

Understanding and Creating Accessible Playgrounds

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Abstract

Playgrounds play a vital role in a child's daily physical activity and social interactions. However, when playgrounds are inaccessible, many people become isolated from those activities and their community. Accessibility is a term that is becoming more common and many communities are striving to make the built environment accessible to everyone. Accessibility is about inclusion and making information and activities available to the broadest possible audience by removing barriers that prevent their participation in society. The purpose of this project is understand and explain the importance of accessibility within a playspace in order to produce a resource guide on how to create a new accessible playground, or update an existing playground. To do this, interviews were conducted with key informants to identify themes, and understand the barriers that affect the creation of an accessible playspace. An environmental scan was conducted to help identify shortcomings of playgrounds that need to be addressed. Playground audits were also conducted to identify current barriers of playgrounds that are limiting. Key findings suggest that accessibility is an increasing issue among governments, communities and individuals. The entire playspace should be accessible and inviting to all those who wish to take part in a play experience. Small changes made to existing playgrounds to make them more accessible is an important step in obtaining inclusivity. Limitations to this project include inability to create the ideal playground, locating Canadian companies, and arranging interview times that worked for both parties. It is suggested that future research look into both child and adult perspectives of playground design, and possibly conducting mock demonstrations to further understand where barriers exist on the playground. It is also suggested that future research looks at equipment more in-depth and the advantages or disadvantages for various special needs.

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Chapter 1- Introduction

Play is one of the most fundamental components to healthy child development. The International Play Association's declaration recognizes the Child's Right to Play, and emphasizes the vital role play has in helping children develop to their full potential (International Play Association, 1989, 2007). It allows children to develop not only physically, but also intellectually, socially, and emotionally. Schools play a vital role in providing an inviting atmosphere that allows children the opportunity to explore their environment, build social relationships, use their imaginations, partake in physical activity, and most importantly a space to have fun!

Playgrounds are a place where children can use the apparatus however they want, and they are able to engage in both independent and co-operative play. The playground is a space that fosters play. A well-designed playground allows for unstructured play that is creative and imaginative, free from the contexts of structured play (personal interview with recreation therapist, 2008). However, due to barriers, not all children are able to use the playground in a similar way. Many playgrounds in the past have been designed and built without considering accessibility, and those with disabilities, especially motor impairments, have been limited by the play structure.

When discussing accessible playgrounds, children are the main point of reference but it should be made clear that playgrounds are also used by people of varying abilities, including children, adults, and seniors as well as parents with strollers or wagons, and people who are providing assistance to those with special needs. Playgrounds are free to be used by anyone and are not just confined to children.

The experiences of children with disabilities on the playground will not be the same as children who do not have a disability. Through education and awareness, and hopefully through this project, thoughts about accessibility will begin the change. When children with disabilities and special needs are not able to experience the same level of social interaction, they can begin to develop low self-esteem, isolation, and can even be labeled as a “loner” by other children (Blatchford, 1998). By making playgrounds accessible, all children can experience the playground in similar ways.

Accessibility is extremely important because every member of society, no matter what their abilities, should feel as though they are a part of the community. Accessibility has also recently become an important issue in Ontario since the government has proposed to make the province barrier-free by 2025 (Ontario Ministry of Community and Social Affairs, 2005). If this goal is to be achieved, playgrounds cannot be overlooked because they play such a large role in child development and inclusion.

1.1 Purpose

This project was developed in conjunction with the Peterborough Victoria Northumberland Clarington Catholic District School Board and two fourth-year Honours Geography students at Trent University in Peterborough, Ontario. The main goal of the project was to develop a resource guide on how to create a new accessible playground, or update an existing playground, in order to support a variety of special needs students. The five key research objectives were:

1. Compare old playground equipment to new accessible equipment.
2. Recommend playground layouts and equipment.
3. Seek possible distributors of suitable equipment related to various needs, and identify costs.
4. Conduct a general playground audit that can be used by schools to identify particular needs.

5. To understand and describe how playgrounds
 - Create a sense of inclusion
 - Provide opportunities for physical activity
 - Provide opportunities for social interaction

1.2 Overview of Approach

In order to gain an understanding of the types of barriers school-yard playgrounds pose for children who have disabilities or special needs, qualitative methodologies were used. Qualitative methods help researchers understand how humans arrange themselves and their settings, and how they make sense of their surroundings through interactions and attitudes (Mansvelt & Berg, 2005). Qualitative methods were appropriate for this project because we were interested in people's opinions and attitudes towards accessibility and play, which would help us understand barriers in the built environment, and allowed us to develop alternative suggestions. The methods we used include an environmental scan, semi-structured interviews, and playground audits. The environmental scan helped us understand how the province of Ontario and the City of Peterborough are working towards breaking down barriers that people with disabilities experience. We chose to use interviews because they helped us collect a diversity of meanings, opinions, and experiences as well as helped us to develop prominent themes regarding accessibility and the value of play (Dunn, 2005). The playground audits gave us a first-hand look at existing and potential barriers that equipment poses for children with disabilities on an everyday basis.

1.3 How this Project is Geographically Situated

The research is situated both within social and recreation geography. The focus of recreation geography applicable to this project includes land uses and the use of space in

providing planned facilities and interactions. Social geography looks at social relations and the spatial structures that underpin those relations. Most importantly, this project corresponds well with the geography of disabilities. This is the study of society's interactions with people with physical and/or mental impairments and the effects of such interactions of the capacities of disabled people to lead independent lives (Johnston, Dictionary of Human Geography, 2000).

Accessible playgrounds identifies with the social model of disability. This means that people with impairments are defined, categorized, and marked out as disabled by social attitudes, values and practices. Because space, such as playgrounds, is seen as disabling, understanding and describing how to make space accessible and inclusive are important aspects to the project.

1.4 Key Terms

A list of key terms has been provided in order to curb any misunderstandings that may occur due to differing perspectives of terminology throughout the research.

Accessibility – At the linguistic, practical, and philosophical levels, is about inclusion and making information and activities available to the broadest possible audience.

Inclusion – Participation of all individuals despite having a disability.

Accessibility Standard – A rule that persons and organizations have to follow to identify, remove and prevent barriers to accessibility.

Barrier – Anything that keeps someone with a disability from participating fully in society because of his or her disability. A barrier can be visible or invisible. An example of a visible barrier is a building with steps but no ramp. An example of a barrier that is

invisible is a policy that sets a time limit for completing a test for employment or for training or promotion opportunities.

Disability – The Accessibility for Ontarians Act uses the Ontario Human Rights Code’s definition of “disability”. This definition includes physical, mental health, developmental and learning disabilities. A disability may be visible or invisible.

Impairment – Attributes of a person with a disability. For example, hearing impairment, learning difficulties.

Recreation – Any pursuit, activity (or even inactivity) that is undertaken voluntarily during leisure time primarily for the purposes of pleasure, enjoyment and satisfaction. (Johnston, Dictionary of Human Geography, 2000)

Playspace – An area containing play equipment, a play structure(s), protective surfacing, etc., that is intended for the use of children between the ages of 18 months and 12 years (Canadian Standards Association, 2003).

Built Environment – physical features of a building, room or public space

1.5 Structure of the Report

This project consists of 5 chapters. The first chapter was the introduction to the project which gave an overview of the purpose, the study approach and some key terms. Chapter 2, the literature review, provides background information that informed the structure of this project. Chapter 3 discusses the methodologies used in conducting the research. The methods we used include an environmental scan, semi-structured interviews, and playground audits. Next, chapter 4 provides readers with the main findings of the research, advising the main themes derived from the interviews and

guiding suggestions for the construction or retrofitting of playgrounds. Finally, Chapter 5 is a detailed discussion and interpretation of the findings, limitations of the current study as well as concluding comments and suggestions for future research.

Chapter 2- Literature Review

The literature review will provide background information regarding disability and the built environment, barriers to accessibility, inclusive social environments, and equipment. We reviewed literature from textbooks, geographical journals, and government publications in order to understand a wider context of findings among past and current literature.

2.1 An Ableist Culture

In a society organized around non-disabled lifestyles, living with a disability can make daily living a challenge. Many of the difficulties people with disabilities face are caused more by people's attitudes than from the disability itself (Government of Ontario Ministry of Community and Social Services, 2005). Participants in a study of individuals with disabilities described the built environment as hostile and infused with able-bodied values (Imrie & Kumar, 1998). For many people with disabilities, access to specific spaces is a constitutive part of how they come to be defined and recognized (Imrie & Kumar, 1998). Different ideas exist about what disability means. To some it may mean an inborn or acquired impairment preventing or impeding daily functioning. Pacione (2001) explains that disability is a socially constructed idea perpetuated by our ableist culture. The majority of people are considered able-bodied and, therefore, the needs of the minority group, in this case, those with a disability or impairment, are often overlooked. Consider the job market to start. Most jobs, especially those in urban design and planning belong to people without a disability. According to a study by Imrie and Hall (2001), developers' definitions of disability show a limited notion of what disability is. When considering the accessible playground, a lack of awareness and co-operation

between key people causes people with disabilities, children especially, to lack representatives (Prellwitz & Tamm, 1999).

2.2 Barriers to Accessibility

Most important to our daily living is the built environment, which significantly influences social and economic opportunities (Imrie and Hall, 2001). Urban design has created barriers, perhaps not intentionally, for those who are considered disabled or even reducing disability to a singular form of mobility impairment such as wheelchair access (Imrie, 2000). Removing barriers that limit children's exploration will support their need for independent, self-directed play (Karsten, 2003). Due to the barriers that exist on the playground, children with disabilities can lack socialization skills important to their development, but most of all, they feel excluded from their peers. Through interviews, Malkusak (2002) found that children just wanted a place to "hang out" with their friends and play on equipment that allowed all of their friends to play along with them. Imrie (2001) argues that for disabled people, the physical construction of urban space often produces distinctive spatialities of demarcation and exclusion. This means that those with impairments have limited access to a variety of services and are not provided with guides for navigation. People with disabilities therefore are prevented from doing what others take for granted (Imrie & Kumar, 1998).

In their focus groups, Imrie and Kumar (1998) came to understand how disabled people may have an oppressive relationship with the city. The participants reported feeling different and of lesser value than their able-bodied counterparts. Many researchers have also discussed this "oversight" as a failure to appreciate the needs of those with

impairments more specifically being called architectural apartheid or discriminatory architectural design (Imrie & Kumar, 1998; Imrie, 2001).

2.3 Financial Considerations

While the local community and provincial government have made some initiatives to make all public spaces and the built environment accessible, there is still much more work that needs to be completed if Ontario is to become fully accessible by 2025. Unfortunately, building new accessible playgrounds is extremely expensive and can cost anywhere from \$350,000 to \$850,000, or more (Roberts, 2005). When interviewing key persons in the building and construction industry, Prellwitz & Tamm (1999) found that because the financial considerations to adapt playgrounds, or even consult with professionals to understand how to make playgrounds accessible, are so high, often full accessibility was overlooked with only minor considerations. Imrie and Kumar (1998) describe this as disability being a cost concern for society. Due to this “cost concern”, many accessible playgrounds have been built through fundraising efforts by parents of children with disabilities (Roberts, 2005). Fundraising provides the opportunity to receive money towards an accessible playground and it also provides the opportunity to promote awareness of accessibility. Most people may not even recognize how inaccessible playgrounds truly are until they have had an experience for themselves.

2.4 Effects of Inaccessibility

When children with disabilities are unable to enjoy the playground because it is exclusionary or inaccessible, they become isolated and do not benefit from positive social interactions as they would if their playground was fully accessible. In the past,

accessibility was not an important issue surrounding the healthy development of children and the construction of playgrounds. Research indicates that children with disabilities lack social interaction, which affects them negatively as they grow older (Hughes, 1990). Playgrounds are becoming more researched as they are an important mechanism in providing space for children to encounter other children, build on social networks, exercise the right to make choices, have physical and sensory experiences, and be actively involved in their learning (Roberts, 2005; Schappet, Malkusak, & Bruya, 2003).

2.5 Elements of Integration

Elements of integration are important because it is crucial to understand inclusive social environments and how they are applied to children. In a study conducted by van de Ven et al. (2005), in-depth interviews were conducted to create a model of successful integration based on the experiences of people with disabilities and their close social environments. Through these interviews, the researchers gained insight into how people with disabilities feel about integration and interactions with others. Negative images that people have of people with disabilities are often what constrain these interactions. Also, through the interviews the researchers developed five elements of what integration means to persons with disabilities. These are (i) functioning in an ordinary way without special attention, (ii) mixing with others without being ignored, (iii) taking part in and contributing to society, (iv) utilizing opportunities, and (v) being the director of one's own life (van de Ven et al., 2005). It is obvious that people with disabilities have a great desire to interact "normally" with their peers and contribute to a greater social identity. For children, this starts at school and on the playground. Peer interaction fosters positive social development which can enhance functioning later on in life. Continuous social

isolation and few opportunities to experiment with objects in the surrounding environment can lead to a reduction in the child's exchange of information with his or her surroundings, making them more dependent on adults (Prellwitz & Tamm, 1999).

Dependency does not allow for people with disabilities to be the director of their own life and causes a vicious cycle and downward spiral of independence and functioning in an ordinary way. Accessible playgrounds will foster development in the five elements of integration discussed by van de Ven et al. (2005).

2.6 Equipment and Standards

Finally, it is essential to understand what makes accessible playgrounds different from regular playgrounds, as well as the simple changes that can be made to make playgrounds more accessible for children with special needs. Roberts (2005) says that the difference between regular and inclusive playgrounds is that they increase the inclusion factor. This means that approximately 70 per cent of the equipment should be accessible. Traditional playgrounds are usually made of metal and iron chains and include swings, slides, seesaws, sandpits and a climbing frame; and modern playgrounds are usually made of wood and offer steps and suspension bridges (Prellwitz & Tamm, 1999). This equipment is not accessible to children with disabilities and impairments.

It has been suggested by Roberts (2005) that things such as elevated sand tables for children in wheelchairs, sensory equipment for visible and hearing impaired children, and balancing activities that promote muscular development, are all ideas for equipment that should be available on accessible playgrounds. In addition, Schappet et al. (2003) argue that surfacing is the most important aspect to consider when constructing accessible playgrounds. This starts at the parking lot, on the pathway to the playground because as

Prellwitz & Tamm (1999) point out, inaccessibility begins right at the entrance. If children with disabilities cannot get to the playground, what is the point? On the playground, resilient surfaces should be colorful and easy for mobility. Another idea for surfaces is to have them make noise as children jump, step and roll (Roberts, 2005). These types of surfaces on the playground help children who have mobility, hearing and visual impairments. Lastly, a major issue to consider when constructing accessible playgrounds involves choosing equipment that is accessible for everyone. In a study conducted by Veitch et al. (2006), parents reported wanting a range of stimulating play equipment that was challenging and appealing for children of all ages. Not only is it important to follow CSA standards for Children's Playspaces and Equipment (Canadian Standards Association, 2003), it is important to understand that a piece of equipment that may be helpful for one child with a special need may hinder accessibility for a child with a different special need. Therefore, this project will look into a variety of disabilities and special needs in order to develop a resource guide on play equipment that is appropriate.

2.7 Discussion

The literature review is important to this project because it has informed the design of the research. The literature helped us develop an idea of how barriers limit the opportunity for play on the playground and how the concept of accessibility is limited in its meaning. Some of the literature has informed our knowledge about accessible equipment and it gave us a starting point in developing the resource guide. The literature had a large impact on the way the interview questions were structured, which also helped us meet some of the key objectives of this project. Finally, the literature helped us realize

how expensive accessible playgrounds can be to build and encouraged us to find and include fundraising options as part of the resource guide.

Chapter 3 - Methodology

From the studies that were reviewed in the literature review, we decided that an environmental scan, interviews, and audits would be the three most effective means in learning about the individual barriers that confront children with disabilities, suggesting ways to try and break down these barriers within schools, and providing suggestions for accessible equipment.

3.1 Study Area

The study area for this project is Peterborough Victoria Northumberland and Clarington Catholic District School Board which includes the County of Peterborough, City of Kawartha Lakes (formerly Victoria County), County of Northumberland and Clarington municipality (see Figure 3.1). This area covers approximately 10,353 km² and has 15 elementary catholic and 5 secondary Catholic schools in 14 communities. The elementary schools that were studied include: St. Catherine Elementary School, St. Paul's Elementary School, and St. John Catholic Elementary School (see Figure 3.2).

3.1.1 County of Peterborough

The County of Peterborough has a population of 133,080 and the majority of adults are married and own their own home. The county has a population of 14,865 children between the ages of 5 and 14 that may use local school playgrounds. The total land area of the County of Peterborough is 3805.71 km² (Statistics Canada, 2006).

3.1.2 City of Kawartha Lakes

The City of Kawartha Lakes (County of Victoria) has a population of 74,561 and 7% are children between the ages of 5 and 14. The majority of the adult population are

married, possess their own home and the majority of these home owners do not have children living in their home (Statistics Canada, 2006).

3.1.3 County of Northumberland

The County of Northumberland has a population of 80,963 and covers a land area of 1,902.97km². The majority of the adult population are married, possess their own home and the majority of these home owners do not have children living in their home. Finally, the homes in this county were, for the most part, constructed before 1986 (Statistics Canada, 2006).

