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Development of School Recreational Facilities

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Development of School Recreational Facilities

Strategies of Developing School Recreational Facilities in
Mitchells Plain for the Governance and Interface Directorate,
City of Cape Town

An Interactive Qualifying Project submitted to the faculty of Worcester
Polytechnic Institute in partial fulfillment of the requirements for the Degree of
Bachelor of Science

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Executive Summary

Cape Town, South Africa has had a unique and turbulent history; the effects of which are still evident today. During the time of apartheid, the non-white South African population was only permitted to live in certain areas which were usually very cramped and undeveloped. Although people are now free to live where they desire, much of the non-white population is still concentrated in certain townships where they experience substantial poverty. These areas are now plagued by overpopulation, lack of facilities, and crime. Furthermore, there has been little done to provide the residents with developed areas of recreation. One of the largest neighborhoods that encounters this problem is Mitchells Plain, a township approximately twenty kilometers outside of Cape Town. The crime rate among youths is perhaps the most alarming problem it faces.

Many urban areas all over the world have faced similar problems of adolescent delinquency, and the team drew on their experiences to propose a plan to help reduce crime. To address this problem, the Governance and Interface Directorate of Cape Town is working in partnership with the German Government in a project known as Violence Prevention through Urban Upgrading (VPUU). According to Craig Haskins from the Strategic Development Information and GIS Department of the City of Cape Town (2007), the goals of the VPUU program are the following:

- Safety and violence prevention
- Upgrading of neighborhood facilities
- Economic development
- Community development

The goals of VPUU are the underlying motivation for our project. We worked to outline a plan for the development of school recreational facilities to ensure that the resources available to VPUU are most effectively allocated.

There has been significant research on the relation of sports to the reduction of youth criminal behavior. One of the more effective approaches to crime and violence reduction is to involve the younger population in outdoor activities such as sports. For example, The Homestead Group in Cape Town has been successful in teaching children soccer and providing a positive activity outside of school. Soccer allows a staff of qualified coaches to teach valuable life lessons, such as leadership, to the participants (Dugmore, 2006). It also has the benefit of

keeping children out of dangerous situations when school is not in session. Another approach to violence prevention involves engaging the community. The Manyanani Peace Park in Khayelitsha, a large township near Mitchells Plain, is a prime example of a major effort to decrease violence through community involvement. Community participation in the creation and management of the park has decreased local violence by creating an environment of mutual responsibility (Small, 2007). These are successful examples of crime and violence being reduced through sports and community involvement, but they have not yet been widely adopted in the townships and informal settlements outside of Cape Town.

The goal of our project was to address the issue of youth crime and violence by designing school recreational facilities. By its conclusion we had completed four major deliverables:

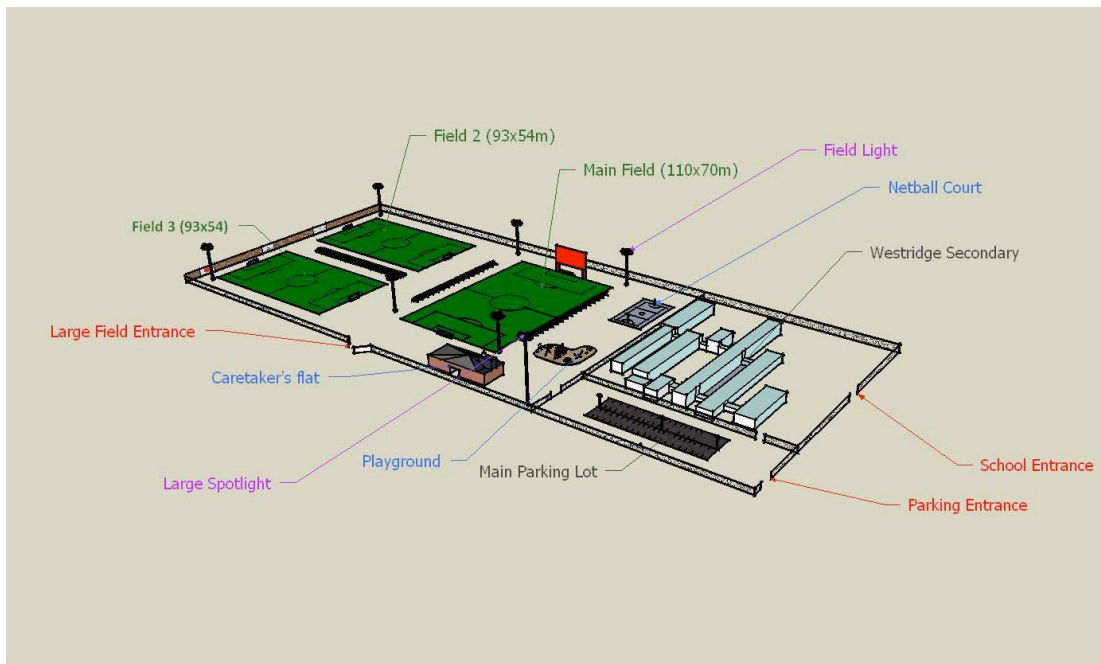
- A database including information about each of the schools in Mitchells Plain
- A recreational reference guide for Mitchells Plain schools, including information about possible amenities
- A design proposal for a match play facility to be developed at Westridge Secondary School
- A guide for developing management systems at the recreational facilities

