cracking or shifting, no trash or foreign objects	4
						Fair	Concrete beginning to break down; visible cracking and/or minor shifting possibly with weed encroachment and some trash or foreign objects present	3
						Poor	Concrete in poor repair; numerous and/or severe crack and/or shifting, possibly with weed encroachment, foreign objects or trash present	2

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Sportsfields (cont.)	Skatepad (cont.)	Surface material (cont.)	One (1) per field	Visual	Audit	Critical	Concrete in critical repair; uneven and crumbling surface with severe cracks and/or shifts, weed encroachment and/or severe litter and foreign object problems; safety risk, skate pad should be shut down until repairs can be made	1
		Components	One (1) per field	Visual	Audit	Good	Bars and rails in good condition; secure with paint intact	4
						Fair	Bars and rails in questionable condition; may be unsecure and/or in poor cosmetic condition	3
						Poor	Bars and rails not secure, components damaged or missing, paint or surface treatment damaged or absent	2
						Critical	Bars and rails severely damaged and/or missing, pose immediate safety risk, skatepad should be closed until repairs are made	1
	Off leash dog area	Perimeter	One (1) per field	Visual	Audit	Good	Perimeter of off-leash area clearly marked and divided from rest of park with secure fence	4
						Fair	Perimeter of off-leash area clearly marked and secured with edge treatment other than fence, few to no informational signs	3
						Poor	Perimeter of off-leash area clearly marked with fence or other edge treatment, but edge treatment is not secure; informational signs may not be visible	2
						Critical	Perimeter of off-leash area not clearly marked, no fence and/or fence not secure and/or informational signs not visible	1
		Waste control	One (1) per field	Visual	Audit	Yes	No or little evidence of litter or dog fouling	4
						No	Abundant litter and dog fouling	1
	Children's Play Areas	Layout	One (1) per play area	Visual	Audit	Yes	Layout is true to design intent; no missing components	2
						No	Layout is not true to design intent; missing components	1
		Accessible	One (1) per play area	Visual	Audit	Yes	Entire or portions of play area/structure meet CSA accessibility standards	2
						No	No portion of play area/structure meet CSA accessibility standards	1
		Surfacing	One (1) per play area	Visual	Audit	Yes	Surfacing in good condition, free of debris, meets COS standards	2
						No	Surfacing in poor condition and/or debris present and/or does not meet COS standards	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Infrastructure	Facilities	Trash Bins	One (1)/park	Visual	Audit	Yes	Numerous and in good condition	2
						No	Too few for usage and/or not in good condition	1
		Benches/Seats	One (1)/park	Visual	Audit	Good	Numerous for size of site and in good condition	4
						Fair	Numerous for size of site and in average condition	3
						Poor	Insufficient for size of site but in good condition	2
						Critical	Insufficient for size of site and/or in poor condition	1
		Washrooms	One (1)/park	Visual	Audit	Good	Provided within park, easy to access, in good condition	4
						Fair	Provided within park or adjacent to park and/or in average condition	3
						Poor	Provided with park or adjacent to park and/or in poor condition and generally avoided	2
						Critical	Temporary toilet provision for events only or no toilet provision	1
		Lighting	One (1)/park	Visual	Audit	Good	Lighting components in good repair along major pathways, facilities and entrance points	4
						Fair	Lighting components in average repair along major pathways, facilities and entrance points	3
						Poor	Limited lighting scheme installed adjacent only to facilities and entrances	2
						Critical	Lighting components severely damaged or in disrepair	1
		Lighting Scheme	One (1)/park	Visual	Audit	Good	Lighting scheme in place, a variety of different lighting types placed at regular intervals and in important location and access points	4
						Fair	Lighting scheme in place, lights generally equally spaced, at least two types of lighting present	3
						Poor	Lighting scheme in place, lights only in important intersections or access points	2
						Critical	Lighting scheme not existent, lights not present in park	1
Special Features	Historic Structures	Condition	One (1) per historic structure	Visual	Audit	Good	Structure/feature is in use and in good condition	4
						Fair	Structure/feature is not in use, but is in good condition	3
						Poor	Structure/feature is not in use and in poor condition	2
	Sculptures/Art Placement	Condition	One (1) per art piece	Visual	Audit	Good	Feature and base is secure and undamaged, placement is appropriate	4
						Fair	Feature and/or base is somewhat secure, placement is appropriate	3
						Poor	Feature and base is secure and/or placement may not be appropriate	2
						Critical	Feature and base in poor condition and or placement is not appropriate, original design intent not acknowledged	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Special Features (cont.)	Observation Decks/Look Outs	Condition	One (1) per deck/lookout	Visual	Audit	Good	Deck and related viewing instruments stable and secure	4
						Fair	Deck and related viewing instruments not completely stable and secure	3
						Poor	Deck and/or related viewing instruments poorly secured and/or not stable	2
						Critical	Deck and related viewing instruments damaged, insecure and/or unsafe	1
	Amphitheatres	Condition	One (1) per amphitheatre	Visual	Audit	Good	Seating and stage area stable, free of tripping hazards, more than two (2) universally accessible areas, in use	4
						Fair	Seating and stage area stable, free of tripping hazards, at least two (2) universally accessible areas, in use	3
						Poor	Seating and/or stage area stable, free of tripping hazards and/or limited universally accessible areas, in use	2
						Critical	Seating and/or stage area in poor condition and/or numerous tripping hazards present and/or no universally accessible areas, not in use	1
	Vendors	Condition	One (1) per vendor	Visual	Audit/Post-Audit	Good	Permanent structure, regular hours, in use and good standing with health guidelines	4
						Fair	Permanent structure, special event use only, and/or temporary health certification	3
						Poor	Temporary structure, special event use only, and/or temporary health certification	2
						Critical	Temporary structure, special event use only, and/or no health certification	1
	Fountains	Condition	One (1) per fountain	Visual	Audit	Good	Fountain holding water, pump in use during peak hours	4
						Fair	Fountain holding water, pump use limited or problematic	3
						Poor	Fountain leaking, unable to efficiently hold water, pump in use during peak hours or limited use	2
						Critical	Fountain empty, pump not in use	1
	Storm Retention Ponds	Condition	One (1) per storm retention pond	Visual	Audit	Good	If there is consistent water retention, it is in good ecological standing, with healthy plant and wildlife population and adequate aeration; bulk of storm water filtered through within 42-74 hours of storm event	4
						Fair	If there is consistent water retention, it is in average ecological standing, with healthy plant and wildlife population with inadequate aeration; bulk of storm water filtered through within 74-92 hours of storm event	3
						Poor	If there is consistent water retention, it is in poor ecological standing, with healthy plant and wildlife populations absent and no aeration; bulk of storm water filtered through within 74-92 hours of storm event	2