3.1.4 Municipality of Clarington

The Municipality of Clarington has a population of 77,820 and 12,535 are children between the ages of 5 and 14. The Municipality covers an area of 611 km² and has seen a population increase of 11.4% between 2001 and 2006. The population is mostly married and owns their homes (Statistics Canada, 2006).

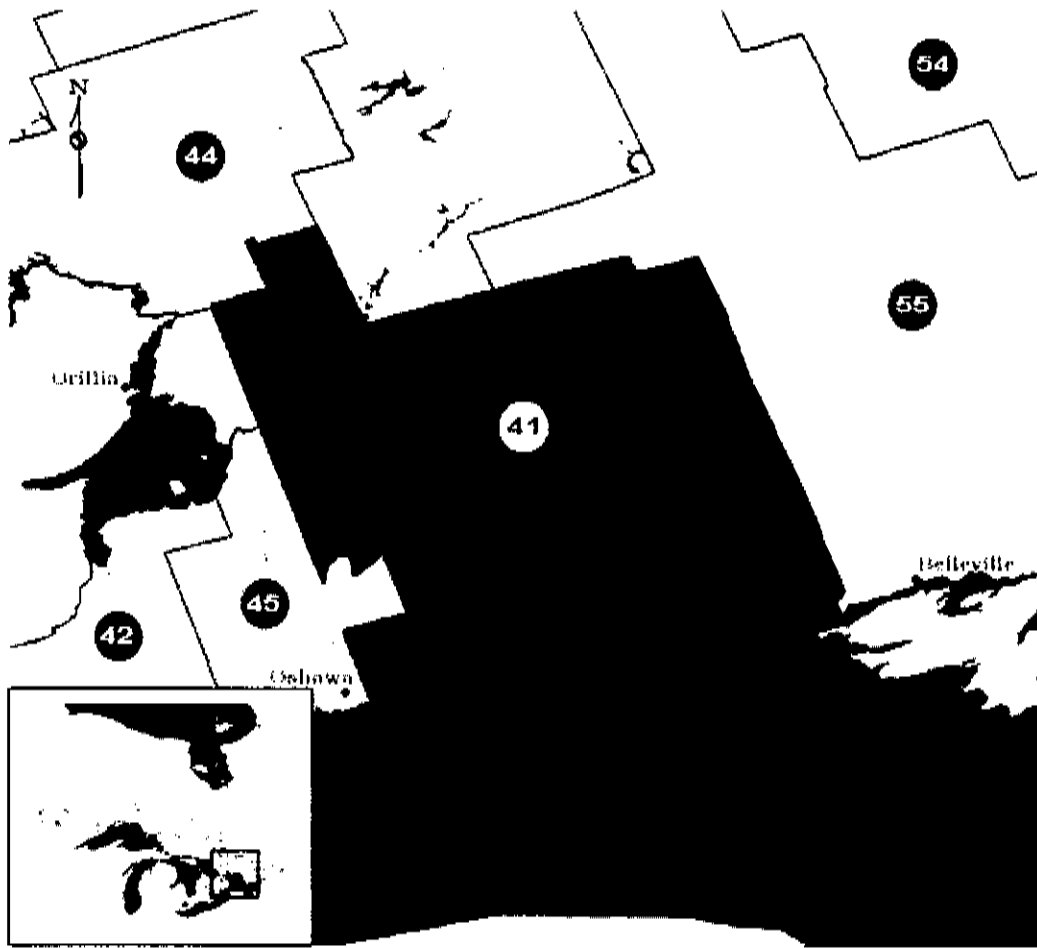


Figure 3.1: Map of Peterborough, Victoria, Northumberland and Clarington Catholic District School Board jurisdiction.

Peterborough

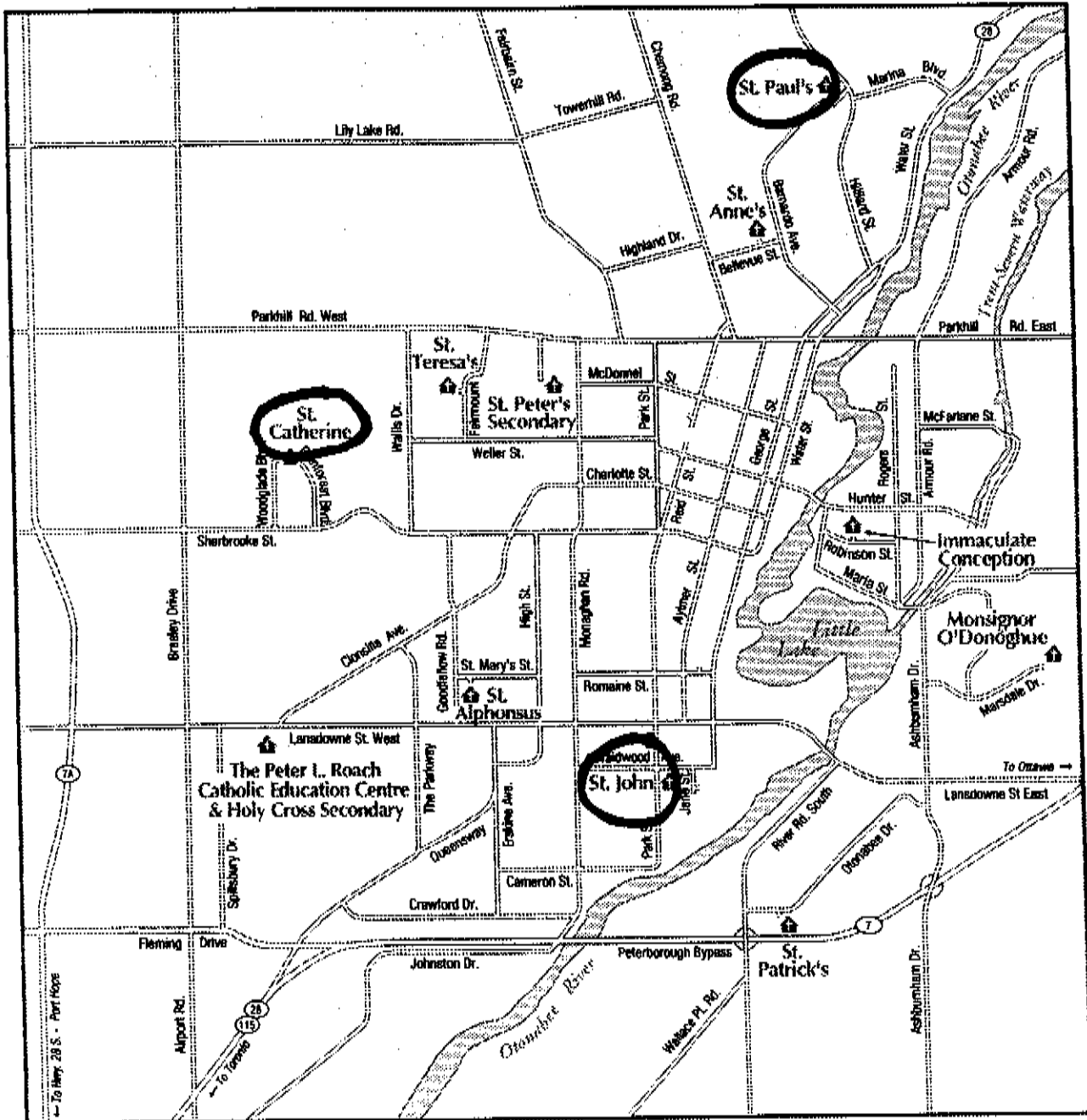


Figure 3.2: Map of audited playgrounds

3.2 Environmental Scan

An environmental scan is the analysis and evaluation of external data and factors that affect organizations that help to identify shortcomings that need to be addressed (Government of Saskatchewan, 2006). The environmental scan helped us understand how the province of Ontario and the City of Peterborough are working towards breaking down barriers that people with disabilities experience. Secondary data such as The Ontario Accessibility Plan (2002), The CSA Standards for Children's Playspaces and Equipment Manual (2003), the City of Peterborough's Access Guidelines (2002), and the Peterborough Victoria Northumberland Clarington Catholic District School Board's accessibility and barrier free policy (2005). The documents were analyzed simply by reading them in-depth and identifying key goals and objectives, as well as discussing their limitations.

3.3 Interviews

The study utilized semi-structured interviews to gather information needed in order to meet the research objectives. Semi-structured interviews have some pre-determined order but allow flexibility for discussion. Also, the types of questions used in the semi-structured interview were opinion questions that allowed us to gather impressions, feelings, ideas, and attitudes. We chose to use interviews because they are effective for this project and they helped us collect a diversity of meanings, opinions, and experiences as well as helped us to develop prominent themes regarding accessibility and the value of play (Dunn, 2005).

Our interview questions were submitted to the Geography Departments Ethics Committee at Trent University for approval before the interviews could take place. Once our ethics application was approved and returned to us one week later, we were able to

arrange potential interviews. Five interviews were conducted with a teacher in an elementary school, a recreation therapist, two city employees, and a specialist for those with visual impairments. The interview participants were contacted by either telephone or e-mail and were asked if they would like to participate in our study about accessible playgrounds. Interviews were conducted at a specific time, date, and location agreed upon by both parties. At the beginning of the interview, participants signed a consent form to ensure they fully understood the study (See Appendix A). The interviews were approximately one hour in length and consisted of eight questions (see Figure 3.3).

The interviews were audio recorded which allowed the researchers to concentrate on the interview and engage in further discussion. After each interview was completed, the researchers transcribed the audio recorded interviews and analyzed them to derive themes from the information gathered (See Appendix B). Themes were coded using different colours to highlight different themes.

1. What does “accessible playground” mean to you?
2. Are playgrounds you see being used by children accessible?
3. Can you think of a time when the design of a playground was disabling?
4. Why is it important for playgrounds to be fully accessible?
5. How do playgrounds play an important role in a child’s daily physical activity?
6. How do playgrounds promote social interaction? Foster positive relationships?
7. Are children with special needs and impairments at a disadvantage in comparison to their peers due to current playground conditions and equipment? (If yes, how and why?)
8. What are some obstacles to creating accessibility?

Figure 3.3: Semi-structured interview questions

3.4 Playground Audits

In order to get a first hand look at school playgrounds and the potential barriers that equipment pose for children with disabilities on an everyday basis, general playground audits designed by the Ontario Parks Association (2001) were conducted. A

playground audit is used to assess playspace elements such as play events, surfacing, and playspace layout. Our host for this project gave us a list of elementary schools that were interested in having their playgrounds audited, and from that list, three were chosen based on proximity to Trent University. These schools were St. Catherine Elementary School, St. Paul's Elementary School, and St. John Catholic Elementary School, all of which were located in the immediate Peterborough region (See Figure 3.4 and Figure 3.5). The audit consisted of survey-like questions answered by yes or no and occasionally providing descriptions and explanations. Conducting playground audits were extremely beneficial to this project because we were able to visit the playgrounds and assess their accessibility. Once this was complete, the audits were analyzed by identifying good existing features, barriers to accessibility, next steps and solutions, and finally the level of priority (low, medium, high) of at which barriers need to be addressed (See Appendix C).

By conducting these audits, we were able to provide recommendations that would make these playgrounds more accessible. Not only will these recommendations be useful for these particular schools, but they will provide insight and suggestions for any playground project that is looking to make accessibility a priority. Through conducting playground audits, we were able to identify equipment, play events, and surfacing materials that do not allow equalized opportunities for the playground experience and provide better alternatives.



Figure 3.4: Photo of playground at St. John Catholic Elementary School

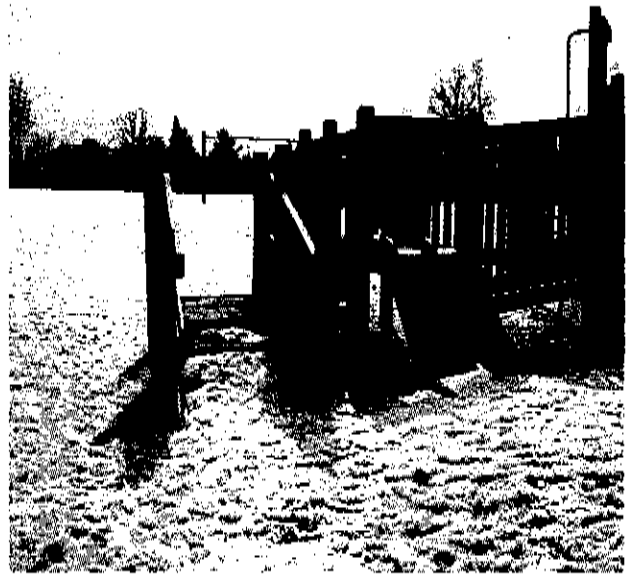


Figure 3.5: Photo of playground at St. Catherine Elementary School

Chapter 4 – Results

This chapter will discuss the main findings of each method used in this project. We report findings from the environmental scan, interviews, and playground audits.

4.1 Environmental Scan

The environmental scan will report findings from the Accessibility for Ontarians with Disabilities Act (2005), the CSA National Standard of Canada playground equipment manual (2003), the City of Peterborough's 2002 Access guidelines, and finally, the Peterborough Victoria Northumberland and Clarington Catholic District School Board's Accessibility Policy (2003).

4.1.1 Accessibility for Ontarians with Disabilities Act

Recently, the Government of Ontario has launched legislation for a barrier-free Ontario by 2025 called the *Accessibility for Ontarians with Disabilities Act (AODA)* (Government of Ontario Ministry of Community and Social Services, 2005). The goal of the AODA to achieve a barrier-free Ontario is a step towards recognizing and appreciating the needs of individuals with disabilities. To fulfill this, the AODA sets yearly standards that are the law, and this Act was the first of its kind in Canada. Specific standards are developed by a standards development committee that represents each standard where accessibility is to be achieved. These include customer service, transportation, information and communications, the built environment, and employment. Once standards are developed, they are open for public review and are passed by the Minister of Community and Social Services. At this point, standards are enacted as regulation and then become the law. Once standards become law, it will become the responsibility of schools boards, and schools themselves, to ensure accessibility in

schools, including the outdoor playspace. Accessibility plans outline steps to be taken to remove barriers that inhibit the functioning of people with disabilities.

4.1.2.CSA National Standard of Canada

The CSA for Children’s Playspaces and Equipment outlines standards that need to be followed when planning, designing, and installing new playgrounds. According to the CSA, a playspace is an area containing play equipment, a play structure(s), protective surfacing, etc., that is intended for the use of children between the ages of 18 months and 12 years. Standards reflect a national consensus of producers and users such as manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies (Canadian Standards Association, 2003). Standards apply to public-use playspaces and play equipment found in places such as schools, parks, and child-care facilities, to name a few. These standards guide the planning, design and installation of playgrounds (see Table 4.1).

Standard 10.3.1	Earth surfaces such as soils and hard-packed dirt are not acceptable, because their shock-absorbing during a fall can be reduced considerably due to weather and environmental conditions
Standard 10.3.3	Loose fill: include but not confined to sand, pea gravel, shredded wood – which have acceptable shock absorbing properties; Unitary: rubber mats, or a combination of rubber-like materials that are held in place by a binder that may be poured into place at the site
Standard F.2.1 – natural topography	Good exposure to sunlight and some shade, sheltered from wind; vegetation and/or landscape elements that should be used to create an appropriate setting for play that is appealing to children; should have visibly defined boundaries
Standard F.2.3	Spaces for each type of activity should be well defined; conflicting activities such as quiet play and physical play should not be located by each other
Other recommendations	Emergency phone, problem reporting (number, name, address), drop-off zones (clearly marked and separated from playspace), parking, garbage cans, benches, lighting

Table 4.1: Example standards from CAN/CSA-Z614-03

4.1.3 City of Peterborough Access Guidelines - Section 6: Outdoor and Recreation Areas

The Access Guidelines clearly state that outdoor and recreation areas should be constructed and designed to accommodate all users including persons with disabilities (City of Peterborough, 2002). It was found that the city's access guidelines do not outline many specific requirements, but rather suggest that information be derived from several other sources. The guidelines, however, do state that the playground must have a level and firm surface walkway to the structure, and it also suggests raised sand tables above regular sand boxes so children who use wheelchairs can play with their peers.

4.1.4 Peterborough Victoria Northumberland and Clarington Catholic District School Board

In the interest of preventing and removing barriers for those who use the educational facility, the board created a committee that addresses accessibility issues within the schools and works towards removing barriers, education and awareness, providing resources and equipment, and creating an annual accessibility plan. The committee is made up of numerous people who are involved in many education services and organizations. A minimum of one school for each community where a catholic school exists must be physically accessible according to a number of criteria, including and not confined to an accessible gym, an accessible library, cut curbs, one accessible washroom, and one accessible classroom (PVNCCDSB Administrative Procedures, 2005).

4.2 Interviews

The aim of the interviews was to understand people's attitudes and opinions towards accessibility, playground design, the importance of playgrounds in healthy child development, and perceived obstacles to creating accessibility. From the analysis of the data, five significant themes were uncovered (see Table 4.2).