When the team began to catalog the schools in Mitchells Plain we found that there was no single comprehensive information source. We therefore compiled data about the 68 schools within Mitchells Plain from a number of sources: Cape Town's Global Information System (GIS), the Western Cape Education Department's website, maps and on-site analysis. This information was catalogued into a database for future use by various city officials as well as developers. The Mitchells Plain secondary schools became the primary focus of this project due to their size, location, and enrolment numbers. On average, they have 6.4 hectares of land and 1,225 students. Given the amount of land available for development, there are many possible amenities that could be implemented at any school. To create a space for the entire community, the following types of amenities were considered: sports fields, playgrounds, walking tracks, picnic areas, benches, and community gardens. The team gathered information on many of these possibilities and created a reference guide for the development of the Mitchells Plain secondary schools. This document contains detailed information on each of the amenities, including the plot size required as well as links to websites that contain further information. In addition to the

detailed descriptions, three dimensional pictures of each field were developed and are included in the reference guide. Some of the amenities that are included in this document already exist at many of the schools, but they are rundown and relatively unused.

After considering all of the amenities that could possibly be implemented at a school, a proposal was created for one specific school. Its purpose was to describe, in detail, what could be achieved if one such facility was developed. The pilot site was Westridge Secondary School, chosen mainly for its topographical fit, size, and existing facilities. Westridge Secondary has a large amount of flat, open land that could easily accommodate multiple soccer pitches in conjunction with other recreational facilities.

The next step in design was to create a design showing where each of the amenities would be placed on the lot. The layout is shown below.



In order to create sustainable sports facilities, they must not only be designed well, but managed well. When considering management of such facilities, three major categories of questions arise: who, what and how.

The first step in setting up a management plan is to decide who should be involved. Literature research and interviews with members of the Mitchells Plain community were completed in order to obtain information on which groups should be represented in management of recreational facilities. We concluded that representatives from the city, local, school, and

soccer communities were the key stakeholders. The projected wants and needs of each stakeholder are represented in the following table.

Needs/Stakeholders	Soccer Clubs	School	City Officials	Community
Access:	Caretaker's Flat, Fields, Parking Lot (for spectators)	Caretaker's Flat, Fields and Courts, Parking Lot (during school hours), Entire Facility	N/A	Facility (to view the soccer clubs and school events)
Scheduling:	Practice during the week, match play on weekends	Physical education during school hours, practice time for school teams, specially scheduled events	N/A	N/A
Maintenance:	Field and Sport Equipment	Entire Facility	N/A	Entire Facility
Authority:	Scheduling, Decision Making	Ownership of Land, Decision Making	Decision Making	Decision Making
Fiscal:	Money made at soccer matches goes back into facility maintenance and development	Do not want to be solely responsible for expenses	Initial development costs	N/A
Secure Facility:	Yes	Yes	Yes	Yes
Other Needs:	N/A	N/A	Public Relations	N/A

Another decision concerned what responsibilities the management personnel would take on. The three major areas of concern with respect to management are finance, maintenance and scheduling. Finance would involve managing both income and expenses of the facility. Maintenance would entail landscaping, repairs of equipment, and upkeep of fields, all of which would require the employment of a caretaker. Finally, scheduling would address who had access to facilities when. Although setting up a management system is quite complicated, the team has set up many of the questions that will need to be answered.