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Special Features (cont.)	Storm Retention Ponds (cont.)	Condition (cont.)	One (1) per storm retention pond	Visual	Audit	Critical	If there is consistent water retention, it is in critical ecological standing, with healthy plant and wildlife populations absent and stagnant water; bulk of storm water released with limited or no filtering after storm event	1
Community Involvement	Patterns of Use/ Events							
		Management Awareness	One (1) per park	Management Plan	Pre-audit/ Post-Audit	Yes	The managers (and therefore the park staff) are aware of user groups, basic patterns of use, park programmed and unprogrammed activities	4
						No	There is little to no awareness of the park user groups, basic patterns of use and/or programmed or unprogrammed park activities	1
		Surveys	One (1) per park	Management Plan	Pre-audit/ Post-Audit	Yes	User patterns and non-user information is sought via user counts, user surveys and/or mail in surveys	2
						No	No user patterns or non-user information is sought	1
		Community Gardens	One (1) per park	Visual	Audit	Yes	Community garden present	3
						No	No community garden present	1
		Community Garden Usage	One (1) per community garden	Visual	Audit	Good	Over 80% of garden plots utilized	4
						Fair	60 to 80% of garden plots utilized	3
						Poor	40 to 60% of garden plots utilized	2
						Critical	20 to 40% of garden plots utilized	1
		Festivals	One (1) per park	Management Plan	Pre-audit/ Post-Audit	Yes	Festivals/ organized events take place in the park	2
						No	No festivals or events take place in park	1
		Educational Facilities	One (1) per park	Management Plan	Pre-audit/ Post-Audit	Yes	Presence of interpretative signage or educational facilities	2
						No	No interpretative signage or educational facilities	1
	Accessi-bility							
		Social	One (1) per park	Management Plan	Pre-audit/ Post-Audit	Yes	Presence of community centre, plaza or meeting area for use by a variety of user groups, preferably with event posting availability	5
						No	No community centre, plaza or meeting area present	1
		Physical	One (1) per park	Visual	Audit	Yes	30% or more of entrances, pathways, rest areas and facilities meet CSA accessibility standards	10
						No	CSA accessibility standards not met in 70% to 100% of the park	1

Major Component	Sub-Component One	Sub-Component Two	Sample Size/ Frequency	Rating Method	Data	Rating	Rating Description	Poss. Rating
Marketing	General and Targeted							
		Information Provision and Interpretation	One (1) per park	Media/ Visual	Post-Audit	Yes	Presentation of park information and general programming through one or more source; including newsletters, annual reports, events calendars, wildlife information and/or websites	4
						No	No presentation of park information readily available	1
		Promotional	One (1) per park	Media/ Visual	Post-Audit	Yes	Park promotion and value to potential investors evident with signage throughout city and parks and with media coverage	4
						No	No park promotion evident	1
		Events/ Festivals	One (1) per park	Media/ Visual	Post-Audit	Yes	Promotion of specific events through signage, media coverage, newsletters, etc.	4
						No	No promotion of specific events	1
		Management	Management Plan					
Management Experience/ Knowledge	One (1) per park			Management Staff	Post-Audit	Yes	Managers have a broad range of skills and information regarding horticultural and environmental issues, marketing public consultation, media management	10
						No	Managers with narrow skill and knowledge set	1
Inter-personnel Communication	One (1) per park			Management Plan	Post-Audit	Yes	Procedure is set in place to avoid poor communication, providing staff with a clear sense of direction	10
						No	No procedure for effective communication in place	1
Budget	One (1) per park			Management Plan	Post-Audit	Yes	Budget set out, and spending within budget, with clear and transparent fiscal allocations	5
						No	Budget not established and/or spending outside budget and/or unclear or non-transparent fiscal allocations	1
Public Service	One (1) per park			Management Plan	Post Audit	Yes	Management plan includes discussion of: how the park contributes to societal issues, the main purpose of the site, who is using it and who is not using it	6
						No	No management plan and/or inclusion of a discussion regarding park contribution to societal issues, main purpose of the park and park users	1
Management Plan Implementation	One (1) per park			Management Plan	Post Audit	Yes	Management plan is actively utilized and implemented	20
						No	Management plan is not actively utilized or implemented	1

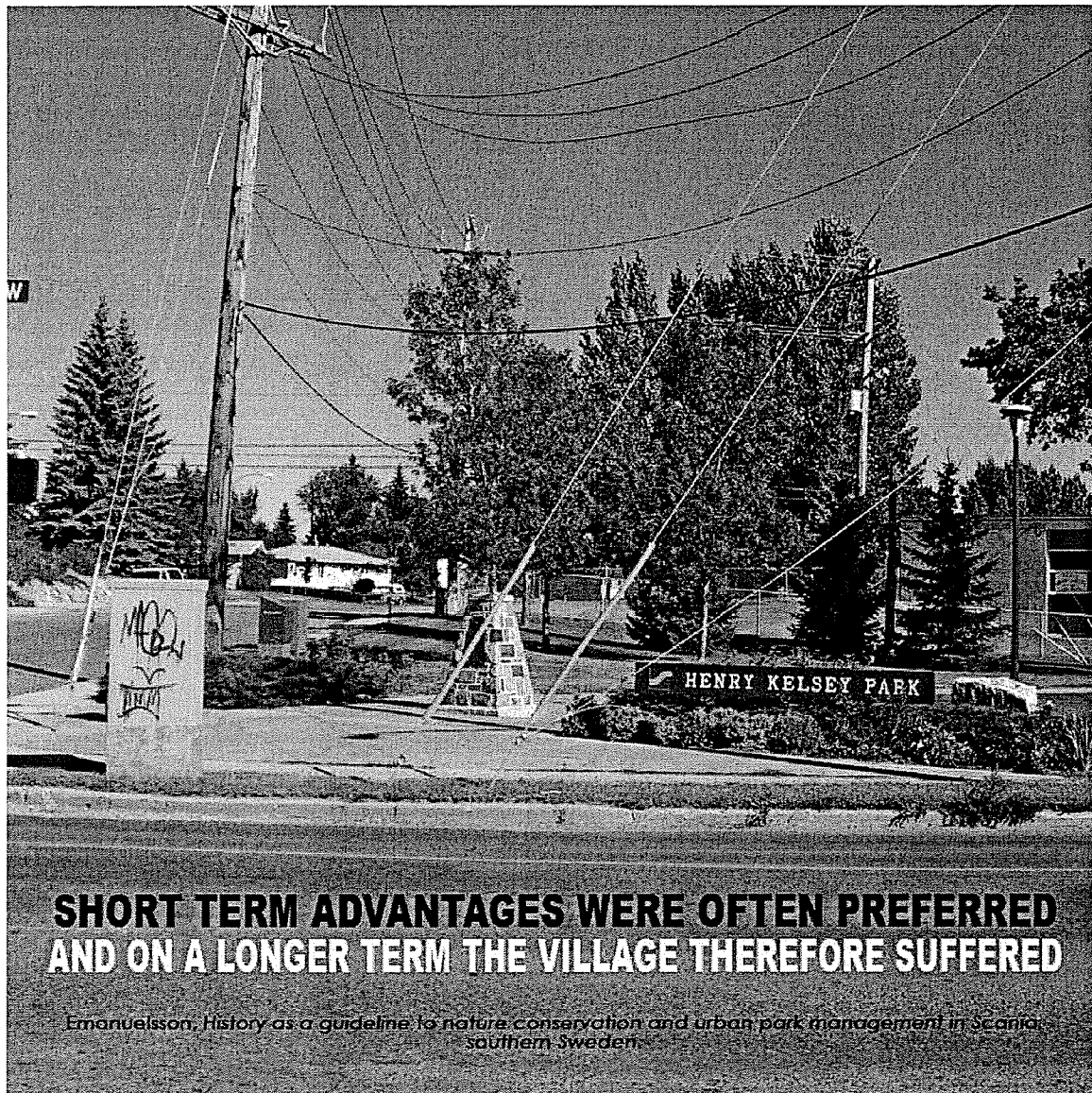


Figure 44. Saskatoon; Henry Kelsey Park.