Main Theme	Description
1. Shifts in Perspectives	Changing attitudes and views towards accessibility; reflects what used to be versus what is today
2. Inclusion	Participation of <i>all</i> individuals
3. Barriers/Obstacles	Impeding experiences and the ability to creating an accessible playspace
4. Accessible Equipment and Planning	Layout of playspace and components of playspace that make it accessible
5. Child Development	How playgrounds play a role in healthy development, for all children, how playgrounds promote interaction, positive relationships

Table 4.2: Main themes derived from interviews

4.2.1 Theme 1 – Shifts in Perspectives

In each interview, ideas about the meaning of accessibility in the past and accessibility now were compared. What was once considered accessible is no longer accessible. Views about accessibility are always changing to include new perspectives, so what was accessible a few years ago is now becoming quickly outdated. The focus today has shifted to full accessibility, so that the design of the playground does not limit anyone, in any way. Here are two examples from the interviews:

“A lot of our playgrounds were built a while ago before we took into account accessibility, but we as a city are starting to work towards creating more or re-doing some of the older playgrounds to make it more accessible to all children.” (city employee)

“I think our playground was designed to be an accessible playground at the time of it being built. It had great intentions, but it is not accessible. Expectations are always changing.” (teaching professional)

Shifts in perspectives have also taken place with respect to the overall design of a play space and the attitudes towards the type of equipment to be included. As one interviewee pointed out:

“Maybe it used to be thought that any type of equipment on the playground would be suitable because people with disabilities only make up a small percentage of the population.” (specialist)

Even though there are still many flaws in creating accessible playgrounds, it has become clear through the interviews that manufacturers and companies are working towards inclusion by providing the necessary equipment to make playgrounds accessible. Through legislation, it has become obvious that society is working towards inclusion as well.

Another idea that consistently came up in the interviews was that by making playgrounds accessible and promoting inclusion, children and parents are becoming more aware and accepting of disabilities and exceptionalities, which demonstrates a positive shift in perspectives among society. For example:

“If a playground is accessible, children will see individuals with disabilities more like themselves.” (teaching professional)

“[Accessible playgrounds are] important as they help other able-bodied children to try and understand a child’s disability and at the same time allowing them to become friends and it makes the disabled child feel included” (city employee)

4.2.2 Theme 2 – Inclusion

The concept of inclusion has not only seen its implementation in the classroom, it has also made its way to the playspace. With a growing movement away from segregation and towards inclusion in the classroom, concerns about accessible inclusive playgrounds being inclusive are also growing. As an interviewee stated:

“[There has been a] shift from segregation to inclusion in the classrooms and this is now moving to recreation.” (recreation therapist)

In the interviews, inclusion was the largest determining factor of what accessible playground meant. Every interviewee stressed the importance a playspace including play structures that could be used in the same way by everyone. For example:

“All equipment in the playground should be able to be used by every child no matter their disability or exceptionality, and should hinder no one’s ability to play.” (city employee)

“A play space that everyone can use in mostly the same Way.” (teaching professional)

“Accessible for parents, children, community and social Interactions.” (recreation therapist)

“Inclusive area where everyone can take part in play.”
(specialist)

It is not uncommon for children to see people with disabilities as different than themselves. Creating accessible playgrounds is an attempt to make all individuals feel as though they are part of the community. As one interviewee said:

“[It is] obvious that somebody has a difference when they have a difference. Most children will know how to help and include them but there is always separation, he or she is seen as different. However, if the playground made it so that everyone could use it, this would start to disappear.” (teaching professional)

4.2.3 Theme 3 – Barriers and Obstacles

For the purpose of this theme, barriers will include the identification of barriers to accessibility in the playspace. On the other hand, obstacles will be used to describe the obstacles faced in creating accessible playgrounds.

Surfacing is one of the first barriers a child with a disability may experience on the playground and it may determine the value of a child’s experience. If the surfacing limits the child’s access to the playspace, the value of play is diminished. Engagement in activities is crucial to inclusion on the playground, but if the child cannot access the activities taking place on the structure, they will be left out. For instance:

“A playground is where children go to play with each other so if a child who has a disability or exceptionality cannot engage in the activities then they are being labeled as an outcast or a loner.” (city employee)

“Children in wheelchairs [are at a disadvantage due to current playground conditions] because they do not have the proper surfacing to get to the equipment.” (specialist)

The design of the playground plays an important role in a child’s play experience. Some of the interviewees explained how the design of a playground can be limiting to children of varying disabilities because it is not “functionally accessible” (teaching

professional). This means that the design is not well thought out to make it easy for people of varying abilities to get to and from the different equipment, and could, in fact, create safety hazards. An interesting example of this comes from a teacher we interviewed whose school's playground was built to be accessible. He said that the only functional part of their playground is a ramp that goes up to the first level of the play structure where there is an activity panel, but additional levels of the play structure could not be accessed by someone with mobility impairments. As stated:

“[The playground should provide] natural opportunities with flexibility for height, interests, and interactions.” (recreation therapist)

“Playgrounds are not functionally accessible. For example, spots with dips, steps, ramps with boards meant to stop you from falling; but imagine someone with a visual impairment (with a cane), if anything goes on quickly, this could be a dangerous situation.” (teaching professional)

There are many reasons why accessible playgrounds are either not being constructed or why they are taking so long to be constructed. The number one obstacle pointed out by the interviewees was finance. For instance:

“New accessible playgrounds cost three times the amount of a regular playground.” (city employee)

“If certain features are not put in, this is probably due to financial reasons, especially if they are retrofitting an old playground.” (specialist)

Along with this,

“In order to receive funding from foundations, the organizations building the playgrounds have to be not-for profit.” (city employee)

Another concern involves the priority of making playgrounds accessible.

“So much stuff has been downloaded by the provincial government that accessible playgrounds has been moved down the list, as there are so many other issues that need to be dealt with that the city doesn’t have any extra money to spend on accessible playgrounds.” (city employee)

Lastly, the interviewees brought up the point that many companies providing accessible equipment are located in the United States, and to transport equipment here is very expensive. Another obstacle in creating accessibility in this sense has to do with locating local companies that supply accessible equipment. Finding and comparing prices is a process and if an organization does not know where to start looking, this can be very discouraging. As one of the interviewees commented:

“Finding appropriate equipment that works for the majority of children with disabilities, and also to be able to find a supplier that makes the right types of equipment.” (city employee)

4.2.4 Theme 4 – Equipment and Planning

Planning an accessible playground is a project that requires cooperation between the city and the community and can be a lengthy process in order to create a playground that provides equipment for all children to use. In a few of the interviews, one thing that came up about planning an accessible playground is that designers tend to over-think the

design to the point where the smallest detail that could make the playground accessible, is forgotten. As two interviewees reflect:

“I remember when we designed this playground with a family who had three disabled children and everything in the playground was accessible for all the children and they were all excited to use the playground by we forgot to cut the curb and put in a wheelchair ramp. Since we did not pay attention to the entrance to the playground this fully accessible playground instantly became disabling.” (city employee)

“One playground tried to become accessible but a large rubber border was placed around the whole playground.” (specialist)

When talking about planning an accessible playground, one important aspect that came up in the interviews was that they need to be completely barrier-free and should hinder no ones ability to play on the playground. For example:

“[Accessible playgrounds] should be completely barrier free from the entrance to the exit for all children.” (city employee)

“Looking at creating a play environment that is inviting and engaging for everyone.” (recreational therapist)

“Ramp that is too sharp would cause a problem for accessibility.”
(teaching professional)

Finally, when planning an accessible playground, location needs to be taken into consideration as children and adults who wish to use these areas need to be able to access them. As quoted:

“The location of the playgrounds can be disabling because if they are located too far people may not be able to get to them.” (city employee)

One key aspect of planning an accessible playground is the inclusion of accessible equipment and one point that was brought up by an interviewee was colours used on the play structures and their importance for the safety of people with low vision. For instance:

“For low vision- stairs don’t have a lot of contrast, making it hard to judge depth (posts and swings- contrasted with striping can help so they don’t walk into posts, borders with different colours make it stand out from rest of structures and make level change obvious.” (specialist)

Another point that was made during the interviews was that accessible equipment does not only need to be included in new playground but rather it can be added to existing playgrounds as well. It was stated that:

“For schools with a number of kids with disabilities the “inclusive treasure box”, toys that can be used outdoors that are inclusive by design, not set up for just kids with disabilities.” (recreational therapist)

4.2.5 Theme 5 – Child Development

The interview questions directly asked the interviewees how they think playgrounds promote social interaction, foster positive relationships and provide opportunities for physical activity. Playgrounds are an important place for children to

have fun together and take part in co-operative play that is not forced upon them. For example:

“[The playground] is a place for social interactions in natural Places.” (recreation therapist)

“[Playgrounds are] completely about building social rapport with peers.” (teaching professional)

“[playgrounds promote social interaction through] co-operative play and helping each other out.” (specialist)

“Playgrounds can encourage team building and co-operation, which encourages children to work together.” (city employee)

They are also a great way for parents to meet, especially for parents who have children with disabilities. As commented:

“It is important for families to connect with other families because having a child with a disability can be isolating, it is important to feel a part of the community.” (recreation therapist)

“They are a central meeting spot for parents and kids.” (specialist)

Playgrounds also allow children to build positive relationships with their friends and their peers. Children are able to express their creativity, and they learn how to play with each other in a positive way. From one of our interviewees, it became apparent that moral development is an important part of play:

“Children learn how to follow rules, they learn how respect each other

and to find common ground when making up games, and they learn how to take turns.” (teaching professional)

“For children who need an accessible playground, their social interactions are limited in a lot of ways. Allowing them the chance to go on these playgrounds give them the opportunity to build a life skill of how to play with other people, follow other people’s expectations, and how to fit in a group.”
(teaching professional)

Finally, playgrounds are important in promoting physical activity in the daily lives of people who use playgrounds. Playgrounds are important for cardiovascular development, strength, flexibility, fine and gross motor development, and having fun is motivating to make physical activity a part of daily routine. Some examples include:

“It helps children develop their gross motor skills, as well as their leg and arm muscles through climbing or running. It encourages exercise for children who are hyperactive.” (city employec)

“Cardiovascular exercise can be achieved by a wheelchair rolling around a rubber tarmac and playing tag.”

“They can build strength on equipment like rings, bars, independent bars.”

“Making exercise a part of daily lifestyle is done through socializing.”

“Play provides children with health insurance for the long-term.” (recreation therapist)

4.3 Playground Audits

The playground audits allowed us to evaluate the strengths and weaknesses of the playspaces at three different schools. In order to report the results, we have compiled a general list of good existing features and a list of barriers to accessibility that can be used as a general reference for improvement. (See Appendix C for copies of the actual audits)

4.3.1 Arrival Point/Entrance to Playspace

Good Existing Features

Each school has two (or more) designated accessible parking spaces that are well-signed and visible to those who may need to access them. These parking spaces were generally located in close proximity to the main entrance of the playspace. With the exception of one school, the arrival point was flat and had no curbs that created a barrier.

Barriers to Accessibility

Due to the fact that these playgrounds are located on school properties, one major barrier to accessing the playspace was large metal gating. With the increasing need for safety precautions, it is understandable that gates are necessary. If the entrance space is too small, this may limit who can and cannot access the play space. One of the schools did not have a cut curb from the parking space to the pathway, which again, causes difficulties getting to the play space.

4.3.2 Pathways

Good Existing Features

All pathways seemed to be in good repair, with little or no visible damage that could be a safety concern. The pathways were usually composed of different textures

than the playspace and they were flat and smooth. Obstructions could easily be detected by someone with low vision or a mobility device.

Barriers to Accessibility

No pathways had rest stops, such as benches or hand rails, where someone who needed to could take a moment to rest. Although the pathways were in good repair, some were lengthy and it could be difficult for someone to walk that far without being able to rest. The pathways were narrow, making it hard for two people to pass or for a mobility device to turn.

4.3.3 Play Events

Good Existing Features

The main play structures were composed of multiple play events, which allows for numerous children to access the structure at the same time, as well as providing a variety of different play experiences. The play structures were colourful, which is good for someone who needs contrast in order to see different equipment. Colour also provides an inviting atmosphere.

Barriers to Accessibility

Ground level activities were limited to swings and playing fields. The play structures were lacking ramps to actually get over the edging to the main play area. Most structures were also lacking ramps on their play structures, with the exception of one school, but even that ramp did not lead anywhere that could occupy the child for more than five minutes. There was a lack of varying activities for developmental learning such as activity panels, activities that could stimulate the imagination, and stimulate the five senses. Safety was a large concern. One of the structures was composed of metal

equipment with narrow bars used as a transfer system. Another one of the structures had planks on the ramp leading from the first level to the second level. This is a safety concern because fast-paced movements could lead to someone tripping.

4.3.4 Playspace Layout

Good Existing Features

All of the playspaces had shelters and shady areas that could be used on sunny days or during inclement weather. These areas could also be good for imaginative games. All of the schools had large playing fields that were incorporated into the playspace.

Barriers to Accessibility

The play structures did not have multiple access points. This creates congestion on the playspace, and can limit who can and cannot access the structure. The playspaces offered a limited number of stand alone activities which can be beneficial for those who would prefer to play alone, or who may not be able to access the primary play structure. Seating was limited around the play structure, with the exception of one school. Some of the playgrounds had indefinable age appropriate activities. This means that junior students would probably find the playground unchallenging and less entertaining than the younger primary students.

4.3.5 Surfacing

Good Existing Features

The playspaces that we audited all had safe and convenient routes for traveling from one event to another.

Barriers to Accessibility

Current playground surfacing consists of pea gravel and/or sand, which is not accessible to those having to use a mobility device. Even if the playground could be accessed with a ramp, pea gravel and sand still limit mobility to the structure itself.

4.3.6 Signage

Good Existing Features

One of the schools had a 24 hour security camera system. Also, two out of the three schools had signs with an emergency contact number.

Barriers to Accessibility

None of the structure's signs displayed the name of the school or the name of the structure, which could cause complications in case of an emergency.

Chapter 5 – Discussion and Concluding Comments

The main objectives of the research were to explain how playgrounds create a sense of inclusion, and provide opportunities for physical activity and social interaction, compare current equipment with new accessible equipment, identify needs and suggest alternatives through playground audits, and recommend ways to make the design of the playspace accessible.

The desired outcome of this project was to develop a resource guide that can be used to recognize the strengths and weaknesses of current playground conditions and identify suitable equipment that can be incorporated into the playspace to make it accessible. The resource guide also includes the contact information for a variety of playground manufacturers, ways to make the playspace more inviting to people of all abilities, sources of funding for accessible playgrounds, and considerations for accessibility, design, and safety of the playspace. The resource guide is located in Appendix D.

5.1 Importance of Play

It has become obvious that play is an important aspect of healthy development. It provides children with opportunities to engage in daily physical activity that will help develop motor skills, as well as improve cardiovascular health, flexibility, strength, dexterity and it helps children release pent up energy. Play on the playground can also help children build social skills. They learn how to get along with their peers through co-operative play and teamwork, they can engage in healthy competition, they learn how to find common-ground and how to take turns, and finally, the playground increases opportunities for children of all abilities to learn together. Although not implicit, the

playground can foster intellectual development as well. Children can engage in logical and rational thinking, problem-solving, memory activities, imaginative play, and playgrounds encourage children to use and refine their intellectual abilities.

5.2 Barrier Free Society

If Ontario is to achieve a barrier-free society by 2025, perhaps views about what the built environment includes need to change. The design of the built environment should be rethought to include and embrace all abilities and this includes playgrounds. The current conditions of the built environment are not designed for individuals with disabilities. There are very few, if any, accessible playgrounds located in many communities and sometimes individuals cannot even reach the playspace due to its location and lack of transportation. Many buildings throughout the built environment call themselves “accessible” because they have simply added a ramp to the front of their building so anyone who uses a mobility device can enter the building. Often after entering the building, not much else is truly accessible. While these are just a few examples of how the built environment is not designed for those with disabilities, it has become apparent that these barriers that limit a person with a disability need to be corrected. Issues that need to be considered when reconsidering the built environment include: (i) the overall design, (ii) age appropriateness (who will be using this space?), (iii) accessibility (does *everyone* have access?), (iv) natural area (can the natural surrounding areas be integrated into the design?), and (v) safety (are all the components in the design safe?).

The AODA legislation is a great initiative by the province as it is the first of its kind and it sets an example for other provinces in Canada. It also shows that the province

recognizes that there is a need to change the way that the built environment is organized and constructed. It demonstrates to people with disabilities that the province is making an effort to make them feel included in society, and by doing so it may shift society's perceptions of people who have disabilities and promote understanding and awareness. While the AODA is a great start, 2025 is still quite some time away. It is recognized that change does take time; however, we encourage everyone to begin to making small changes now instead of waiting for the law to initiate change.

With the initiation of the AODA, accessibility has become a concern for both the School Board and the City of Peterborough. Small changes, such as sound warnings at intersections for those with a visual impairment, and the construction of ramps to certain buildings, although mainly government buildings, are currently taking place. Looking through the access guidelines from 2002, we noticed that the guidelines were vague and did not offer many guidelines for playgrounds, but rather, left this open to interpretation and seemed to suggest the bare minimum, with reference to other sources. One of the limitations to this interpretation is that we were only able to access the guidelines for 2002. Although these guidelines are vague, the city is currently building an accessible playground at Roger's Cove in the City of Peterborough. Recently, an accessible water park was built at Riverwood Park and Zoo. It is clear that the city is taking the initiative to include playgrounds in the co-ordination of accessibility.

By meeting with the Accessibility for All committee, it became apparent that they are really trying to push for accessibility in the catholic schools. This project is an initiative to help the board understand accessible playgrounds and what needs to be improved. The major barrier to creating accessible playgrounds found throughout our

interviews was finances and the ability to fund the creation of fully accessible playgrounds at schools. Since the board has limited access to funding resources, we have uncovered different ways that schools can go about receiving funding for an accessible playground project.