There are many different ways that a management structure could be organized and run. Our team suggested that it would be most efficient to use a management board that would hold the decision-making power for the facility. The appointment of a treasurer, secretary and chairperson would cover the responsibilities of the board not mandated by each specific stakeholder. For example, the treasurer could oversee a fundraising committee responsible for raising money to keep the facility funded.

These management ideas were collected and laid out in more detail through the creation of a sport facility management guide. This guide can serve as a tool for the development of a sports facility management structure, or to discuss possible questions and solutions for the development process.

When young people grow up in an environment where it is commonplace to witness crime and violence, it becomes instilled in their minds that it is just the way of life. If they are given an activity, such as sports, as an alternative to gangs and drugs, the positive outcome will be clearly evident. Beyond the physical gains from sports, young adults can learn valuable life lessons about leadership, teamwork, determination and perseverance. With the specific proposal in conjunction with the various guides in hand, members of the Mitchells Plain community as well as Cape Town city officials will be able to see what benefits might follow if the open land surrounding the secondary schools is developed.

Abstract

This report, prepared for Violence Prevention through Urban Upgrading Programme of the Governance and Interface Directorate of Cape Town, provided plans to guide the development and management of recreational facilities in Mitchells Plain. It encompassed background investigation, data collection, analysis, design and recommendations. Through interviews and data collection, we laid the groundwork for recreational expansion, focused on soccer, at Mitchells Plain secondary schools. The project's ultimate goal was to reduce crime while promoting teamwork, discipline and safe community interaction.

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Chapter 1: Background

The Governance and Interface Directorate of Cape Town is working in partnership with the German Government in a project known as Violence Prevention through Urban Upgrading Program (VPUU). Specifically, this project is financially sponsored by the German Development Bank Kreditanstalt für Wiederaufbau (KfW) with the focus in the township of Mitchells Plain. KfW and the German Soccer Federation have teamed up to sponsor this project, with VPUU being the motivator. The VPUU is currently working with a school within Khayelitsha to design and construct a sports facility.

According to Craig Haskins from the Strategic Development Information and GIS Department of the City of Cape Town (2007), the goals of the VPUU program are:

- Safety and violence prevention
- Upgrading of neighborhood facilities
- Economic development
- Community development

The goals of the VPUU are the underlying motivation for our project. In order to address these goals, it was first necessary to complete a comprehensive background research on Khayelitsha and Mitchells Plain. This information is discussed first, with emphasis on history, youth, education, and violence. In an attempt to solve the violence problem, the VPUU program, as well as the past examples of using sports and community involvement as violence prevention methods were explored and summarized. Due to the number of success stories, it was felt that designing a facility that incorporates both sports and community involvement would be the most advantageous approach. Although extensive research was completed, the team understands that literature cannot fully encompass the drastic differences between life in informal settlements and in the United States.

1.1 Khayelitsha and Mitchells Plain

Included in the following paragraphs is a brief history of Khayelitsha and Mitchells Plain, including information regarding education, facts about the prevalence of crime and violence within the townships, and information regarding the current state of the school facilities. The research was done in an effort to better understand the informal settlements in which the project would be completed, and more specifically the problem of youth violence within these areas.

1.1.1 Past and Present

Khayelitsha and Mitchells Plain are located in the Cape Flats. It was in the Cape Flats where most non-whites were restricted to live due to the institutionalized separation system established by the South African Government during the apartheid era. Khayelitsha and Mitchells Plain are only two of the many townships within the Flats. Khayelitsha was designated as an area for people classified as Black under the apartheid government, while Mitchells Plain was for people classified as Coloured¹. The map in Figure 1 below shows the location of Khayelitsha and Mitchells Plain in relation to the City of Cape Town.