Conclusions

The design of the Blended Audit System (BAS) has been embedded with the theories and concepts of the presented visual theories and assessment systems. Each level within this linear research builds on the previous and ultimately influences the final product, the BAS.

The connections between management, design and public accountability, discussed within Chapter One, situate the role of the open space audit systems. Park audit systems such as the BAS have the potential to influence the relationship between management design and public accountability in a positive way.

The tourism field, particularly Gunn's notion of 'vacationscape' explored in Chapter Two, has links to open space audit systems. Concepts such as 'easy comprehensibility' and 'capacity to satisfy' are represented within the BAS under the 'patterns of use' and in a broad sense within the rating of physical elements such as lighting and benches. 'Basis in environment' is integrated throughout the vegetation, water feature and irrigation ratings. 'Owner control' is represented with the sections regarding the management plan, the maintenance, marketing and usage patterns.

Visual preference and landscape evaluation theories such as the prospect-refuge, information processing, human habitat and cross-cultural variation form much of the underlying basis for the selection of the major components of BAS and of the point allocation system. It is critical in the development of an audit to explore various theories of why certain physical components may be seen as more important in determining comfort levels and restoration capabilities of open spaces.

In the case of any audit development, it is critical to explore and understand the context in which it functions. Two separate park systems were selected for exploration in this research; the City of Saskatoon parks in Saskatoon, Saskatchewan and the national level of parks in the United Kingdom. Knowledge of each of these systems allowed for a more complete understanding of each of their respective park audit systems; the PICA system and the Green Flag Awards. These systems, along with some other visual

assessments, pedestrian audits and environmental audits that have been briefly explored, have directly influenced the BAS major components, the method of application and the point allocation system. A combination of personal experience and literary understanding have allowed for a blending of these audits to create the BAS.

Each of these research components has ultimately contributed to the final product of this practicum; the Blended Audit System. While the two major audit systems studied in this research, the PICA and the Green Flag Award systems have influenced the BAS, each research component is an integral part of the BAS. This audit has been developed to not only demonstrate a possible practical application of the information and theoretical ideals of public accountability, visual preference and landscape value assignment, but also to demonstrate how each of these relates to landscape architecture. For reasons of increasing environmental awareness, public accountability and tightening budgets, open space and park audit systems should be considered a critical part of any park design. Audit systems encompassing a broad range of physical and social park components, while remaining tailored to specific contexts, such as the PICA, Green Flag Awards or the Blended Audit System, should be in the forefront any park designer's mind.

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Appendix A: Strengths and Weakness of PICA, Green Flag Awards & the Blended Audit System for application in Saskatoon

PICA		Green Flag Award		Blended Audit System	
Strength	Weakness	Strength	Weakness	Strength	Weakness
Development of a fiscal amount to be used for budgetary decisions	Fiscal amounts can fluctuate independently of actual park condition; skewing results	Points system allows for consistent comparison between parks and years	No direct relationship between fiscal decisions and audit results	Points system allows for consistent comparison between parks and years	No direct relationship between fiscal decisions and audit results
Opportunity for flexibility of fiscal value assignment	Fiscal value assignment may not be indicative of societal value assignment	Opportunity for flexibility of points value assignment; indicative of societal value assignment	Point assignment can become reactive rather than proactive to trends	Opportunity for flexibility of points value assignment; indicative of societal value assignment	Point assignment can become reactive rather than proactive to trends
Rating assignment language specific and focused on physical attributes (e.g. "up to 5 broadleaf leaves"); allowing for repeatable results	Rating assignment language specific and focused on physical attributes (e.g. "up to 5 broadleaf leaves"); does not allow for individual situation consideration or social aspects	Rating assignment language (e.g. "appropriate provision for community") allows for personal rating judgments; rating allows for consideration of remarkable conditions	Rating assignment language (e.g. "appropriate provision for community") allows for personal rating judgments; rating assignment may not be repeatable	Rating assignment language and points assignment (e.g. "Over 80% of garden plots utilized") blends rating of physical and social components	Rating assignment language and points assignment (e.g. "Over 80% of garden plots utilized") may not allow for remarkable situations and all components may not be repeatable
Value assign for points allows for fiscal connections	No connection between social values and audit results	Averaging of scores for major sections of audit allows for even rating of components	Averaging of scores for major sections of audit does not allow for connection between social values and audit results	Point assignment allows for connection between social values and audit results	Point assignment not connected to fiscal conditions
Opportunity to identify specific safety issues and problem areas	Numerous safety issues have the ability to inaccurately skew fiscal results and overall park rating	Opportunity to identify general areas of concern; e.g. safety or cleanliness	The lack of specific information may delay response to issues	Opportunity to identify specific safety issues and problem areas independent of points assignment	Fiscal relationship to areas of issues done independently of audit; may not be consistent
Rigorous detail assessed for major audit components	Major audit components not comprehensive in regard to social value assignment	Major audit components include comprehensive social evaluation of parks	Major audit components not assessed with objective detail	Major audit components comprehensive for physical and social components of park	Comprehensive nature of study requires portions of audit to be completed in separate years
Well-received by management as an inaugural assessment	Not well-known in the public realm; mandatory participation may limit motivation for excellence	High park participation levels and aspirations of award excellence; high profile with public,	Volunteer participation may limit the number of parks participating in audit	n/a	n/a