5.3 Sources of Funding

Schools can consult service clubs such as the Rotary Club and the Kiwanis club, which provide grants for community projects. Organizations such as Hudon's Bay Company (HBC) and Ronald McDonald House provide grants for projects, but there is an application procedure that is quite extensive. Schools can always ask for direct donations, called in-kind, which can be in the form of goods, services, and volunteer time. Lastly, schools can hold fundraisers for the community to raise money for an accessible playground project. Fundraising ideas include bake sales, car washes, fun-fairs, and silent auctions.

If funding an accessible playground is a problem, there are many opportunities to make the playspace accessible and inclusive. It is not necessary to make large changes all at once, but small steps toward accessibility can make a difference. For example, start with a ramp onto the play structure, or installing stand alone activities such as an accessible sand table or splash pads. There are also other ways of making the playspace accessible for people with disabilities. For example, Nabors et al. (2001) suggest taking the classroom to the playground. This means bringing items such as sidewalk chalk, building blocks, gardening activities, and quiet activities to the play space so even if children cannot access the main structure, they are still included in the play environment

and play experience. The immediate environment can shape the play experience. It is not just about what is on the playground, rather what is around the playspace.

5.4 Understanding Barriers to Accessibility

It is clear that people are becoming more aware of accessibility issues. Education is one of the first steps in understanding accessibility. Accessibility in the playspace means that children have equal opportunities to access a play experience. If they can achieve similar experiences from play, then perhaps differences will become less visible. Also, how the children use the equipment to get the intention out of the play experience is important. Though they may not use the equipment provided in the same way, they are still engaging in physical activity, social interaction, building friendships, and learning natural consequences.

While children with disabilities may not use the provided equipment in the same way as their able-bodied peers, it is still imperative that all children be able to access the equipment. One important barrier that can limit which equipment can be accessed and which pieces cannot is surfacing. Although surfacing is one of the most important components to creating accessibility, it surprised us that this idea was not brought up to a great extent throughout the interviews. This could be because they were so excited to share their knowledge on accessibility and accessible equipment that surfacing was just overlooked. The playground audits that were conducted revealed that the majority of the schools had either pea gravel or sand as the primary type of surfacing. Both of these types of surfacing do not allow people who need to use mobility devices to access the playground as the fill is too loose and prevents the device from moving freely. One way that this barrier can be eliminated is by putting in either a ramp that leads from the start of

the surfacing to the play structures, or by using a more accessible type of surfacing such as pour-in-place rubber or rubber tiles as these allow for mobility devices to be used throughout the entire playground.

From conducting the playground audits and listening to our interviewees share their thoughts on the current design of the playgrounds, it was apparent that very little imagination is used in playground construction. For example, in one of the schools we went to, only one area was accessible and this area was the main play structure, but only the first level could be accessed. It was accessible via a ramp and on this first level there was only one activity panel and one slide, both of which could become boring very quickly. This area demonstrated a lack of imagination, as there was very little for the children who need the use of a mobility device to do. The rest of the playground was also like this as there were not a variety of activities such as activity panels, and stand-alone equipment to stimulate the use of different areas of the brain. Also, there were only standard swings that did not vary in size or height. One way to provide a little more imagination to the swinging experience is for the school to provide swings that vary in size and height, swings that are accessible for children of varying abilities including children who need the use of mobility devices. In addition, on all of the playgrounds there were only the typical two different sized slides that went straight down as opposed to having a waved or twisting design.

One suggestion that might bring more imagination to the playground that was mentioned in the interviews was to gain more public input about what should be included in the overall playground design. Public input would try to involve every member of the community including children, adults, people with various disabilities and the elderly.

Public input should take a variety of different forms including public meetings, surveys/questionnaires, playground participation and focus groups.

Despite the fact that more imagination is needed in the overall design of a school's playground, it is also important to remember that the design should not limit anyone from being able to play. However, this is nearly impossible because what may help one person with a disability may, in fact, hinder another person's play experience. Since this design issue cannot be avoided it is best to design an accessible playground in a way that can be used by the majority of people.

Another barrier that can limit the use of equipment is the lack of contrasting colours on the play equipment. Single colours make it difficult for people who have visual impairments to locate or identify the equipment and it affects their depth perception, which can cause injuries. This barrier can be easily corrected by simply painting contrasting coloured stripes on equipment and borders so they can be easily recognized.

While providing equipment that can be accessed by everyone is important to the success of an accessible playground, one barrier is the ability to locate suppliers within Canada, Ontario, or even locally located manufacturers that can provide the needed equipment (surfacing and other features such as benches, picnic tables that can accommodate a wheelchair, shelters and a variety of transfer systems). Some suggestions are to first look up companies in the yellow pages or online. Often people who work for the city or belong to accessibility committees will be able to help in locating companies and providing the names of possible suppliers and distributors. Another idea is to hire a playground consultant. Consultants are often extremely knowledgeable in their field and

are well educated about accessibility and accessible equipment. The only downside to hiring a consultant is the extra cost. For a list of companies that supply accessible equipment, consult the resource guide (See Appendix D).

5.5 Limitations of the Study

We would like to discuss some limitations to this project and the obstacles we faced in its completion. First, the project really took off in the winter months of the school year and we had a harsh winter in 2008. We had to cancel and reschedule some of our interviews due to inclement weather as well as both researchers getting ill at some point. Also, we planned to conduct our audits towards the end of the project, in hopes that most of the snow would melt and we would be able to see the majority of the play structure. To our surprise, the snow stuck around much longer than expected, making some playgrounds difficult to audit. Another limitation was finding appropriate times to conduct interviews that worked well for both the interviewers and the interviewees. Due to this limitation, only five interviews were conducted. Finding Canadian companies that manufacture accessible equipment also proved to be more difficult than we expected, so some of the equipment we discuss is from American companies. Canadian companies are a priority because transportation costs are lower and the equipment would not be subject to taxes at the borders. Creating the ideal playground design was a problem since we do not have the knowledge, or the means to create proper blueprints. To combat this limitation, we have provided an idea of the strengths and barriers of current playgrounds, and have suggested ways to make the playground more accessible and inviting. Lastly, we were obviously not able to include all accessible equipment available, so we have provided what we believe to be an extensive sample.

5.6 Contributions to Research

The ultimate objective of this project was to create a resource guide that schools can use as a starting point and a reference to creating an accessible playground. The guide provides multiple types of accessible equipment that can be used by children who have various disabilities and exceptionalities, and provides the schools with a simple audit that they can use to identify barriers on their playgrounds. By providing this resource guide to the schools, we believe that we have aided the Peterborough Victoria Northumberland and Clarington Catholic School Board in meeting their goal of identifying and removing barriers in the playspace.

This project has also contributed to the research on playgrounds by acknowledging that though big changes would be ideal when creating an accessible playground, they are not always feasible. However, through the research and findings, it has been discovered that by making small changes to already existing playgrounds, the ability for those playgrounds to become accessible changes. Our project demonstrates that small changes, such as adding a ramp to a play structure, can dramatically improve the play experience of children who have disabilities and exceptionalities.

Finally this project contributed to geographical information by demonstrating that creating accessibility should not only focus on profit driven spaces in the built environment, such as commercial businesses, but rather needs to focus on public spaces that are for community use, and do not necessarily generate a profit for the economy. Also, this project demonstrates that there is an increasing awareness of accessibility and the environment. More research could look into how parts of the built environment, such

as playspaces, that are accessible make a difference in the daily lives of individuals who have disabilities.

5.7 Concluding Comments

Through this project, it has become obvious that play is a critical requirement for healthy child development. Before the project, we did not realize the true importance of playgrounds in fostering so many opportunities for play that embrace development. By making playgrounds accessible, many doors are opened for people who were once excluded from this type of play. By removing and preventing barriers in the future, people who have disabilities will not be limited by this part of the built environment. Instead, they will be provided with an inclusive and inviting environment where they will be able to interact with their peers in a regular as possible situation.

When designing an accessible playground, it is important to remember that there is more to it than just picking equipment from a catalogue. Ensuring that the design of the playground flows, that it is designed for different types of children's play, that the equipment is age appropriate, ensuring accessibility, and safety are all vital issues to consider when designing an accessible playground. Again, it is also important to remember that it is not just the playground that needs consideration. The entire playspace should be accessible and inviting to all those who wish to take part in a play experience.

Though we would like to strive to create the perfect accessible playground, we have come to realize that no playground can ever truly be perfect. Equipment or activities that help one person may hinder another since each person is different, even those who have the same disability. Small changes made to existing playgrounds to make them more accessible is an important step in obtaining inclusivity. Remember that even bringing

activities from the classroom to the playspace to ensure everyone is included in a meaningful play experience is another step toward accessibility. Every little change makes a difference.

This project is intended to help others understand accessibility and the social and environmental issues that underpin these relations. It is also intended to be a reference to those looking into creating accessible playgrounds, or updating existing playgrounds. This project can be used by schools, organizations, municipalities, families, and individuals doing research to gain some insight and background knowledge to how playgrounds foster positive relationships, social interactions, and physical activity. It will also help these people understand the importance of accessibility in the built environment. Lastly, the project can be used to understand people's ideas, opinions and attitudes regarding obstacles, barriers, and how the environment can be disabling or limiting to some people.

Future researchers involved in a project like this, or involved in planning an accessible playground, should conduct mock demonstrations to understand how a playground is limiting and the barriers people with different disabilities face in using a playspace. Another suggestion would be to survey children and adults, both with and without disabilities, to understand their perspectives on playgrounds and what they would like to see included in a playspace. Another idea is looking more in-depth into pieces of equipment and how they can help children develop and the types of play that can be experienced using these pieces of equipment.

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APPENDIX A:
Interview Consent Form

TRENT UNIVERSITY
Department of Geography
Peterborough, Ontario, K9J 7B8
Tel: (705) 748-1440, Fax: (705) 748-1205, E-Mail: geography@trentu.ca

HUMAN RESEARCH CONSENT FORM

Nature of the Project: Accessible Playgrounds is a study intended to create a resource guide of playground equipment for children with special needs. Additionally, we will recommend ideal layouts for accessible playgrounds and seek out distributors who provide suitable equipment. Part of the study involves a series of semi-structured interviews with key informants (teachers, principals, parents with children who have special needs and business professionals). The interviews are designed to take no longer than one hour. We hope to gain greater insight into how playgrounds:

- Create a sense of inclusion
- Provide opportunity for physical activity
- Provide opportunity for social interactions
- Can be developed or updated to support the diversity of all children

Researchers: Lindsay Taylor and Lindsay Morey

Researcher Contact Information:

- ljtaylor@trentu.ca
- lindsaymorey@trentu.ca
- We may also be contacted through the Geography Department

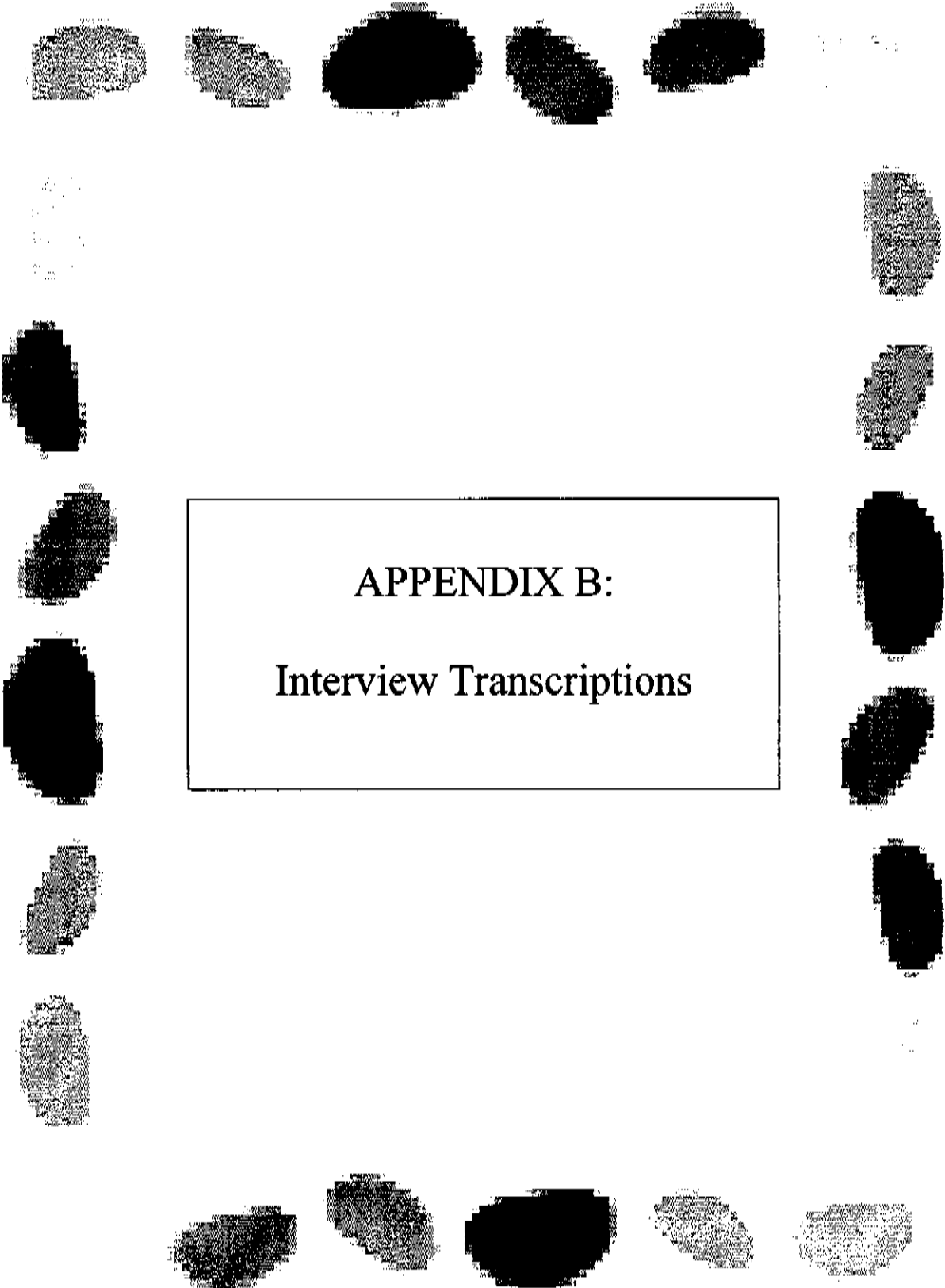
As a participant in the above project, I understand the following:

1. I have been fully informed by the interviewer about the nature of the research and my participation in the project;
2. My participation is entirely voluntary. I may refuse to answer any or all questions and end the interview at any time;
3. The data resulting from the interview will not be used for any commercial purposes and will be strictly used for the advancement of research and social policy applications;
4. The information supplied during the interview will be kept confidential and my identity will not be used in any reports or other publications;
5. The information will be stored responsibly and my participation in the project will be known only to the researchers;
6. Any risks to my participation in the project are unforeseen by the researcher;
7. I have been provided with a copy of this participant consent form for my own records; and
8. I understand that this project has been approved by Trent University's Department of Geography's Research Ethics Committee.

Participant Name: _____ **Participant Signature:** _____

Interviewer Name: _____ **Interviewer Signature:** _____

Date: _____



APPENDIX B:
Interview Transcriptions

Interview #1

Participant 1 & Participant 2

2) What does “accessible playground” mean to you?

P1: I think to me it means that it is completely barrier free from the entrance to the exit for all children. All equipment in the playground should be able to be used by every child no matter their disability or exceptionality and should hinder no one's ability to play.

P2: Also an accessible playground should be accessible for adults who may have certain disabilities to exceptionalities. Also an accessible playground should be properly signed with universal symbols so that anyone can read the sign no matter what.

3) Are playgrounds that your children use or you see being used by children accessible?

P1: Well no not really because in Peterborough we only have one playground that we consider to be accessible and even that one is not completely accessible as entrance to the playground is not fully accessible and some of the equipment is not accessible to all children.

P2: A lot of our playgrounds were built a while ago before we took in accessibility but we as a city are starting to work towards creating more or redoing some of the playgrounds to make it more accessible all children.

4) Can you think of a time when the design of a playground was disabling?

P1: I can think of many a time when the playground designs have been disabling as many of the proposed layouts for new playground or the remodeling of an already existing one has been disabling. In the layouts there are always equipment that they propose that hinder a child's play. Also, the location of playgrounds can be disabling because if they are located too far people may not be able to get to them.

P2: I remember when we designed this playground with a family who had 3 disabled children and everything in the playground was accessible for all the children and they were all excited to use the playground but we forgot to cut the curb and put in a wheelchair ramp. Since we didn't pay any attention to the entrance to the playground this fully accessible playground instantly become disabling.

5) Why is it important for playgrounds to be fully accessible?

P1: Well first of all there is government passed legislation that says that everything now must be accessible to everyone as much as possible so it is the cities job to try and accomplish this. Also, a playground is where children go to play with other children so if a child who has a disability or exceptionality cannot engage in the activities then that are being labeled as an outcast or a lone.

P2: Its important as it helps other able bodied children to try and understand a disabled child's disability and as the same time allowing them to become friends and it makes the disabled child feel included.

6) How do playgrounds play an important role in a child's daily physical activity?

P1: Well it helps children develop their gross motor skills as well as their other leg and arms muscles through climbing or running. Encourages exercise for children who are hyperactive

P2: Playgrounds can encourage team building and cooperation, which encourages children to work together; it also encourages fine thinking skills, competition.

7) How do playgrounds promote social interaction? Foster positive relationships?

P1: With a disabled child on the playground and being included in a game it helps the able-bodied children begin to understand the disability and help them to see what the disabled person goes through on a daily basis.

P2: Cooperative play as many games on the playground encourage children to work together and get to know one another. It also

8) Are children with special needs and impairments at a disadvantage in comparison to their peers due to current playground conditions and equipment? If so, how and why?

P1 & 2: haven't kept pace with the larger cities and the legislation as there is only 1 accessible playground and one is coming. Some much stuff as been downgraded by the provincial government that accessible playgrounds has been moved down the list as there are so many other issues that need to be dealt with that they city doesn't have any extra money to spend on an accessible playground.

9) What are some obstacles to creating accessibility?

P1: Cost is a huge one as an accessible playground could be 3 times the cost of a regular playground. There are foundations that can provide some funding for playgrounds but many of the organizations have to be non-profit in order to be eligible. Another obstacle is finding appropriate equipment that works for the majority of the children with disabilities and also to be able to find a supplier with makes the right types of equipment.

P2: Topography: Peterborough is very hilly and in order to build a playground the surface needs to be relatively flat so a lot of work has to be put into making it flat. Also, legislation requirement could take some time, as an environmental impact assessment has to be completed before construction can be started.

Interview #2
Participant # 3

2) What does “accessible playground” mean to you?

- When first entered field – cookie cutter playground
- Importance of social interactions in *natural places* – accessible means a place for pre-fab accessible venues – accessible for parents, children, community, social interactions
- Smaller things that can be weaved into an already existing environment
- *Natural opportunities* with flexibility for height, interests, interactions
- Play space for everybody
- *Community* needs to decide purpose

OFF TOPIC (what else to include in guide)

- Importance of play, child development and social/family interactions
- Pictures (or web links to pictures)
- Defining accessibility – mean different things to people
- Meaning of play, what is appropriate for what age (primary, junior, senior)

- Drawback: can be limiting
- Need to plan – ramp up to driving wheel will only be interesting for 5 year old for 5 seconds – if that’s the only thing they can go up to then all the money and time is lost

3) Are playgrounds that your children use or you see being used by children accessible?

- Peterborough community not accessible
- Port Hope (community working towards accessibility in all areas) – wanted access to a swing – in a wheelchair – became honorary member of accessibility committee
- Have people on council paired with person with disability to go through town
- Future research/directions: as part of planning, target certain schools and have a demo where clients/students with variety of disabilities and ages to get a real idea about what to include
- Been talk about accessible playgrounds in community for years

4) When can the design of a playground be disabling?

- Our society/environment is set up for people who don’t have disabilities
- Looking at creating a play environment that is inviting and engaging
- Patterns of inclusion – shift from segregation to inclusion – classrooms, now moving to recreation
- Looking at development of community, changed a lot in last 20 years – example – tire swing no longer acceptable
- Issues around safety, insurance, and liability around play spaces
- Green spaces – trees, shelters – inclusive of everyone – next step
- Recreation – used to see it as very specialized (separate care), philosophy: role is to inform community about disabilities and promote inclusion in the community, adapting activities and training staff members, develop community partnerships
- Room for everyone in community regardless of needs, we all have needs

5) Why is it important for playgrounds to be fully accessible?

- More than just the children accessing it
- Public spaces – if they are really public then they are inviting everyone to access it
- Social places – play spaces are social – important for families to connect with other families because having child with disability can be isolating, important to feel a part of the community
- Having child with disability can be expensive, play environment nearby that is free and part of the community important for families
- Goes beyond just play – affordability, importance of having a space where you belong in a community

6) How do playgrounds play an important role in a child's daily physical activity?

- Natural opportunity for physical activity
- Games and fun motivate kids
- Cardiovascular – wheelchair rolling around rubber tarmac, playing tag – if not able to get on to tarmac then not getting cardio, same with a walker
- Strength – equipment like rings, bars (upper body strength), independent bars (parallel bars) [muscles needed later in life for transferring into bed, personal care in bathroom]
- Flexibility
- Motivation = continuation
- Make exercise part of daily lifestyle – done through socializing
- Health insurance for the long-term

7) How do playgrounds promote social interaction? Foster positive relationships?

- Social interaction: accessible play space has to be designed properly to promote social interaction – just because there is a proper landing it does not mean it is accessible
- Separate pieces can be put in for use by different abilities, better success [basketball net from flaghouse]
- Co-operative play is key, everyone can participate
- Finding pieces of equipment that are age appropriate
- For schools with a number of kids with disabilities – “inclusive treasure box”, toys that can be used outdoors that are inclusive by design, not set up for just kids with disabilities [example: large mitts with Velcro – ideal for kids who don't have very good hand dexterity, can be playing with another kid who does not have a disability]
- Looking beyond standard accessible playground – equipment for both inside and outside
- Sets of activities that can be put together that connects to equipment [gym class or recess] – more than just the playground
- Positive relationships: they are fun, build friendships
- Well designed playground [lots of opportunities] –don't tell you what you should be doing all the time – no direct rules – free play – creative and imaginative – provide areas for creative play and for imagination and social interactions

8) Are children with special needs and impairments at a disadvantage in comparison to their peers due to current playground conditions and equipment? If so, how and why?

- In this community, disadvantaged because there are lots of barriers [finances, transportation]

- Riverwood park and zoo – creative play space – free – on a bus line – connected to another area [zoo], area relatively flat
- Rodger's Cove, Beavermeade area

9) What are some obstacles to creating accessibility?

- Obstacles include: finance, transportation, design, depends on what organization [city (public space), school board (private space & liabilities after hours), adults fear of liability, expense, not wanting it to be vandalized
- Be creative – have pieces in addition to other things

- Ontario Children's Treatment Centers
- Blooview-Macmillan Rehab

Interview #3
Participant # 4

2) What does “accessible playground” mean to you?

- A play space that everyone can use mostly the same way
- Get as much as they can out of the intention of the play space (ex – climbing wall, not everyone will use it the same way but somewhere else they could do something comparable)
- Everyone can use it to meet it’s intention

3) Are playgrounds that your children use or you see being used by children accessible?

- Comment on school’s playground: accessible insofar as anyone should be able mostly to get up on the playground and use parts of the playground
- Not *functionally* accessible – example: spots with dips, steps, ramps with boards meant to stop you from falling but imagine someone with a visual impairment (with a cane) if anything going on quickly could be a dangerous situation, big long slides or round tubular slides that are covered not useful for someone in a wheelchair (more involved motor disability), monkey bars inaccessible for children with motor disability
- Anyone with visual, motor impairment – safety concerns

4) When can the design of a playground be disabling?

- Anything that moves abruptly from one level to another, not gradual – difficult to get from one level up to highest level
- Big concern when moving quickly from one level to another – climbing ladder or steps
- Ramp that is too sharp would cause a problem for accessibility
- Traditional slides – hill leading up to slide – makes accessible for wheelchair
- Tubes issue for someone with motor disability – without functional use of strength

5) Why is it important for playgrounds to be fully accessible?

- At a school setting, want all students to be active in a social environment that lets them be their best
- If you’re going to play with your peers, it’s nice if there is no limitations
- Children at recess with motor disabilities – can use playground but can’t keep up with their peers
- If playground is built in such a way that at least they can keep up somewhat with their peers or if they playground isn’t what is stopping them from keeping up – get a child playing with their peers, socially integrating in a situation that is regular as possible – in a situation comparable to how those peers would play with any other peers
- Completely about building social rapport with their peers

6) How do playgrounds play an important role in a child’s daily physical activity?

- With my class I have done things in gym where it is structured but some of the time they enjoy unstructured as long as they were getting exercise
- Unstructured play good for imagination, developing own social understanding

- When teacher is always setting rules, kids know what rules to follow because they are told to – not because they know what is appropriate and not appropriate
- For children who need accessible playground, their social interactions limited in a lot of ways, allowing chance to go on these playgrounds give them opportunity to build life skill of how to play with other people, follow other peoples expectations, how you fit in a group
- Important for kids to be able to play with it having to be a game, stretches abilities and their imagination that we can't do otherwise
- The playground can become whatever you want it to be but then we put rules on them so we ruin their fun!

7) How do playgrounds promote social interaction? Foster positive relationships?

- Really important for kids to just play with each other
- Playground, equipment allows them to be creative and come up with games on their own but need to be able to respect each other, find common ground
- Playgrounds allow for that because it is unstructured, but need to learn to respect each other and come up with rules for games, turn-taking
- Natural consequences – learning safety
- Freedom of playground important for building positive rapport with each other
- If playground accessible, children will see child with disability more like themselves
- Obvious somebody has a difference when they have a difference – usually positive, most kids will know how to help and include them but always separation – he or she is different – if somehow playground made so that everyone can use it, maybe that will start to disappear

8) Are children with special needs and impairments at a disadvantage in comparison to their peers due to current playground conditions and equipment? If so, how and why?

- Absolutely - functionally speaking, in terms of how they can use it, there are parts of our playground that are really inaccessible. For someone in a wheelchair, only really functional part of our playground is ramp that goes up and first level (none of around structure stuff accessible because getting them there would be a nightmare), ramps not even wide enough for wheelchair
- Wide open spaces – safety issues – impairment to using it safely
- Slides useless to someone in a wheelchair, especially covered ones.
- Designed to be an accessible playground (at time of building – great intentions) but it is not
- Changing expectations – 10 years from now – research going into autism – next step with accessibility should be autism (sensory items lacking on playgrounds – sensory accessibility)
- Easy to come up with something that would work for visual impairment but not as easy to actually make it happen

9) What are some obstacles to creating accessibility?

- Imagination – adults lose imagination – imagination and creativity big problem – professionals looking at it through their eyes
- Budgets – money biggest obstacle

- Attitudes – not attitude in sense that we don't want to include people with disabilities, but we don't have the education to go with it – but that's what we do with accessibility awareness week, etc.
- Ignorance - just getting someone on to the structure with a ramp is not accessible in a way that they can use it – people designing and building never have to give it another thought
- Legislation – if legislation in place to make it functionally accessible – have builders and designers get in a wheelchair, blindfolded with a cane
- Safety

Interview #4
Participant # 5

2) What does “accessible playground” mean to you?

- Inclusive area where everyone can take part in play in that space
- Children and adults

3) Are playgrounds that your children use or you see being used by children accessible?

- Becoming more accessible but still a lot of flaws
- Surfacing isn't great for wheelchair users, hard to maneuver
- For low vision – stairs don't have a lot of contrast making it hard to judge depth (posts and swings – contrasted with striping can help so they don't walk into posts, borders different colours make it stand out from rest of structure, make level change obvious)
- Textures and pathways

4) When can the design of a playground be disabling?

- Part of my job, go into schools doing environmental assessments on playgrounds
- Wheelchairs – try to make accessible but put huge rubber border around whole playground – wheelchair user could not even access playground – disabling because can't get to it

5) Why is it important for playgrounds to be fully accessible?

- So everybody can take part in play and have fun
- We shouldn't be discriminating against those users, whatever the disability may be
- If certain features not put in, probably due to financial reasons – especially if retrofitting older playground – think it's just a small part of population and that it will be fine

6) How do playgrounds play an important role in a child's daily physical activity?

- Gross motor development
- Features that help fine motor development
- Get rid of energy they have
- Social place for kids to meet up and interact and develop those kinds of skills

7) How do playgrounds promote social interaction? Foster positive relationships?

- Central meeting spot for parents and kids
- Cooperative play, making up own games, playing tag, helping each other out
- Parents can help foster relationships

8) Are children with special needs and impairments at a disadvantage in comparison to their peers due to current playground conditions and equipment? If so, how and why?

- Barriers
- Safety issue – blind/low vision – struggle to see where equipment is – contrast – might not know where certain things are

- Kids in wheelchair – don't have proper surfaces to get to equipment, monkey bars too high

9) What are some obstacles to creating accessibility?

- Financial
- Knowledge – people's awareness of the need for it and what is needed
- Doing better at making people aware

APPENDIX C:
Playground Audits

Playability Audit



Important: This audit is designed to measure the universal accessibility of a playspace. It is not a replacement for and does not supercede the CSA International CAN/CSA-Z614-98 Children's Playspaces and Equipment. That standard must be used to determine safety of all playspaces. To get the most from this audit, use it in conjunction with the other modules of OPA's Playability Tool Kit.

Playspace Surveyed: St Pauls elementary School

Location: 1101 hillard St.

Surveyed by: Lindsay & Lindsay

Date: Mar. 27 10th

Attachments: None. (pictures)

Arrival Point

	Yes	No
1. Does the park or other facility where the playspace is located have a name and street address?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2. Is there a parking lot?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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If no, is there on-street parking?	<input type="checkbox"/>	<input type="checkbox"/>
------------------------------------	--------------------------	--------------------------

If yes, where is the parking lot in relation to the playspace?

close (50m)

3. Are there any barriers in the parking lot limiting access to the playspace?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--	--------------------------	-------------------------------------

If yes, describe

* Gate.

- wooden barrier

- cement until playspace

Playability Audit



Yes No

4. Is the surface of the parking area smooth and hard?

If no, describe

5. Are there designated parking spaces marked for people with disabilities?

How many?

2

- If yes, do they have wheelchair logos painted in the centre and easy-to-read signs 1200 mm above grade?

Pathways

1. Can a person travel from a designated parking space to the playspace without encountering abrupt changes in level (curb, step, too steep ramp)?
2. Are there any steps?
3. Is there a curb?
4. Are there handrails?
5. Is there an alternative route to the playspace?

Playability Audit



Yes No

6. Is the pathway in good repair?

7. What is the surface material?

Cement

8. Is the pathway surface a different texture from the surrounding surface?

9. Are the edges of the pathway consistently defined (i.e. a sloped edge or a gravel border)?

10. Is the pathway free from obstructions?

(gated)

11. Can all objects that protrude into the pathways be detected by a cane?

12. Is there a slope in the pathway?

If yes, is it between 1:20 (5%) and 1:16 (6.25%)?

13. Is the width of the pathway a minimum of 1525 mm ?

If no, what is the width?

14. Are there turning areas on the pathway that are a minimum of 1525 mm in diameter?

15. Are there seating/resting areas every 30 metres along the pathway?

Playability Audit



Yes No

16. Are there access points along the pathway so a user does not have to enter and exit at the same point?

17. Are there any toxic or thorny plants that should be removed from the pathway and borders?

Entrance to the Playspace

1. Is there a formal entrance to the playspace (archway, main path, sign, bulletin board, map, etc.)?

If yes, describe

If no, what is the transition to the playspace?

- metal gate

2. Are there gates, bollards or other features that obstruct the entrance?

3. Is there a change in level at the entrance (curb, step, etc.)?

4. Is the surface texture of the playspace different from the pathway?

5. Is there a waiting area with seating at the entrance?

Playability Audit



Play Events

Yes No

1. Is/are there a composite play structure(s), made up of multiple components in the playspace?

2. What is the age and condition of the structure (look for a manufacturer's plate with the installation date or check with park manager)?

3. What is the total number of play events making up the structure?

5

How many are elevated?

43

How many are at ground level?

2

4. What are the means of accessing elevated play events?

Ladder

Ropes

Ramp

Transfer system

Other

5. If there is a ramp, is it wide enough for two people using wheelchairs to pass (1525 mm)?

Playability Audit



Yes No

6. Is there opportunity to use the topography of the site (e.g. berms, hillsides) for access to elevated surfaces?

7. Is there space for a caregiver to assist a child accessing the play structure?

Caregiver with a disability

Caregiver without a disability

8. Are there stand alone play events, such as spring rockers?

How many are elevated?

20

How many are at ground level?

2

9. Are there swings?

What types of swings?

Standard

How many have a back rest?

0

10. Are there upper-body activities at appropriate heights for children who are both standing and sitting?

Playability Audit



Yes No

11. Is there a range of activities appropriate to different ages and providing different levels of challenge?

12. Are there manipulative play opportunities like sand, water, steering wheels, activity panels?

How are they accessed?

13. Are the colours used on the play structure high contrast?

14. Are there activities to stimulate the five senses?

What are they?

Touch _____

Sound _____

Sight _____

Smell _____

Speech _____

15. Are there activities to stimulate the imagination such as play store, clubhouse, stage?

Playability Audit



Playspace Layout

- | | Yes | No |
|--|-------------------------------------|--------------------------|
| 1. Are the climbing and sliding activities laid out in a circuit that can be easily travelled? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. How far apart are:
the bottom of the slide and the ladder?
<u>Very close</u> | | |
| the bottom of the slide and the ramp, if one exists?
<u>No</u> | | |
| the bottom of the slide and transfer system or steps for returning to the top?
<u>Very close</u> | | |
| 3. Is there room to wait at the bottom of the slide, out of the way of the next person? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. If there are structures and play events for different age groups, are they attached in any manner or separate from each other?
<u>attached</u> | | |
| 5. Are there quiet spaces for children who need to play quietly or observe others? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Is there seating, for both children and adults, out of the way but with a view of the main area of activity? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are there shady areas to sit? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

*benches to left of
no backrest*

Playability Audit



Surfacing

Yes No

1. Are there different types of surfacing in the playspace? (i.e. sand, wood chips, rubber tiles, pea gravel, poured rubber, grass)

2. What are the safety surfaces under the play structure?

Pea gravel

Under swings?