Appendix B: PICA Rating Criteria

Major Component	Sub-Component One	Sub-Component Two	Sample Size	Rating Method	Rating	Rating Description
Turf Areas	Turf Condition	Weed Count	30cm by 30cm	Visual	Good	Up to 5 broadleaf weeds
					Fair	6 to 10 broadleaf weeds
					Critical	Over 10 broadleaf weeds
		Turf Density	30cm by 30cm	Visual/ Touch	Good	Grass blades close together, flat and dark green, appearing as one continuous ground cover, can not see thatch or soil unless blades moved aside
					Fair	Grass blades not close together, individual plants obvious, blades somewhat flat and dark green, thatch or soil can be seen through turf cover
					Critical	Grass blades not close together, blades square and needle-like, thatch or soil is easily seen through turf cove
		Thatch Density	30cm by 30cm	Visual/ Touch	Good	Thatch is visible, but not accumulated when fingers raked through sample area
					Fair	Thatch can be accumulated by raking fingers through, thatch composed primarily of grass clippings
					Critical	Thatch is not evident, turf may be worn or soil compacted or thatch can be readily accumulated by raking fingers through
	Grading		as identified radically or linearly, $\leq 1m$, $1 \leq 5m$, $5 \leq 20m$	Visual	Safety	Visible ponding area poses a safety concern to users
					Plant Growth	Visible ponding area negatively affecting plant growth
	Irrigation		as identified radically or linearly, $\leq 1m$, $1 \leq 5m$, $5 \leq 20m$	Visual	Head Damage	A circular dry patch in an irrigated area
					Dry Turf	A larger area of dry turf to indicated a valve or line problem
					Excess Moisture	A wet or moisture damaged area due to over irrigation
	Turf Wear		as identified radically or linearly, $\leq 1m$, $1 \leq 5m$, $5 \leq 20m$	Visual	Pedestrian	Ruts or wear caused by pedestrian use
					Vehicle	Ruts or wear caused by vehicle use
	Irrigation		as identified, site specific	Visual	Meter Pit Damage	Damage to meter pit, requiring repair/replacement
					Control Cabinet Damage	Damage to control cabinet, requiring repair/replacement
					Valve Box Damaged	Damage to valve box, requiring repair/replacement
Soccer/ Football	Goal Areas		30cm by 30cm	Visual	Good	Grass blades close together, flat and dark green, appearing as one continuous ground cover, can not see thatch or soil unless blades moved aside
					Fair	Grass blades not close together, individual plants obvious, blades somewhat flat and dark green, thatch or soil can be seen through turf cover
					Critical	Grass blades not close together, blades square and needle-like, thatch or soil is easily seen through turf cove
	Centre Field		30cm by 30cm	Visual	Good	Grass blades close together, flat and dark green, appearing as one continuous ground cover, can not see thatch or soil unless blades moved aside
					Fair	Grass blades not close together, individual plants obvious, blades somewhat flat and dark green, thatch or soil can be seen through turf cover
					Critical	Grass blades not close together, blades square and needle-like, thatch or soil is easily seen through turf cove
	Overall Turf Condition	Weed Count	30cm by 30cm	Visual	Good	Up to 5 broadleaf weeds
					Fair	6 to 10 broadleaf weeds
					Critical	Over 10 broadleaf weeds
		Turf Density	30cm by 30cm	Visual, Touch	Good	Grass blades close together, flat and dark green, appearing as one continuous ground cover, can not see thatch or soil unless blades moved aside
					Fair	Grass blades not close together, individual plants obvious, blades somewhat flat and dark green, thatch or soil can be seen through turf cover
					Critical	Grass blades not close together, blades square and needle-like, thatch or soil is easily seen through turf cove

Major Component	Sub-Component One	Sub-Component Two	Sample Size	Rating Method	Rating	Rating Description
Soccer/ Football (cont.)	Overall Turf Condition (cont.)	Thatch Density	30cm by 30cm	Visual, Touch	Good	Thatch is visible, but not accumulated when fingers raked through sample area
					Fair	Thatch can be accumulated by raking fingers through, thatch composed primarily of grass clippings
					Critical	Thatch is not evident, turf may be worn or soil compacted or thatch can be readily accumulated by raking fingers through
	Field Problems		as identified	Visual	Ground Squirrel Damage	Area impacted by burrows
					Grading	Visible ponding, diameter reported
					Irrigation	Area affected by damaged irrigation
Ball Diamonds	Infield Conditions	Layout	one rating per infield	Visual	Yes	Layout of infield proportionally is correct and true to design intent
					No	Layout of infield proportionally is not correct or true to design intent
		Weed Growth	one rating per infield	Visual	Yes	No weeds present
					No	Weeds present
		Surfacing Material	one rating per infield	Visual	Good	Shale
					Fair	Screened aggregate/sand/soil mix
					Poor	Predominantly soil
		Grading	one rating per infield	Visual	Good	Grade is uniform through infield with evidence of recent scarification
					Fair	Grade is uniform except for running paths and surrounding bases, evidence of scarification
					Poor	Grade is uneven, with depressions along running paths and surrounding bases, no evidence of scarification
	Outfield Condition	Weed Count	30cm by 30cm	Visual	Good	Up to 5 broadleaf weeds
					Fair	6 to 10 broadleaf weeds
					Critical	Over 10 broadleaf weeds
		Turf Density	30cm by 30cm	Visual/ Touch	Good	Grass blades close together, flat and dark green, appearing as one continuous ground cover, can not see thatch or soil unless blades moved aside
					Fair	Grass blades not close together, individual plants obvious, blades somewhat flat and dark green, thatch or soil can be seen through turf cover
					Critical	Grass blades not close together, blades square and needle-like, thatch or soil is easily seen through turf cover
		Thatch Density	30cm by 30cm	Visual/ Touch	Good	Thatch is visible, but not accumulated when fingers raked through sample area
					Fair	Thatch can be accumulated by raking fingers through, thatch composed primarily of grass clippings
					Critical	Thatch is not evident, turf may be worn or soil compacted or thatch can be readily accumulated by raking fingers through
		Ground Squirrel	one rating	Visual	Yes	Area affected by ground squirrel damage
					No	Area not affected by ground squirrels
		Turf Problems	as identified, individually	Visual	Ground Squirrel Damage	Area impacted by burrows
					Grading	Visible ponding, diameter reported
					Irrigation	Area affected by damaged irrigation
Pathways	Asphalt	Surface Condition	as identified linearly, ≤1m, 1 ≤ 5m, 6 ≤ 20m, 20 ≤ 100m	Visual	Fair	Aggregate is uniformly held together, some loose particles, cracks up to 3mm wide
					Poor	Aggregate is not uniformly held together, numerous loose particles, cracks over 3mm wide
					Critical	Aggregate is loose, surface appearing gravelly, numerous cracks over 3mm wide
	Bricks/Unit Pavers	Surface Condition	as identified linearly, ≤1m, 1 ≤ 5m, 6 ≤ 20m, 20 ≤ 100m	Visual	Fair	Surface starting to crack, chip, flake, but alignment is still in tact
					Poor	Surface has several cracks, chips or flaking causing slight separation of materials, plant intrusions evident, surface still aligned
					Critical	Surface is rough due to numerous cracks, chips and/or flaking that has caused separation of material more than 5mm in any direction