Pea gravel

At the slide bottom back to slide access?

Pea gravel

In splash pads or other water play areas?

N/A

On pathways within the playspace?

asphalt/Pea gravel

3. Is there a safe and convenient route to travel throughout the playspace from one play event to another?

4. What kind of edging is there around the different parts of the playspace?

Wood

How high is it?

30cm

Playability Audit



Amenities

	Yes	No
1. Does the playspace include:		
<input type="checkbox"/> washrooms		
<input type="checkbox"/> picnic tables	<i>N/A</i>	✓
<input type="checkbox"/> water fountain		✓
<input type="checkbox"/> lighting		✓
<input type="checkbox"/> garbage cans		
<input type="checkbox"/> public telephone		✓
<input type="checkbox"/> picnic tables	<i>N/A</i>	✓
<input type="checkbox"/> other _____		

2. How far are they from the playspace?
N/A

3. Have the washrooms been designated accessible for people with disabilities?

4. Can furniture, including picnic tables, be arranged to accommodate a person using a wheelchair?

5. Are garbage cans and public telephones accessible to people with disabilities?

Playability Audit



Signage

	Yes	No
1. Are there signs clearly pointing to the playspace, amenities, and other features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Are there maps?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Do the signs use:		
large, plain lettering in contrasting colours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
universal symbols or pictures as well as lettering?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Braille?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
languages other than English?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
are letters and/or symbols on signs raised or embossed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Are there signs with a number to call for emergencies and/or to report damage, safety hazards or vandalism?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Playability Audit Worksheet

Playspace: St. Pauls
 Prepared by: _____
 Date: Mar. 27/08

Playspace Area	Good existing features	Barriers to accessibility	Next steps /Solutions	Priority
Arrival Point	- Perimeter close to playspace.	- Gate	- remove Gate - replace wooden barrier	low/med
Pathways	- good repair ✓ OK	- Just the gate. - No other route. - No seating on path - No handrail	- Leave gate open all the time - put in bench - install rail	Low
Entrance to the Playspace	- No change in level ✓ OK	- gate - wooden barrier - cement to dirt	- Leave gate open - remove barrier - gate painted	low
Play Events	- Play structure was OK. - multiple play events	- NO ramp - no back rest for swings - no upper body activities - limited activities	- install ramp - activities	high
Playspace Layout	✓	- NO barriers		low
Surfacing	- pathways in good repair - convenient route	- Pea gravel - wood edging	- replace with more accessible surface	high
Amenities				
Signage	- emergency #	NO signs.	- install signs with universal symbols	Med.

Playability Audit



Important: This audit is designed to measure the universal accessibility of a playspace. It is not a replacement for and does not supercede the CSA International CAN/CSA-Z614-98 Children's Playspaces and Equipment. That standard must be used to determine safety of all playspaces. To get the most from this audit, use it in conjunction with the other modules of OPA's Playability Tool Kit.

Playspace Surveyed: St John

Location: 746 Port St. South

Surveyed by: Lindsay Morey & Lindsay Taylor

Date: Mar. 27/08

Attachments: _____

Arrival Point

Yes **No**

1. Does the park or other facility where the playspace is located have a name and street address?

2. Is there a parking lot?

If no, is there on-street parking?

If yes, where is the parking lot in relation to the playspace?
Other side of building

3. Are there any barriers in the parking lot limiting access to the playspace?

If yes, describe

- sidewalk
- gate
- hedge

Playability Audit



Yes No

4. Is the surface of the parking area smooth and hard?

If no, describe

5. Are there designated parking spaces marked for people with disabilities?

How many?

2

If yes, do they have wheelchair logos painted in the centre and easy-to-read signs 1200 mm above grade?

Pathways

1. Can a person travel from a designated parking space to the playspace without encountering abrupt changes in level (curb, step, too steep ramp)?

to gate

2. Are there any steps?

3. Is there a curb?

4. Are there handrails?

5. Is there an alternative route to the playspace?

Playability Audit



Yes No

6. Is the pathway in good repair?

7. What is the surface material?

asphalt

8. Is the pathway surface a different texture from the surrounding surface?

9. Are the edges of the pathway consistently defined (i.e. a sloped edge or a gravel border)?

10. Is the pathway free from obstructions? (hoopall nets)

11. Can all objects that protrude into the pathways be detected by a cane?

12. Is there a slope in the pathway?

If yes, is it between 1:20 (5%) and 1:16 (6.25%)?

13. Is the width of the pathway a minimum of 1525 mm?

If no, what is the width?

14. Are there turning areas on the pathway that are a minimum of 1525 mm in diameter?

15. Are there seating/resting areas every 30 metres along the pathway?

Playability Audit



Yes No

- 16. Are there access points along the pathway so a user does not have to enter and exit at the same point? Yes No

- 17. Are there any toxic or thorny plants that should be removed from the pathway and borders? Yes No

Entrance to the Playspace

- 1. Is there a formal entrance to the playspace (archway, main path, sign, bulletin board, map, etc.)? Yes No

If yes, describe

If no, what is the transition to the playspace?

- gate

- 2. Are there gates, bollards or other features that obstruct the entrance? Yes No

- 3. Is there a change in level at the entrance (curb, step, etc.)? Yes No

- 4. Is the surface texture of the playspace different from the pathway? Yes No

- 5. Is there a waiting area with seating at the entrance? Yes No

Playability Audit



Play Events

Yes No

1. Is/are there a composite play structure(s), made up of multiple components in the playspace?

2. What is the age and condition of the structure (look for a manufacturer's plate with the installation date or check with park manager)?

3. What is the total number of play events making up the structure?
4

How many are elevated?
4

How many are at ground level?
2

4. What are the means of accessing elevated play events?

- Ladder
- Ropes
- Ramp
- Transfer system

Other

5. If there is a ramp, is it wide enough for two people using wheelchairs to pass (1525 mm)?

Playability Audit



Yes No

6. Is there opportunity to use the topography of the site (e.g. berms, hillsides) for access to elevated surfaces?

Yes No

7. Is there space for a caregiver to assist a child accessing the play structure?

Yes No

Caregiver with a disability

Caregiver without a disability

Yes No

8. Are there stand alone play events, such as spring rockers?

Yes No

ball nets (6)

How many are elevated?

How many are at ground level?

9. Are there swings?

Yes No

What types of swings?

Standard

How many have a back rest?

0

10. Are there upper-body activities at appropriate heights for children who are both standing and sitting?

Yes No

only standing (rings)

Playability Audit



Yes No

11. Is there a range of activities appropriate to different ages and providing different levels of challenge?

2 levels of slides

12. Are there manipulative play opportunities like sand, water, steering wheels, activity panels?

How are they accessed?

13. Are the colours used on the play structure high contrast?

14. Are there activities to stimulate the five senses?

What are they?

Touch _____

Sound _____

Sight colours (soccer field on play structure)

Smell _____

Speech _____

15. Are there activities to stimulate the imagination such as play store, clubhouse, stage?

Playability Audit



Playspace Layout

- | | Yes | No |
|--|-------------------------------------|-------------------------------------|
| 1. Are the climbing and sliding activities laid out in a circuit that can be easily travelled? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. How far apart are:
the bottom of the slide and the ladder?
<u>big - other side, little - close</u>
the bottom of the slide and the ramp, if one exists?

the bottom of the slide and transfer system or steps for returning to the top?
<u>moderately close</u> | | |
| 3. Is there room to wait at the bottom of the slide, out of the way of the next person? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. If there are structures and play events for different age groups, are they attached in any manner or separate from each other?
<u>attached</u> | | |
| 5. Are there quiet spaces for children who need to play quietly or observe others?
<u>shelter</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Is there seating, for both children and adults, out of the way but with a view of the main area of activity? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are there shady areas to sit? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Playability Audit



Surfacing

Yes No

1. Are there different types of surfacing in the playspace? (i.e. sand, wood chips, rubber tiles, pea gravel, poured rubber, grass)

2. What are the safety surfaces under the play structure?

Pea gravel

Under swings?

Grass

At the slide bottom back to slide access?

Pea gravel

In splash pads or other water play areas?

N/A

On pathways within the playspace?

N/A

3. Is there a safe and convenient route to travel throughout the playspace from one play event to another?

4. What kind of edging is there around the different parts of the playspace?

Wood

How high is it?

300mm

Playability Audit



Amenities

Yes No

1. Does the playspace include:

washrooms

picnic tables

water fountain

lighting

garbage cans

public telephone

picnic tables

other _____

2. How far are they from the playspace?

10M

3. Have the washrooms been designated accessible for people with disabilities?

4. Can furniture, including picnic tables, be arranged to accommodate a person using a wheelchair?

5. Are garbage cans and public telephones accessible to people with disabilities?

Playability Audit



Signage

- | | Yes | No |
|--|--------------------------|-------------------------------------|
| 1. Are there signs clearly pointing to the playspace, amenities, and other features? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Are there maps? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Do the signs use: | | |
| large, plain lettering in contrasting colours? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| universal symbols or pictures as well as lettering? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Braille? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| languages other than English? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| are letters and/or symbols on signs raised or embossed? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Are there signs with a number to call for emergencies and/or to report damage, safety hazards or vandalism? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

→ Security Camera:

ST. JOHN

Playspace Area	Good Existing Features	Barriers to Accessibility	Next steps/Solutions	Priority
Arrival Point	<ul style="list-style-type: none"> - designated spaces (2) - well-signed - smooth surface 	<ul style="list-style-type: none"> - parking lot far distance from play structure - gated - curb at entrance 	<ul style="list-style-type: none"> - cut curb for wheelchair access - enlarge width of gate entrance 	LOW/MED
Pathways	<ul style="list-style-type: none"> - alternative route provided - different texture from surrounding area - objects can be easily detected 	<ul style="list-style-type: none"> - no resting spots - not free from obstructions (basketball nets) - edges not consistently defined 	<ul style="list-style-type: none"> - include resting spot on way to play structure - add contrasting colours to poles to ensure visibility 	LOW/MED
Entrance to the Playspace	<ul style="list-style-type: none"> - relatively flat - variety of textures 	<ul style="list-style-type: none"> - wood edging with no ramp 	<ul style="list-style-type: none"> - provide ramp to playspace 	MED
Play Events	<ul style="list-style-type: none"> - colours - swings 	<ul style="list-style-type: none"> - # of play events limited - only 1 way to access elevated events - metal not safe - safety concerns with equipment (ways to get up) 	<ul style="list-style-type: none"> - provide more play events - look into new play structure 	HIGH
Playspace Layout	<ul style="list-style-type: none"> - shady areas - large playing field - big and small slides 	<ul style="list-style-type: none"> - structure itself was very small, not many children would be able to play at once, larger children excluded - swings far from structure 	<ul style="list-style-type: none"> - look into new structure 	HIGH
Surfacing	<ul style="list-style-type: none"> - safe and convenient route to travel from one event to another 	<ul style="list-style-type: none"> - pea gravel not safe and not accessible - wood edging 	<ul style="list-style-type: none"> - look into new surfacing that is accessible and safe (rubber tarmack) 	HIGH

Signage	- security cameras with 24 hour monitoring	- no signs	- provide signs with contrasting colours, universal symbols, etc.	LOW
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Playability Audit



Yes No

4. Is the surface of the parking area smooth and hard?

If no, describe

5. Are there designated parking spaces marked for people with disabilities?

How many?

3

If yes, do they have wheelchair logos painted in the centre and easy-to-read signs 1200 mm above grade?

Pathways

1. Can a person travel from a designated parking space to the playspace without encountering abrupt changes in level (curb, step, too steep ramp)?

2. Are there any steps?

3. Is there a curb?

4. Are there handrails?

5. Is there an alternative route to the playspace?

Playability Audit



6. Is the pathway in good repair? Yes No

7. What is the surface material?

gravel

8. Is the pathway surface a different texture from the surrounding surface? Yes No

9. Are the edges of the pathway consistently defined (i.e. a sloped edge or a gravel border)? Yes No

10. Is the pathway free from obstructions? Yes No

11. Can all objects that protrude into the pathways be detected by a cane? Yes No

12. Is there a slope in the pathway? Yes No *flat*

If yes, is it between 1:20 (5%) and 1:16 (6.25%)? Yes No

13. Is the width of the pathway a minimum of 1525 mm? Yes No

If no, what is the width?

14. Are there turning areas on the pathway that are a minimum of 1525 mm in diameter? Yes No *- winter ?*

15. Are there seating/resting areas every 30 metres along the pathway? Yes No

Playability Audit



Yes No

16. Are there access points along the pathway so a user does not have to enter and exit at the same point?

17. Are there any toxic or thorny plants that should be removed from the pathway and borders?

X

Entrance to the Playspace

1. Is there a formal entrance to the playspace (archway, main path, sign, bulletin board, map, etc.)?

If yes, describe

gated on both sides of
pathway

If no, what is the transition to the playspace?

2. Are there gates, bollards or other features that obstruct the entrance?

3. Is there a change in level at the entrance (curb, step, etc.)?

4. Is the surface texture of the playspace different from the pathway?

5. Is there a waiting area with seating at the entrance?

Playability Audit



Play Events

Yes No

1. Is/are there a composite play structure(s), made up of multiple components in the playspace?

2. What is the age and condition of the structure (look for a manufacturer's plate with the installation date or check with park manager)?
14 yrs. Sat.

3. What is the total number of play events making up the structure?
12

How many are elevated?
10

How many are at ground level?
2

4. What are the means of accessing elevated play events?

Ladder

Ropes

Ramp

Transfer system

Other

5. If there is a ramp, is it wide enough for two people using wheelchairs to pass (1525 mm)?

Playability Audit



Yes No

6. Is there opportunity to use the topography of the site (e.g. berms, hillsides) for access to elevated surfaces?

7. Is there space for a caregiver to assist a child accessing the play structure?

Caregiver with a disability

Caregiver without a disability

8. Are there stand alone play events, such as spring rockers? monkey bars
bb nets

How many are elevated?
2

How many are at ground level?
1

9. Are there swings?

What types of swings?

How many have a back rest?

10. Are there upper-body activities at appropriate heights for children who are both standing and sitting?

Just standing

Playability Audit



Yes No

11. Is there a range of activities appropriate to different ages and providing different levels of challenge? Yes No *Prim.*

12. Are there manipulative play opportunities like sand, water, steering wheels, activity panels? Yes No
min

How are they accessed?
on play structure

13. Are the colours used on the play structure high contrast? Yes No

14. Are there activities to stimulate the five senses? Yes No

What are they?

Touch Play struct

Sound _____

Sight to it tac

Smell _____

Speech _____

15. Are there activities to stimulate the imagination such as play store, clubhouse, stage? Yes No

Playability Audit



Playspace Layout

- | | Yes | No | |
|---|-------------------------------------|-------------------------------------|-------------------------------|
| 1. Are the climbing and sliding activities laid out in a circuit that can be easily travelled? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | - planks
- pathways narrow |
| 2. How far apart are:
the bottom of the slide and the ladder?
<u>1.5M</u> | | | |
| the bottom of the slide and the ramp, if one exists?
<u>4.5M</u> | | | |
| the bottom of the slide and transfer system or steps for returning to the top?
<u>2M</u> | | | |
| 3. Is there room to wait at the bottom of the slide, out of the way of the next person? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. If there are structures and play events for different age groups, are they attached in any manner or separate from each other?
<u>NIA</u> | | | |
| 5. Are there quiet spaces for children who need to play quietly or observe others? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 6. Is there seating, for both children and adults, out of the way but with a view of the main area of activity? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | - 1 bench |
| 7. Are there shady areas to sit? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 2 shelters
NO trees |

Playability Audit

Surfacing

Yes No

1. Are there different types of surfacing in the playspace? (i.e. sand, wood chips, rubber tiles, pea gravel, poured rubber, grass)

2. What are the safety surfaces under the play structure?

~~sand~~ Sand

Under swings?

N/A

At the slide bottom back to slide access?

Sand

In splash pads or other water play areas?

N/A

On pathways within the playspace?

gravel

3. Is there a safe and convenient route to travel throughout the playspace from one play event to another?

- only ramp

4. What kind of edging is there around the different parts of the playspace?

wood

How high is it?

water - not very visible

Playability Audit



Amenities

Yes No

1. Does the playspace include:

washrooms

picnic tables

water fountain

lighting

garbage cans

public telephone

picnic tables

other Shelter

2. How far are they from the playspace?

close

3. Have the washrooms been designated accessible for people with disabilities?

4. Can furniture, including picnic tables, be arranged to accommodate a person using a wheelchair?

5. Are garbage cans and public telephones accessible to people with disabilities?

Playability Audit



Signage

- | | Yes | No |
|--|--------------------------|-------------------------------------|
| 1. Are there signs clearly pointing to the playspace, amenities, and other features? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Are there maps? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Do the signs use: | | |
| large, plain lettering in contrasting colours? | <input type="checkbox"/> | <input type="checkbox"/> |
| universal symbols or pictures as well as lettering? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Braille? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| languages other than English? | <input type="checkbox"/> | <input type="checkbox"/> |
| are letters and/or symbols on signs raised or embossed? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Are there signs with a number to call for emergencies and/or to report damage, safety hazards or vandalism? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

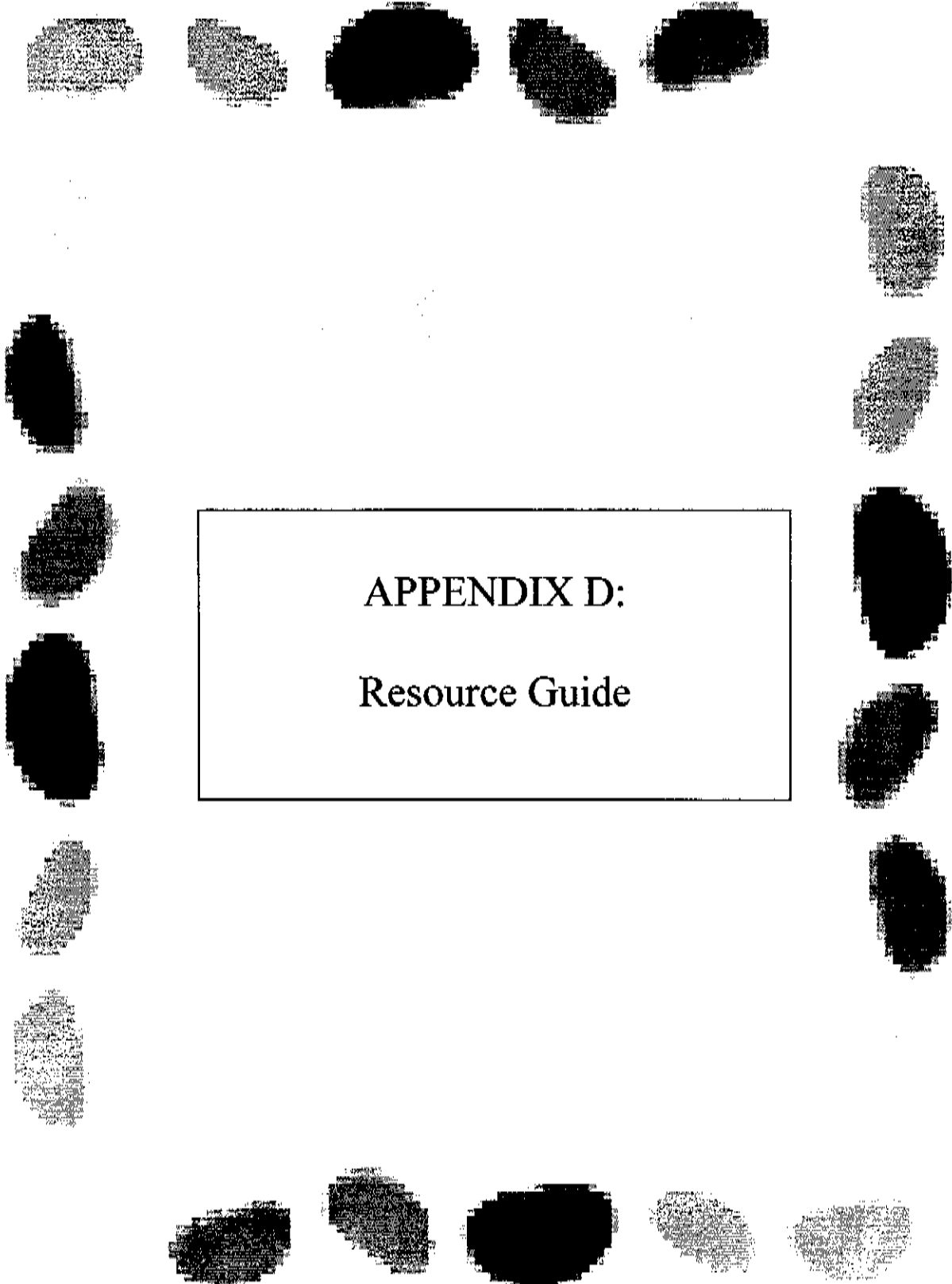
Playability Audit Worksheet

Playspace: St. Catherine

Prepared by: _____

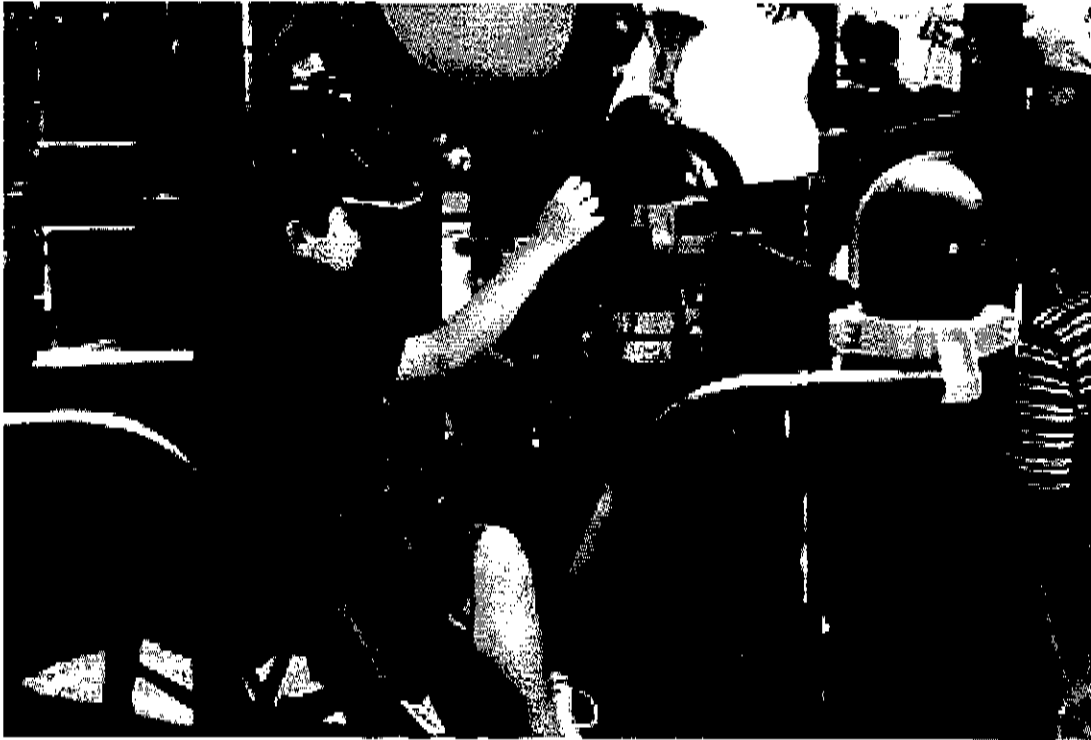
Date: March 27/08

Playspace Area	Good existing features	Barriers to accessibility	Next steps /Solutions	Priority
Arrival Point	<ul style="list-style-type: none"> - # of parking spaces (disabled) - well signed - surface 	/	✓	
Pathways	<ul style="list-style-type: none"> - defined edges - free from obstructions 	<ul style="list-style-type: none"> - no handrails - pathway not accessible - gravel 	<ul style="list-style-type: none"> - re-pave pathway - include hand rails or rest stops 	MEDIUM
Entrance to the Playspace	<ul style="list-style-type: none"> - visible entrance but gates are not obstructing 	<ul style="list-style-type: none"> - surface - interlocking bricks have shifted - change in level at entrance - wood deck - no ramp 	<ul style="list-style-type: none"> - re-do pathway up to entrance - ensure flat + smooth 	LOW-MED
Play Events	<ul style="list-style-type: none"> - variety of play events - contrasting colours - ramp to structure 	<ul style="list-style-type: none"> - many activities elevated - directed to primary only 	<ul style="list-style-type: none"> - provide activities that might appeal to older children 	HIGH
Playspace Layout	<ul style="list-style-type: none"> - quiet spaces -> large playing field - shady/shelters 	<ul style="list-style-type: none"> - pathways on playground too narrow - planks = barrier - no seating 	<ul style="list-style-type: none"> - provide rest areas w/ seating 	LOW-MED
Surfacing	<ul style="list-style-type: none"> - 2 different textures 	<ul style="list-style-type: none"> - sand surface - gravel pathways - no ramp to get on structure - wood edging 	<ul style="list-style-type: none"> - make ALL Surfacing more accessible + safe, provide ramp 	HIGH
Amenities	N/A - school	playground		
Signage		NO SIGNS	<ul style="list-style-type: none"> - provide emergency # - if signs provided - use universal symbols 	LOW



APPENDIX D:
Resource Guide

Accessible Playgrounds: A Resource Guide



**Created by: Lindsay Taylor & Lindsay Morey
Trent University
Department of Geography
April 2008**

This guide is intended to help others understand accessibility and the social and environmental issues that underpin these relations. It is also intended to be a reference for those looking into creating accessible playgrounds, or updating existing playgrounds. This project can be used by schools, organizations, municipalities, families, and individuals doing research to gain some insight and background knowledge to how playgrounds foster positive relationships, social interactions, and physical activity. It will also help these people understand the importance of accessibility in the built environment. Lastly this guide can be used to understand people's ideas, opinions and attitudes regarding obstacles, barriers, and how the environment can be disabling or limiting to some people.

This project was developed in conjunction with the Peterborough Victoria Northumberland Clarington Catholic District School Board and two fourth year Honours Geography students at Trent University in Peterborough, Ontario. The main goal of the project was to develop a resource guide on how to create a new accessible playground, or update an existing playground, in order to support a variety of special needs students.

In order to gain an understanding of the types of barriers school-yard playgrounds pose for children who have disabilities or special needs, qualitative methodologies were used. Qualitative methods help researchers understand how humans arrange themselves and their settings, and how they make sense of their surroundings through interactions and attitudes (Mansvelt & Berg, 2005). Qualitative methods were appropriate for this project because we were interested in people's opinions and attitudes towards accessibility and play, which would help us understand barriers in the built environment, and allowed us to develop alternative suggestions. An environmental scan, interviews, and audits were three ways that we learned about the

individual barriers that confront children with disabilities, suggesting ways to try and break down these barriers within schools, and providing suggestions for accessible equipment.

The information that we have gathered from this project has been extracted from the final product in order to create this resource guide. Please refer to our Understanding and Creating Accessible Playgrounds Report for more information.

The Importance of Play

Play is one of the most fundamental components to healthy child development. The International Play Association's declaration recognizes the Child's Right to Play, and emphasizes the vital role play has in helping children develop to their full potential (International Play Association, 1989). It allows children to develop not only physically, but also intellectually, socially, and emotionally. Schools play a vital role in providing an inviting atmosphere that allows children the opportunity to explore their environment, build social relationships, use their imaginations, partake in physical activity, and most importantly a space to have fun!

Playgrounds are a place where children can use the apparatus however they want, and they are able to engage in both independent and co-operative play. The playground is a space that fosters play. A well-designed playground allows for unstructured play that is creative and imaginative, free from the contexts of structured play. However, due to barriers, not all children are able to use the playground in a similar way. Many playgrounds in the past have been designed and built without considering accessibility and those with disabilities, especially motor impairments, have been limited by the play structure.

It has become obvious that play is an important aspect of healthy development. It provides children with opportunities to engage in daily physical activity that will help develop motor skills, as well as improve cardiovascular health, flexibility, strength, dexterity and it helps

children release pent up energy. Play on the playground can also help children build social skills. They learn how to get along with their peers through co-operative play and teamwork, they can engage in healthy competition, they learn how to find common-ground and how to take turns, and finally, the playground increases opportunities for children of all abilities to learn together. Although not implicit, the playground can foster intellectual development, as well. Children are required to engage in fine thinking skills such as logical and rational thinking, problem-solving, memory activities, imaginative play, and playgrounds encourage children to use and refine their intellectual abilities.

When discussing accessible playgrounds, children are the main point of reference but it should be made clear that playgrounds are also used by people of varying abilities, including children, adults, and seniors as well as parents with strollers or wagons, and people who are providing assistance to those with special needs. Playgrounds are free to be used by anyone and are not just confined to children.

The experiences of children with disabilities on the playground will not be the same as children who do not have a disability. Through education and awareness, and hopefully through this project, thoughts about accessibility will begin the change. When children with disabilities and special needs are not able to experience the same level of social interaction, they can begin to develop low self-esteem, isolation, and can even be labelled as a “loner” by other children (Blatchford, 1998). By making playgrounds accessible, all children can experience the playground in similar ways.

Accessibility is extremely important because every member of society, no matter what their abilities, should feel as though they are a part of the community. Accessibility has also recently become an important issue in Ontario since the Government has proposed to make the

province barrier-free by 2025 (Ontario Ministry of Community and Social Affairs, 2005). If this goal is to be achieved, playgrounds cannot be overlooked because they play such a large role in child development and inclusion.

Sources of Funding

Since the board has limited access to funding resources, we have uncovered different ways that schools can go about receiving funding for an accessible playground project.

Schools can consult service clubs such as the Rotary Club and the Kiwanis club, which provide grants for community projects. Organizations such as Hudson's Bay Company (HBC) and Ronald McDonald House provide grants for projects, but there is an application procedure that is quite extensive. Schools can always ask for direct donations, called in-kind, which can be in the form of goods, services, and volunteer time. Lastly, schools can hold fundraisers for the community to raise money for an accessible playground project. Fundraising ideas include bake sales, car washes, fun-fairs, and silent auctions.

If funding an accessible playground is a problem, there are many opportunities to make the playspace accessible and inclusive. It is not necessary to make large changes all at once, but small steps toward accessibility can make a difference. For example, start with a ramp onto the play structure, or installing stand alone activities such as an accessible sand table or splash pads. There are also other ways of making the playspace accessible for people with disabilities. For example, Nabors et al. (2001) suggest taking the classroom to the playground. This means bringing items such as sidewalk chalk, building blocks, gardening activities, and quiet activities to the play space so even if children cannot access the main structure, they are still included in the play environment and play experience. The immediate environment can shape the play experience. It is not just about what is on the playground, rather what is around the playspace.

Reshaping the Built Environment

The current conditions of the built environment are not designed for individuals with disabilities. There are very few, if any, accessible playgrounds located in many communities and sometimes individuals cannot even reach the playspace due to its location and lack of transportation. Many buildings throughout the built environment call themselves accessible because they have simply added a ramp to the front of their building so anyone who uses a mobility device can enter the building; but often after they enter the building, not much else is truly accessible. While these are just a few examples of how the built environment is not designed for those with disabilities, it has become apparent that these barriers that limit a person with a disability need to be corrected. Issues that need to be considered when reconsidering the built environment include: (i) the overall design, (ii) age appropriateness (who will be using this space?), (iii) accessibility (does *everyone* have access?), (iv) natural area (can the natural surrounding areas be integrated into the design?), and (v) safety (are all the components in the design safe?).

The AODA legislation is a great initiative instated by the province as it is the first of its kind and it sets an example for other provinces in Canada. It also shows that the province recognizes that there is a need to change the way that the built environment is organized and constructed. It demonstrates to people with disabilities that the province is making a valiant effort to make them feel included in society, and by doing so it may shift society's perceptions of people who have disabilities and promote understanding and awareness. While the AODA is a great start, 2025 is still quite some time away. It is recognized that change does take time.

However, we encourage everyone begin making small changes now instead of waiting for the law to initiate change.

Accessibility Awareness – Identifying Barriers and Suggestions for Improvement

It is clear that people are becoming more aware of accessibility issues. Education is one of the first steps in understanding accessibility. Accessibility in the playspace means that children have equal opportunities to access a play experience. If they can achieve similar experiences from play, then perhaps differences will become less visible. Also, how the children use the equipment to get the intention out of the play experience is important. Though they may not use the equipment provided in the same way, they are still engaging in physical activity, social interaction, building friendships, and learning natural consequences.

While children with disabilities may not use the provided equipment in the same way as their able-bodied peers is it still imperative that all children be able to access the equipment. One important barrier that can limit which equipment can be accessed and which pieces cannot is surfacing. Although surfacing is one of the most important components to creating accessibility, it surprised us that this idea was not brought up to a great extent throughout the interviews. The playground audits revealed that the majority of the schools had either pea gravel or sand as the primary type of surfacing. Both of these types of surfacing do not allow people who need to use mobility devices to access the playground as the fill is too loose and prevents the device from moving freely. One way that this barrier can be eliminated is by putting in either a ramp that leads from the start of the surfacing to the play structures, or by using a more accessible type of

surfacing such as pour-in-place rubber or rubber tiles as these allow for mobility devices to be used throughout the entire playground.

From conducting the playground audits and listening to our interviewee's share their thoughts on the current design of the playgrounds, it was apparent that very little imagination is used in playground construction. For example, in one of the schools we went to, only one area was accessible and this area was the main play structure, but only the first level could be accessed. It was accessible via a ramp and on this first level there was only one activity panel and one slide, both of which would become boring very quickly. This area demonstrated a lack of imagination, as there was very little for the children who need the use of a mobility device to do. The rest of the playground was also like this as there were not a variety of activities such as activity panels, and stand-alone equipment to stimulate the use of different areas of the brain. Also, there were only standard swings that did not vary in size or height. One way to provide a little more imagination to the swinging experience is for the school to provide swings that vary in size and height, swings that are accessible for children of varying abilities including children who need the use of mobility devices. In addition, on all of the playgrounds there were only the typical two different sized slides that went straight down as opposed to having a waved or twisting design.