Major Component	Sub-Component One	Sub-Component Two	Sample Size	Rating Method	Rating	Rating Description
Pathways (cont.)	Concrete	Surface Condition	as identified linearly, $\leq 1\text{m}$, $1 \leq 5\text{m}$, $6 \leq 20\text{m}$, $20 \leq 100\text{m}$	Visual	Fair	Surface starting to crack, chip, flake, but alignment is still in tact
					Poor	Surface has several cracks, chips or flaking causing slight separation of materials, plant intrusions evident, surface still aligned
					Critical	Surface is rough due to numerous cracks, chips and/or flaking that has caused separation of material more than 5mm in any direction, numerous plant intrusions
	Aggregate	Surface Condition	as identified linearly, $\leq 1\text{m}$, $1 \leq 5\text{m}$, $6 \leq 20\text{m}$, $20 \leq 100\text{m}$	Visual	Fair	Surface may show some uneven areas due to erosion or vehicle use, deviations in grade no more than 10mm deep, plant growth along edges
					Poor	Surface may show some uneven areas due to erosion or vehicle use, deviations in grade more than 10mm deep, weeds growing at edges and in middle
					Critical	Surface is rough due to cracking, erosion, or vehicle damage, separation of material more than 10mm. Plant material has shown significant intrusion into sides and surface
	Pathway Width		as identified linearly, $\leq 1\text{m}$, $1 \leq 5\text{m}$, $6 \leq 20\text{m}$, $20 \leq 100\text{m}$	Visual		Noted only if pathway was less than 2.4m wide
Bollards	Condition/Effectiveness		as identified linearly, $\leq 1\text{m}$, $1 \leq 5\text{m}$, $6 \leq 20\text{m}$, $\geq 20\text{m}$	Visual	Ineffective	Bollards vertical, secure and conform to design intent, with random units missing or damaged
					Required	Bollards may not be vertical, secure or conform to design intent, with two or more units missing or damaged
Trees	Tree Health		all tree canopy	Visual	Good	10% or less disease or dieback in canopy
					Fair	10 to 25% disease or dieback in canopy
					Poor	25 to 50% disease or dieback in canopy
					Critical	More than 50% disease or dieback in canopy
	Tree Damage	Trunk	as identified, unit	Visual	Fair	Bark broken, but cambium layer not exposed
					Poor	Bark broken and cambium layer exposed in an area less than 10cm square
					Critical	Bark broken and cambium layer exposed almost completely around tree
		Root	as identified, unit	Visual	Fair	Roots shallow and exposed resulting in damage
					Poor	Roots exposed and damaged in cultivated areas
					Critical	Roots exposed and damaged by excavation
Naturalized Areas	Grass/Herbaceous	Ground Cover	one rating per 20 square metres of bed	Visual	Good	Grass/herbaceous plant material uniformly covering soil, with gaps no less than 1 metre in diameter
					Fair	Grass/herbaceous plant material uniformly but thinly covering soil, with gaps appearing scattered through bed
					Poor	Grass/herbaceous plant material sparsely cover over soil, gaps appear regularly
		Ground Cover Variety	one rating per 20 square metres of bed	Visual	Good	Variety is consistent throughout site, few invasive weeds
					Fair	Limited variety of plant material found throughout site, invasive weed species are colonizing and crowding out desired plants
					Poor	Only one or two plant species throughout site, invasive weed species are dominant
	Trees and Shrubs	Species Variety	one rating per 20 square metres of bed	Visual	Good	All species from plant list are evident and growing
					Fair	Only approximately 50% of species from plant list are evident
					Poor	Less than 25% of species from plant list are evident and growing
		Naturalization	one rating per 20 square metres of bed	Visual	Good	All species from plant list are displaying natural propagation by at least one instance in each planting bed
					Fair	Only approximately 50% of species from plant list are displaying natural propagation by at least one instance in each planting bed
					Poor	Less than 25% of species from plant list displaying natural propagation by at least one instance in each planting bed

Major Component	Sub-Component One	Sub-Component Two	Sample Size	Rating Method	Rating	Rating Description
Naturalized Areas (cont.)	Native Plant Stands	Deadfall	one rating per 20 square metres of bed	Visual	Good	Non apparent
					Fair	Isolated locations
					Poor	Numerous and prevalent throughout area
		Re-Growth	one rating per 20 square metres of bed	Visual	Good	Numerous and prevalent throughout area
					Fair	Evident through 50% of area
					Poor	Limited and hard to locate
			one rating per 20 square metres of bed	Visual	Good	Limited and in small areas, less than 1 metre dia
					Fair	Limited but in larger areas greater than 1 metre in dia
					Poor	Evident throughout and/or in several large areas, greater then 1metre in dia
Shrubs	General Condition		one rating per 20 square metres of bed	Visual	Good	Plants require thinning, little or no leaf development except on outside of plant, less than 25% disease or dieback
					Fair	Plants require thinning, some suckering, between 25 and 50% disease or dieback
					Critical	Plants have excessive suckering, evidence or root or stem rot, numerous old woody branches, over 50% disease or dieback
	Density		one rating per 20 square metres of bed	Visual	Good	Canopy cover thin, plants are healthy
					Fair	Canopy cover does not exist, plants are healthy
					Critical	Canopy cover does not exist, plants are not healthy, irregularly spaced
	Weed Growth		one rating per 20 square metres of bed	Visual	Moderate	Average 5-10 weeds/square metre
					Heavy	Average over 10 weeds/square metre
	Mulch		one rating per 20 square metres of bed	Visual	Adequate	Mulch relatively new, between 50 and 100mm thick, few to no weeds, soil or grass clippings
					Heavy	Mulch over 100mm thick, showing evidence of excessive moisture retention
					Inadequate	Mulch grey in colour and mulch fibers somewhat decayed, between 10 and 25mm thick, contamination with soil and/or other dead plant material
					Critical	Soil visible through mulch or mulch non-existent
Flowerbeds	Soil Condition		every 10 sq. metres of bed	Visual/ texture	Very Good	Soil falls away from trowel and readily falls apart after removal from bed, dispersal of organic matter
					Fair	Soil clings to trowel, some identifiable organic matter
					Poor	Soil clings to trowel, no identifiable organic matter
	Edging		one rating per bed	Visual	Good	Edging line is properly aligned and provides clear distinction between bed and surrounding material
					Fair	Edging line is not properly aligned, but not further off course than 5cm, distinction between bed and surrounding materia
					Poor	Edging line is not properly align or is undistinguishable, edging fails to separated bed from surroundings
	Weed Population		every 10 sq. metres of bed, 25 by 25cm	Visual	Good	June: Less than 10 weeds per sample area July/August: Less than 5 weeds per sample are
					Fair	June: 10-20 weeds per sample area July/August: Less than 10 weeds per sample are
					Critical	June: More than 20 weeds per sample area July/August: Less than 20 weeds per sample are
	Effectiveness of Design		one rating per bed	Visual	Good	Bed is well designed and presents and effective appropriate image to park users or passers by Image is suitable for the context. Maintenance is appropriate for the location and design.
					Fair	Bed is appropriate for the location but design, size or level of maintenance is not appropriate for the location or intent.
					Poor	Bed is poorly designed or inappropriate in this location of the park. Maintenance is weak and bed presents a poor image to users or passers by.

Adapted from City of Saskatoon *Parks Inventory and Condition Audit* , 2005.

Adapted with permission from the City of Saskatoon Parks Branch.