One suggestion that might bring more imagination to the playground that was mentioned in the interviews was to gain more public input about what should be included in the overall playground design. Public input would try to involve every member of the community including children, adults, people with various disabilities and the elderly. Public input should take a variety of different forms including public meetings, surveys/questionnaires, playground participation and focus groups or interviews.

While more imagination is needed in the overall design of a school's playground, it is also important to remember that the design should not limit anyone from being able to play. However, this is nearly impossible because what may help one person with a disability may, in fact, hinder another person's play experience.

Another barrier that can limit the use of equipment is the lack of contrasting colours on the play equipment. Single colours make it difficult for people who have visual impairments to locate or identify the equipment and it affects their depth perception, which can cause injuries. This barrier can be easily corrected by simply painting contrasting coloured stripes on equipment and borders so they can be more easily recognized.

While providing equipment that can be accessed by everyone is important to the success of an accessible playground, one barrier to this is the ability to locate suppliers within Canada, Ontario, or even locally located manufacturers that can provide the needed equipment (e.g., surfacing and other features such as benches, picnic tables that can accommodate a wheelchair, shelters and a variety of transfer systems). Some suggestions are to first look up companies in the yellow pages or online. Often people who work for the city or belong to accessibility committees will be able to help in locating companies and providing the names of possible suppliers and distributors. Another idea is to hire a playground consultant. Consultants are often extremely knowledgeable in their field and are well educated about accessibility and accessible equipment. The only downside to hiring a consultant is the extra cost. For a list of companies that supply accessible equipment, consult the resource guide.

Concluding Remarks

When designing an accessible playground, it is important to remember that there is more to it than just picking equipment from a catalogue. Ensuring that the design of the playground

flows, that it is designed for different types of children's play, that the equipment is age appropriate, ensuring accessibility, and safety are all vital issues to consider when designing an accessible playground. Again, it is also important to remember that it is not just the playground that needs consideration. The entire playspace should be accessible and inviting to all those who wish to take part in a play experience.

Though we would like to strive to create the perfect accessible playground, we have come to realize that no playground can ever truly be perfect. Equipment or activities that help one person may hinder another since each person is different, even those who have the same disability. Small changes made to existing playgrounds to make them more accessible is an important step in obtaining inclusivity. Remember that even bringing activities from the classroom to the playspace to ensure everyone is included in a meaningful play experience is another step toward accessibility. Every little change makes a difference.

Instructions for Use

Accessible Equipment

The guide for accessible equipment can be found at the back of this report, along with the contact information of companies that supply the accessible equipment discussed in this guide. It is very simple to use and can help those looking to create an accessible playground find equipment that will address the needs of individuals with disabilities, impairments, and exceptionalities. At the top, four disabilities and exceptionalities are listed: visual impairment, learning/cognitive/language, physical/mobility impairment, and developmental. Along the left-hand side, equipment is organized by type into ten different categories along with the name of the providing company. The dots on the list represent what equipment can work for and embrace each disability, impairment, or exceptionality. The legend will explain which company supplies the equipment listed.

- ✓ If you are looking for a specific disability, impairment or exceptionality, start at the top and work your way downwards to see what equipment is suitable for that specific disability, impairment, or exceptionality.

- ✓ If you are looking for a specific piece or category of equipment and would like to know what disability, impairment, or exceptionality it can work with, locate the equipment you are looking for on the side and scan horizontally across.

Conducting a Playground Audit

Equipment Required:

- 1 clipboard
- A copy of the audit which can be found at the back of this guide
- 1 pencil/pen
- A copy of the CSA Standards for Children's Playspaces and Equipment (optional)

Conduct the audit on the playground of choice. To do this, simply answer the questions on the audit to the best of your knowledge. Once the audit is complete, it is a good idea to fill out the Playability audit worksheet. This worksheet is important as you will outline good existing features of your playground, barriers to accessibility, and you will be able to provide specific steps or solutions to barriers. Once this is complete, rate the priority in which you believe the solutions needs to be completed. High priority means that the barrier needs to be fixed immediately, while low priority means the barrier is not necessary immediately. High priority items should include ramps to get onto the play structure, un-cut curbs, surfacing, and unsafe play events. Low priority items might include things such as signage and existing layouts.

References

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- Mansvelt, J. & Berg, L.D. (2005). Writing Qualitative Geographies, Constructing Geographical Knowledges. In I. Hay (Ed.), *Qualitative Research Methods in Human Geography* (pp. 248-265). Melbourne: Oxford University Press.
- Morey, L. & Taylor, L. (2008). Understanding and Creating Accessible Playgrounds. Unpublished Honours Project, Trent University, Peterborough.
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- Ontario Parks Association. (2001). *Playability Tool Kit*.

Accessible Playground Equipment Manufacturers:
Contact Information

Active Playground Equipment

124 Kendall St.,
Pt. Edward, Ontario
N7V 4G5, Canada
Phone: 1-800-463-2361
Fax: (519) 337-3444
www.apeplayground.com

Belair Recreational Products Inc.

21 Scotts Avenue
P.O. Box 244
Paris, ON Canada
Toll free: 1-800-387-6318
Fax: 519-442-0111
www.belairplaygrounds.com/products

Blue Grass Playgrounds

1056 Fedee Lane
Ashland, NE 68003
Phone: 1-800-271-4011
Fax: 866-271-4011
www.bluegrassplaygrounds.com

BYO Playgrounds

7000 U.S. 1 North
Suite #201
St. Augustine, FL 32095
Phone: 1-800-853-5316 or 904-808-8509
www.byoplayground.com/index.html

Detailed Play Systems

Box 633
Springfield NJ 07081
Phone: 1-877- 548-3100
Fax: 1-973-376-8881
<http://www.detailedplaypro.com/information.html>

Flag House

235 Yorkland Blvd, Suite 105,
North York, Ontario,
M2J 4Y8, Canada
Phone: 1-416-495-8262
Fax: 1-800-265-6922
www.flaghouse.ca

Game Time

Crozier Agencies
Unit 8, 1865 Sargent Ave.
Winnipeg, Manitoba
R3H 0E4, Canada
Phone: 204-774-6084
Toll Free: 800-665-3821
Fax: 204-774-6099
www.gametime.com

Henderson

2311 Hwy #134
Peterborough, Ontario, ,
K9J 8J6 , Canada
Tel: (705) 295-4577
www.henderson-recreation.com

KSL Design

18 Spalding Drive
PO Box 25085
Brantford, Ontario
N3T 6K5, Canada
Phone: 1-877-757-7529
Fax: 519-758-6565
www.ksl.com

Little Tikes
Phone: 1-800748-2204
www.littletikes.com

Outdoor Fun Store
3766 Commerce Court
Wayne, MI, 48184
Phone: 1-877-386-1700
www.outdoorfunstore.com

Romperland
Del-Air Systems
P.O. Box 2500
Humboldt , SK
S0K 2A0, Canada
Phone:1-306-682-5081
Fax: 1-306-682-5559
www.romperlandplay.com

Sound Play
P.O. Box 115
Parrott, GA 39877
Phone: 1-229-623-5545
www.soundplay.com

Surface Play
3253 Jean-Béraud
Laval, QC, H7T 2L2
Canada
Phone: 1-800-773-0737
www.surfaceplay.com

Visual Impairment

Learning/Cognitive/Language

Physical/Mobility Impairment

Developmental

	Visual Impairment	Learning/Cognitive/Language	Physical/Mobility Impairment	Developmental
Activity Panels				
Clock (KSL)		●	●	●
Alphabet (KSL)		●	●	●
Mirror(KSL)		●	●	●
Sign Language (KSL)		●	●	●
Bells (APE)	●	●	●	●
Abacus (B)	●	●	●	●
Panel with a Bench ®	●	●	●	●
Up and Down Talk tubes ®		●	●	●
Tic-Tac-Toe (KSL)		●	●	●
Free Play/ Stand Alone				
Punch Buggy (APE)		●	●	●
Talk Tube (APE)	●	●	●	●
Torso Support Spring Rider (BG)			●	●
Sand Digger (ODFS)			●	
Musical Instruments (SP)	●	●	●	●
Wheel Chair Arcade (BG)			●	
Sand and Water Table (LT)	●	●	●	●
UFO bouncer ®	●	●	●	●
Accessible Loop Ladder (BYOP)			●	
Speed Racer (BYOP)		●	●	●
Fun Table (DPS)		●	●	●
Hex sandbox wth access (H)	●	●	●	●
Game Table (ODFS)		●	●	●
Transfer Systems				
Stairs with coloured kick plates (LT)	●	●		●
Wheelchair ramp (APE)			●	●
Tranfer Station (APE)			●	●
Boarder Ramp (BG)			●	●
Surfacing				
Euroflex Shock Absorbent (H)	●	●	●	●
Pour in place Rubber (GT)	●	●	●	●
Rubber Tile (BG)	●	●	●	●
Loose-fill Rubber (BG)	●	●	●	●
Engineered Wood fibre (BG)	●	●	●	●
Durable Carpets (S)	●	●	●	●
Rubber Interlocking Tile (S)	●	●	●	●

	Visual Impairment	Learning/Cognitive/Language	Physical/Mobility Impairment	Developmental
Slides				
Double Stainless Steel (ODFS)	●	●	●	●
Straight Slide (B)	●	●		
Swings				
Inclusive Combo Set (BG)	●	●	●	●
Inclusive Swing Seat (LT)			●	●
PlayCenters/ Climbers				
Village Play Center (BG)	●	●	●	●
Climber with contrasting colour steps (APE)	●	●		●
Play house (LT)	●	●		●
Bedrock climber (B)	●	●		●
Musical Center (BYOP)	●	●	●	●
Stand alone activity play center (APE)	●	●	●	●
Climbing Wall (DPS)		●		●
Sports				
Accessible Fun Hoop (BYOP)	●	●	●	●
Funball (H)		●		●
Triple Hoop Game (H)		●		●
Height Adjustable Basketball Net (F)		●	●	●
Signage				
No limits (GT)	●	●	●	●
Accessible playground (BYOP)	●	●	●	●
Rest Areas				
Wheel-up picnic tables (LT)			●	●
Low Benches (BG)	●	●	●	●
Shelters (BYOP)	●	●	●	●

Legend

- APE = Active Playground Equipment
- B = Belair
- BG = Blue Grass playgrounds
- BYOP = BYO playgrounds
- DPS = Detailed Play Systems
- F = Flaghouse
- GT = Game Time
- H = Henderson
- KSL = KSL Design
- LT = Little Tikes
- ODFS = Outdoor Fun Store
- ® = Romperland
- SP = Sound Play

Playability Audit



Important: This audit is designed to measure the universal accessibility of a playspace. It is not a replacement for and does not supersede the CSA International CAN/CSA-Z614-98 Children's Playspaces and Equipment. That standard must be used to determine safety of all playspaces. To get the most from this audit, use it in conjunction with the other modules of OPA's *Playability Tool Kit*.

Playspace Surveyed:

Location:

Surveyed by:

Date:

Attachments:

Arrival Point

	Yes	No
1. Does the park or other facility where the playspace is located have a name and street address?	<input type="checkbox"/>	<input type="checkbox"/>

2. Is there a parking lot?	<input type="checkbox"/>	<input type="checkbox"/>
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If no, is there on-street parking?	<input type="checkbox"/>	<input type="checkbox"/>
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If yes, where is the parking lot in relation to the playspace?

3. Are there any barriers in the parking lot limiting access to the playspace?	<input type="checkbox"/>	<input type="checkbox"/>
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If yes, describe

Playability Audit



Yes No

4. Is the surface of the parking area smooth and hard?

If no, describe

5. Are there designated parking spaces marked for people with disabilities?

How many?

- If yes, do they have wheelchair logos painted in the centre and easy-to-read signs 1200 mm above grade?

Pathways

1. Can a person travel from a designated parking space to the playspace without encountering abrupt changes in level (curb, step, too steep ramp)?
2. Are there any steps?
3. Is there a curb?
4. Are there handrails?
5. Is there an alternative route to the playspace?

Playability Audit



6. Is the pathway in good repair? Yes No

7. What is the surface material?

8. Is the pathway surface a different texture from the surrounding surface?

9. Are the edges of the pathway consistently defined (i.e. a sloped edge or a gravel border)?

10. Is the pathway free from obstructions?

11. Can all objects that protrude into the pathways be detected by a cane?

12. Is there a slope in the pathway?

If yes, is it between 1:20 (5%) and 1:16 (6.25%)?

13. Is the width of the pathway a minimum of 1525 mm ?

If no, what is the width?

14. Are there turning areas on the pathway that are a minimum of 1525 mm in diameter?

15. Are there seating/resting areas every 30 metres along the pathway?

Playability Audit



Yes No

- 16. Are there access points along the pathway so a user does not have to enter and exit at the same point? Yes No

- 17. Are there any toxic or thorny plants that should be removed from the pathway and borders? Yes No

Entrance to the Playspace

- 1. Is there a formal entrance to the playspace (archway, main path, sign, bulletin board, map, etc.)? Yes No

If yes, describe

If no, what is the transition to the playspace?

- 2. Are there gates, bollards or other features that obstruct the entrance? Yes No

- 3. Is there a change in level at the entrance (curb, step, etc.)? Yes No

- 4. Is the surface texture of the playspace different from the pathway? Yes No

- 5. Is there a waiting area with seating at the entrance? Yes No

Playability Audit



Play Events

1. Is/are there a composite play structure(s), made up of multiple components in the playspace? Yes No

2. What is the age and condition of the structure (look for a manufacturer's plate with the installation date or check with park manager)?

3. What is the total number of play events making up the structure?

How many are elevated?

How many are at ground level?

4. What are the means of accessing elevated play events?

- Ladder
- Ropes
- Ramp
- Transfer system

Other

5. If there is a ramp, is it wide enough for two people using wheelchairs to pass (1525 mm)?

Playability Audit



Yes No

6. Is there opportunity to use the topography of the site (e.g. berms, hillsides) for access to elevated surfaces?

7. Is there space for a caregiver to assist a child accessing the play structure?

Caregiver with a disability

Caregiver without a disability

8. Are there stand alone play events, such as spring rockers?

How many are elevated?

How many are at ground level?

9. Are there swings?

What types of swings?

How many have a back rest?

10. Are there upper-body activities at appropriate heights for children who are both standing and sitting?

Playability Audit



Yes No

11. Is there a range of activities appropriate to different ages and providing different levels of challenge?

12. Are there manipulative play opportunities like sand, water, steering wheels, activity panels?

How are they accessed?

13. Are the colours used on the play structure high contrast?

14. Are there activities to stimulate the five senses?

What are they?

Touch _____

Sound _____

Sight _____

Smell _____

Speech _____

15. Are there activities to stimulate the imagination such as play store, clubhouse, stage?

Playability Audit



Playspace Layout

- | | Yes | No |
|---|--------------------------|--------------------------|
| 1. Are the climbing and sliding activities laid out in a circuit that can be easily travelled? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. How far apart are:
the bottom of the slide and the ladder?
<hr/> the bottom of the slide and the ramp, if one exists?
<hr/> the bottom of the slide and transfer system or steps for returning to the top?
<hr/> | | |
| 3. Is there room to wait at the bottom of the slide, out of the way of the next person? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. If there are structures and play events for different age groups, are they attached in any manner or separate from each other?
<hr/> | | |
| 5. Are there quiet spaces for children who need to play quietly or observe others? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Is there seating, for both children and adults, out of the way but with a view of the main area of activity? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Are there shady areas to sit? | <input type="checkbox"/> | <input type="checkbox"/> |

Playability Audit



Surfacing

Yes No

1. Are there different types of surfacing in the playspace? (i.e. sand, wood chips, rubber tiles, pea gravel, poured rubber, grass)

2. What are the safety surfaces under the play structure?

Under swings?

At the slide bottom back to slide access?

In splash pads or other water play areas?

On pathways within the playspace?

3. Is there a safe and convenient route to travel throughout the playspace from one play event to another?

4. What kind of edging is there around the different parts of the playspace?

How high is it?

Playability Audit



Amenities

Yes No

1. Does the playspace include:

- washrooms
- picnic tables
- water fountain
- lighting
- garbage cans
- public telephone
- picnic tables
- other _____

2. How far are they from the playspace?

- 3. Have the washrooms been designated accessible for people with disabilities?
- 4. Can furniture, including picnic tables, be arranged to accommodate a person using a wheelchair?
- 5. Are garbage cans and public telephones accessible to people with disabilities?

Playability Audit



Signage

	Yes	No
1. Are there signs clearly pointing to the playspace, amenities, and other features?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are there maps?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do the signs use:		
large, plain lettering in contrasting colours?	<input type="checkbox"/>	<input type="checkbox"/>
universal symbols or pictures as well as lettering?	<input type="checkbox"/>	<input type="checkbox"/>
Braille?	<input type="checkbox"/>	<input type="checkbox"/>
languages other than English?	<input type="checkbox"/>	<input type="checkbox"/>
are letters and/or symbols on signs raised or embossed?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are there signs with a number to call for emergencies and/or to report damage, safety hazards or vandalism?	<input type="checkbox"/>	<input type="checkbox"/>

Playability Audit Worksheet

Playspace: _____

Prepared by: _____

Date: _____

Playspace Area	Good existing features	Barriers to accessibility	Next steps /Solutions	Priority
Arrival Point				
Pathways				
Entrance to the Playspace				
Play Events				
Playspace Layout				
Surfacing				
Amenities				
Signage				