Appendix C: Green Flag Award Rating Criteria

Major Component	Sub-Component One	Acceptable Rating Description
A Welcoming Place	Entrance Signage	-good quality, easy to read -well-maintained, clear of vandalism -states owner information, behaviour guidelines
	Physical Access	-close proximity to public transport -safe pedestrian/vehicle interactions -cycling permitted -restricted vehicle access -clear entrance/exits
	Social Access	-meets requirements of local groups -universally accessible -benches/rest areas accessible and frequent, with semi-private spaces incorporated into design -hosts a rich and adventurous series of events to attract new users -staff easily identifiable
	Aspects of Design	-design is attractive, innovative, timeless, appropriate and fits within its surrounding context and maintenance regime -blandness is avoided, art/craftsmanship level is high -stylistic innovation is encouraged -usage of durable and environmentally sustainable material -temporary structures avoided for long-term usage -design is suitable for financial limitations -planting should not be high maintenance
Health & Safety	Well Being	-promotes healthy living choices -inclusion of fitness trails/jogging routes, guided health walks -development and promotion of park as sports venue -inclusion of semi-private rest areas -children/young people encouraged to physically play
	Equipment & Facilities	-toilets, drink water fountains, first aid/emergency information provided -utilization of trees for shade surrounding play structures/ sports field -children's play equipment to meet national standards, be safe and appropriately placed, equipment functions properly -dogs excluded from play areas -hard surfacing well-drained, clean and free from hazards
	Security	-adequate supervision in parks/play areas, promotion of play areas that are available only to adults if accompanying a child -adequate government co-ordination with local and national levels regarding security and involvement of local community -use of design factors to prevent unsafe conditions, lighting in areas used at night with police/citizen patrols -little to no cash being handled on site -hazards clearly marked
	Dog Control	-adoption of Dogs Act 1996 -creation of dog-free zones -provision of dog waste bins in dog areas -promotion of responsible dog ownership through programming choices (i.e. dog shows)
Maintenance & Cleanliness	Litter & Waste	-chewing gum disposal awareness -attractive well-maintained litter bins -implementation of staff policy (at all levels) to pick up trash when they see it -litter collection directly following peak hours -waste storage out of site and waste transported off site as quickly as possible -composting of horticultural waste
	Grounds Maintenance	-high standard of maintenance; regular shrub pruning, flowerbeds weeded regularly, lakes managed as healthy ecosystems, edges of grassed areas trimmed and mowed -grounds maintenance contracts not evaluated only on cost, consideration of awarding smaller, specialized contract to highly trained specialists -public involved whenever possible
	Building Management & Maintenance	-buildings should be used and well cared for, including maintenance of brickwork, roofing, guttering, woodwork, painted surfacing -refurbishment should improve building look/function/sustainability -new buildings fit into design context and current environmental standards
	Equipment Maintenance (Staff)	-staff are appropriately trained with equipment with only trained staff operated cutting -risk assessment regarding equipment usage in place -high level of operational maintenance for equipment -surface and foul water drains appropriately marked
	Equipment Maintenance (Public)	-daily visual inspections -weekly technical inspections for equipment -annual inspections by independent specialists

Major Component	Sub-Component One	Acceptable Rating Description
Conservation & Heritage	Cultural	-reflection of the relationship between people and their surroundings -design considers recommendations from English Heritage
	Water Management	-water use efficient -separate management plans for water features as healthy ecosystems -prevention of leaf (and other) litter from entering waterways -use of borehole water to supply static water features -marginal and aquatic vegetation establishment -management and control of fish and wildfowl numbers -water features have gentle slopes -impacts of recreational uses are considered with evidence in design and management of water features
	Trees & Woodlands	-identification of woodland areas, value placed on older stands -ecological assessments carried out with management plans in place -woodlands created when appropriate with various canopy levels -when indigenous plant material is introduced, it is locally collected and grown -dead wood and decaying material left when appropriate
	Grasslands	-establishment of meadow areas within park; clear establishment of boundaries with mowing strips between formal lawns and naturalizing meadows -use of grazing animals for meadow management when appropriate -meadow and naturalized grasslands relate to the design context
	Other Habitats	-establishment of wetlands, heath lands, salt marshes, inter-tidal mud areas where appropriate to surrounding context
	Fauna	-creation of right habitats for wild animals -presence of nest boxes for birds and bats -creation of fenced off areas for bird/wildlife establishment -introduction of animals only to suitable ecosystems -incorporation of bird feeding stations for public interest
	Geological/ Physical Features	-utilization of experts to identify notable features -development of education and interpretation materials to highlight features -creation of geological interest by identify in rocks used in curbs, paving and other hard landscaping elements
	Conservation (Landscape)	-identification and protection of the relationships between the landscape features by incorporating into master design and park management
	Conservation (Built Environment)	-identification of important built structures; development of a management plan in accordance with subsequent requirements -attempts have been made to help park users to understand the importance of the buildings
	Historical Character	-important views and vistas are maintained -style and standard of horticultural displays harmonize with the site's historical character -efforts have been made to provide for continuity in historic collection of trees, shrubs and ornamental architectural detailing -replacement features conserve or enhance the site's historic character -historic features are intact and in use
Community Involvement	Patterns of Use	-managers and Friends Groups demonstrate basic understanding of patterns of use, number of parks users, main attractions of each park -usage numbers and patterns are monitored -household surveys utilized
	Local User Involvement	-delegation of children's play areas, boating lakes, wildlife areas, horticultural therapy gardens, sports facilities, youth shelters, street sport sites to specialized community groups -established posts for park rangers, community park officers, play workers, sports staff, dog wardens and neighbourhood wardens
	Facilities	-park demonstrates appropriate level of facility provisions for many sectors of community -events and festivals are controlled in regard to advertising and commercial opportunities and frequency of events
	Children's Play	-children's play is encouraged throughout the site, not just in designated areas -involvement of children in play area decisions -play policy in place in management plan
	Educational Facilities	-commitment to environmental education evident; simple walking programmes, areas of park designated for educational usage, school holiday programming
	Open4all	-park meets requirements of Disability Discrimination Act 1995

Major Component	Sub-Component One	Acceptable Rating Description
Marketing	Information Provision & Interpretation	-presentation of information and interpretation; newsletters, annual reports, events calendars, wildlife information, site management plans, regular press releases, promotion of parks, website inclusion
	Events	-incorporation of events suitable for park size and design and community groups
	Promotion	-parks promotion evident in signage, media coverage, notice-boards throughout park and city -clear information about park and its value available for potential funders
	Green Flag Award Marketing	-past Green Flag Awards utilized in park promotional literature
Management	Public Service	-discussion within management plan of how park contributes to societal issues, the main purpose of site, who is using it and who is not
	Personnel	-managers have a broad range of skills and information regarding horticultural and environmental issues, marketing, public consultations, media management -plan is in place to help: eliminate poor communication, provide staff with a clear sense of direction and make clear links with other key areas of council policies with relation to park management
	Financial	-spending within budget -management plan sets forward financial priorities, future investments, pricing policies and plans for raising revenue
	Implementation	-management plan is actively utilized

Information summarized from Green Flag Award website.

Available at: <http://www.greenflagaward.org.uk/manual/>. Accessed May 2007.

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Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %		
Landscaped/ Horticultural Areas (cont.)	Shrubs			0							0	0			
		Shrub Variety	Yes	3											
			No	1											
		Shrub Health	Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
			Weed Growth	Yes	1										
		No		4											
		Mulch	Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
		Flower- beds			0							0	0		
		Plant Variety	Yes	3											
	No			1											
	Plant Health		Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
			Weed Growth	Yes	1										
	No			4											
	Edging		Yes	3											
			No	1											
	Turf				0							0	0		
	Irrigation Type		Irrigated	n/a											
				Dryland	n/a										
			Weed Count	Good	4										
				Fair	3										
		Poor		2											
		Critical		1											
		Turf Quality	Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
	Turf Maintenance			0							0	0			
	Mowing	Good	4												
			Fair	3											
			Poor	2											
			Critical	1											
		Aeration	Yes	2											
			No	1											
		Fertilization	Yes	2											
			No	1											
		Pest Control	Yes	2											
			No	1											
		Irrigation Performance	Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
Grading Problems				0							0	0			
Turf Wear	Pedestrian	n/a													
		Vehicle	n/a												
	Irrigation Problems	Head damage	n/a												
		Valve damage	n/a												
		Control box damage	n/a												
		Sensor damage	n/a												
	Moisture	n/a													
Total Achieved Landscaped Areas										0	0	#####			

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Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %		
Sportsfields (cont.)	Sportsfield Turf Maintenance (cont.)	Pest Control	Yes	2											
			No	1											
		Irrigation Performance	Good	4											
			Fair	3											
			Poor	2											
			Critical	1											
		Irrigation Problems	Head damage	n/a											
			Valve damage	n/a											
			Control box damage	n/a											
			Sensor damage	n/a											
		Moisture	n/a												
	Ball Diamond Infield	Layout		0								0	0		
			Yes	3											
		Weed Growth	No	1											
			Yes	1											
		Surface material	No	2											
			Good	3											
			Fair	2											
		Grading	Poor	1											
			Good	3											
			Fair	2											
			Poor	1											
	Football/Soccer	Layout		0								0	0		
			Yes	3											
		Goal Post	No	1											
			Good	4											
			Fair	3											
			Poor	2											
	Basketball	Layout	Critical	1											
				0								0	0		
		Basketball Hoops	Yes	3											
			No	1											
	Skatepad	Layout		0								0	0		
			Yes	2											
		Surface material	No	1											
			Good	4											
			Fair	3											
			Poor	2											
		Components	Critical	1											
			Good	4											
			Fair	3											
			Poor	2											
	Off leash dog area	Perimeter	Critical	1											
			Yes	4											
			No	1											
				0								0	0		
		Waste control	Good	4											
			Fair	3											
		Children's Play Areas	Layout	Poor	2										
				Critical	1										
Accessible			Yes	2											
			No	1											
Surfacing	Yes	2													
	No	1													
Total Achieved Sportsfields				0							1	0	0.0		
Infrastructure	Facilities			0							0	0			
		Trash Bins	Yes	2											
			No	1											

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %			
Infrastructure (cont.)	Facilities (cont.)	Benches/ Seats	Good	4												
			Fair	3												
			Poor	2												
			Critical	1												
		Washrooms	Good	4												
			Fair	3												
			Poor	2												
			Critical	1												
		Lighting	Good	4												
			Fair	3												
			Poor	2												
			Critical	1												
		Lighting Scheme	Good	4												
			Fair	3												
Poor	2															
Critical	1															
Total Achieved Infrastructure											0	0	#####			
Special Features	Historic Structures	Condition		0								0	0			
			Good	4												
			Fair	3												
			Poor	2												
	Sculptures/ Art Placement	Condition		0								0	0			
			Good	4												
			Fair	3												
			Poor	2												
		Critical		1												
				0												
			Good	4												
			Fair	3												
		Poor		2												
			Critical		1											
					0											
				Good	4											
		Fair			3											
			Poor		2											
				Critical		1										
						0										
	Amphl- theatres	Condition				0								0	0	
			Good		4											
			Fair	3												
			Poor	2												
		Critical		1												
				0												
			Good	4												
			Fair	3												
		Poor		2												
			Critical		1											
				0												
Good				4												
	Fair			3												
		Poor		2												
			Critical		1											
					0											
	Good				4											
		Fair			3											
			Poor		2											
				Critical		1										
Total Achieved Special Features													0	0	#####	
Community Involvement	Patterns of Use/ Events	Management Awareness				0								0	0	
			Yes		6											
		Surveys	No	1												
			Yes	2												
			No	1												
			Yes	3												
		Community Gardens	No	1												

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %	
Community Involvement (cont.)	Patterns of Use/ Events (cont.)	Community Garden Usage	Good	4										
			Fair	3										
			Poor	2										
			Critical	1										
		Festivals	Yes	2										
			No	1										
	Educational Facilities	Yes	2											
		No	1											
	Access-ibility			0								0	0	
		Social	Yes	5										
			No	1										
		Physical	Yes	10										
No	1													
Total Achieved Community Involvement											0	0	#####	
Marketing	General and Targeted			0								0	0	
		Information Provision and Interpretation	Yes	4										
			No	1										
		Promotional	Yes	4										
			No	1										
		Events/ Festivals	Yes	4										
			No	1										
Total Achieved Marketing											0	0	#####	
Management	Management Plan			0								0	0	
		Management Experience/ Knowledge	Yes	10										
			No	1										
		Inter-personnel Communication	Yes	10										
			No	1										
		Budget	Yes	5										
			No	1										
		Public Service	Yes	6										
			No	1										
		Management Plan Implementation	Yes	20										
No	1													
Total Achieved Management											0	0	#####	
Overall Park Rating (%)													####	

Notes:

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Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %
Landscaped/ Horticultural Areas (cont.)	Shrubs	Shrub Variety	Yes	0							0	0	
			No	3									
		Shrub Health	Good	1									
			Fair	4									
			Poor	3									
			Critical	2									
		Weed Growth	Yes	1									
			No	4									
		Mulch	Good	4									
			Fair	3									
			Poor	2									
			Critical	1									
	Flower- beds	Plant Variety	Yes	0							0	0	
			No	3									
		Plant Health	Good	1									
			Fair	4									
			Poor	3									
			Critical	2									
		Weed Growth	Yes	1									
			No	4									
		Edging	Yes	3									
			No	1									
	Turf	Irrigation Type	Irrigated	8							1	7	87.5
			Dryland	n/a	Y								
		Weed Count	Good	n/a	4								
			Fair	4									
			Poor	3									
			Critical	2									
		Turf Quality	Good	1									
			Fair	4	3								
			Poor	3									
			Critical	2									
	Turf Maintenance	Mowing	Good	14							1	8	57.1
			Fair	4	4								
			Poor	3									
			Critical	2									
		Aeration	Yes	1	2								
			No	2									
		Fertilization	Yes	1	1								
			No	2									
		Pest Control	Yes	1	1								
			No	2									
		Irrigation Performance	Good	4									
			Fair	3									
			Poor	2									
			Critical	1	n/a								
	Grading Problems	Turf Wear	Pedestrian	0							0	0	
			Vehicle	n/a	Y								
		Irrigation Problems	Head damage	n/a									
			Valve damage	n/a									
			Control box damage	n/a									
			Sensor damage	n/a									
			Moisture	n/a									
				n/a									
Total Achieved Landscaped Areas											4	25	63.4

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %
Native/ Naturalized Areas	Characteristics	Origin	Natural	4							1	3	75.0
			Manmade	n/a	Y								
		Value	High	4									
			Medium	3	3								
			Low	2									
	Tree/ Shrub Naturalized Areas	Type		12							1	10	83.3
			Riparian	n/a									
			Inland multilayer canopy	n/a	Y								
		Species Variety	Single Canopy	n/a									
			Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
		Re-growth	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
		Weed Infestation	Good	4									
			Fair	3									
			Poor	2	2								
			Critical	1									
	Grassland/ Wetland/ Herbaceous Areas	Type		11							1	10	90.9
			Riparian	n/a									
			Inland Multilayer Canopy	n/a									
		Establishment of Boundaries	Single Canopy	n/a	Y								
			Yes	3	3								
		Species Variety	No	1									
			Good	4									
			Fair	3	3								
			Poor	2									
			Critical	1									
		Ground Cover	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
Total Achieved Naturalized Areas											3	23	83.1
Sportsfields	Type of Field	n/a	n/a	n/a									
	Sportsfield Turf Areas			102							3	50	49.0
		Irrigation Type		n/a		Y							
			Dryland	n/a	Y								
		Weed Count	Good	4									
			Fair	3	3	3		3	3	3			
			Poor	2		2	2						
			Critical	1									
		Turf Quality	Good	4				4	4				
			Fair	3	3	3			3	3			
			Poor	2		2	2						
			Critical	1									
		Turf Wear	Yes	1	1								
			No	2		2							
	Sportsfield Turf Maintenance			28							2	22	78.6
		Mowing	Good	4	4	4							
			Fair	3									
			Poor	2									
			Critical	1									
		Aeration	Yes	2	2	2							
			No	1									
		Fertilization	Yes	2		2							
			No	1	1								

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %
Sportsfields (cont.)	Sportsfield Turf Maintenance (cont.)	Pest Control	Yes	2	2	2							
			No	1									
		Irrigation Performance	Good	4									
			Fair	3		3							
			Poor	2									
			Critical	1	n/a								
		Irrigation Problems	Head damage	n/a									
			Valve damage	n/a	Broken in NW corner								
			Control box damage	n/a									
			Sensor damage	n/a									
			Moisture	n/a									
	Ball Diamond Infield			11							1	9	81.8
		Layout	Yes	3	3								
			No	1									
		Weed Growth	Yes	1									
			No	2	2								
		Surface material	Good	3									
			Fair	2									
			Poor	1	1								
		Grading	Good	3	3								
			Fair	2									
			Poor	1									
	Football/Soccer			7							1	7	100.0
		Layout	Yes	3		3							
			No	1									
		Goal Post	Good	4		4							
			Fair	3									
			Poor	2									
			Critical	1									
	Basketball			6							1	4	66.7
		Layout	Yes	3	3								
			No	1									
		Basketball Hoops	Yes	3									
			No	1	1								
	Skatepad			10							1	10	100.0
		Layout	Yes	2	2								
			No	1									
		Surface material	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
		Components	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
	Off leash dog area			0							0	0	
		Perimeter	Good	4									
			Fair	3									
			Poor	2									
			Critical	1									
		Waste control	Yes	4									
			No	1									
	Children's Play Areas			6							1	4	66.7
		Layout	Yes	2	2								
			No	1									
		Accessible	Yes	2									
			No	1	1								
		Surfacing	Yes	2									
			No	1	1								
Total Achieved Sportsfields											10	106	77.5
Infrastructure	Facilities			90							5	15	16.7
		Trash Bins	Yes	2									
			No	1	1								

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %
Infrastructure (cont.)	Facilities (cont.)	Benches/ Seats	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
		Washrooms	Good	4									
			Fair	3	3								
			Poor	2									
			Critical	1									
		Lighting	Good	4									
			Fair	3	3								
			Poor	2									
			Critical	1									
		Lighting Scheme	Good	4	4								
			Fair	3									
			Poor	2									
			Critical	1									
Total Achieved Infrastructure											5	15	16.7
Special Features	Historic Structures	Condition		0							0	0	
			Good	4									
			Fair	3									
			Poor	2									
	Sculptures/ Art Placement	Condition		0							0	0	
			Good	4									
			Fair	3									
			Poor	2									
			Critical	1									
	Observation Decks/ Look Outs	Condition		0							0	0	
			Good	4									
			Fair	3									
			Poor	2									
	Amphitheatres	Condition		0							0	0	
			Good	4									
			Fair	3									
			Poor	2									
	Vendors	Condition		4	4						1	4	100.0
			Good	4									
			Fair	3									
			Poor	2									
	Fountains	Condition		0							0	0	
			Good	4									
			Fair	3									
			Poor	2									
	Storm Retention Ponds	Condition		4	4						1	4	100.0
			Good	4									
			Fair	3									
			Poor	2									
			Critical	1									
Total Achieved Special Features											2	8	100.0
Community Involvement	Patterns of Use/ Events	Management Awareness		19							1	11	57.9
			Yes	6	6								
			No	1									
		Surveys	Yes	2									
			No	1	1								
		Community Gardens	Yes	3									
			No	1	1								

Major Component	Sub-Component One	Sub-Component Two	Rating	Num. Value/ Poss. Value	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	Rating 6	No. of Ratings	Ttl. Achieved Sum	Ttl. %	
Community Involvement (cont.)	Patterns of Use/ Events (cont.)	Community Garden Usage	Good	4										
			Fair	3										
			Poor	2										
			Critical	1										
		Festivals	Yes	2										
			No	1	1									
		Educational Facilities	Yes	2	2									
			No	1										
	Access-ibility			15								1	6	40.0
		Social	Yes	5	5									
			No	1										
		Physical	Yes	10										
No	1		1											
Total Achieved Community Involvement											2	17	48.9	
Marketing	General and Targeted			12								1	12	100.0
		Information Provision and Interpretation	Yes	4	4									
			No	1										
		Promotional	Yes	4	4									
			No	1										
		Events/ Festivals	Yes	4	4									
	No	1												
Total Achieved Marketing												1	12	100.0
Management	Manage-ment Plan			51								1	83	162.7
		Management Experience/ Knowledge	Yes	10	10									
			No	1										
		Inter-personnel Commun-ication	Yes	10										
			No	1	1									
		Budget	Yes	5										
			No	1	1									
		Public Service	Yes	6										
			No	1	1									
		Management Plan Implemen-tation	Yes	20	70									
	No	1												
Total Achieved Management												1	83	162.7
Overall Park Rating (%)													80.0	

Notes:

NW corner of hedge row recently trimmed to ground, may need some infill planting.
Hot air balloons are commonly launched from this park.