Figure 1 – Cape Town, South Africa

After the end of apartheid, there came a surge of migration and many non-white South Africans moved westward, toward the urban areas of Cape Town, in search of work. There were already hundreds of thousands of people who lived in the settlements. By 1996, Khayelitsha had a population of about

¹ Although the classifications of Black and Coloured no longer have any legal meaning in Cape Town, they are still commonly used to designate differences in background and skin color.

250,000 people settled upon an area that is only about 53 square kilometers. The last census completed was in 2001 and it was calculated that the population of Khayelitsha had increased to 330,000. Within that population, about 65% are set up in informal “squatter” camps and shacks, consisting of houses made of metal, wood, cardboard, or any other materials they can find as seen in Figure 2. Although the census data gives an estimate, it is inaccurate due to being outdated and 17% of the population being not accurately counted (Census, 2001). Currently, the population of Khayelitsha is most likely over 500,000.



Figure 2- Khayelitsha

Mitchells Plain is a slightly more upscale area, consisting of very few squatter camps where only about 10% of the population lives in shacks as seen in Figure 3. Below Mitchells Plain there is a very large underground aquifer offering the possibility of access to water. The population size in this region is very similar to that of Khayelitsha with about 300,000 residents (Census, 2001). However, Mitchells Plain is about double the area of Khayelitsha at around 110 square kilometers. The land lying between Khayelitsha and Mitchells Plain is known as Swartklip and is currently a very large open area used only for a munitions factory. Due to poor environmental protection laws, there has been a lot of hazardous waste dumped in this site.



Figure 3- Mitchells Plain

The quality of life for many of the people in these two areas has not changed for a couple of decades. The racial segregation that occurred has led to unequal education and employment opportunities for non-white South Africans. Although this is currently in the process of being corrected, the effects will take a long time to erase. Among the non-white South Africans, there is an extremely high rate of unemployment. According to the 2001 Census, about 50% of the population in Khayelitsha

and about 30% in Mitchells Plain are classified as unemployed. As a result, there is a high level of poverty and poor living conditions (Census, 2001). In such dire circumstances, many people turn to different forms of violence and crime such as alcohol and drug abuse. There has been an increasing problem with Crystal Methamphetamine, known as Tik in South Africa, in the settlements. The problem has become so bad that Mitchells Plain is described as the Tik capital of the world (Graham, 2007). The people that are suffering the most in these conditions are the youth because they are not being raised in the best possible conditions. The poor communities cannot afford to keep the streets clean and the schools properly furnished.

1.1.2 Youth and Education

Today roughly 30% of the total population within the flats is under the age of 14 (Information and Knowledge Management Department, 2003). South Africa as a whole has tried to keep up with the increasing pressures on children in school, as the country has spent a good portion of government expenditures on education in the last few years (UNDP, 2003: 198-227; cf. also Jansen, Taylor, 2003).

There are over 107 primary and secondary schools within Khayelitsha and Mitchells Plain. As one can see from Figure 4, the schools are spread out relatively evenly throughout the region, yet even with so many schools in the area, most of them are still hindered by overcrowding. This is largely because the size of the schools has not been able to keep up with the ever growing population. Within the 68 primary and secondary schools in Mitchells Plain, there are about 65,000 students.

For many years, these schools were the only learning environment for children; the conditions were poor at best. Schools are bleak, drab and functional, built to minimal space standards, out of cheap materials. There were no provisions for libraries, assembly halls or special needs (Architectural Review, 2007). In the classrooms, the learners are not adequately equipped with learning materials and smooth writing surfaces to work on. At one point in time, it was necessary to have a group system. This meant two sessions could be run every school day; this was the only way to accommodate so many children. There are only a few toilets in every school, each being used by up to a thousand children. Barbed wire is very common as an intimidating parameter around the school grounds. In a study written for *Anthropology & Education Quarterly*, Mark Conostas wrote: “The extreme poverty of the community setting, the schools' lack of the most fundamental resources, the extraordinarily difficult set of conditions under which teachers and students must teach and learn created a seemingly incomprehensible configuration of educational circumstances” (Conostas, 591).

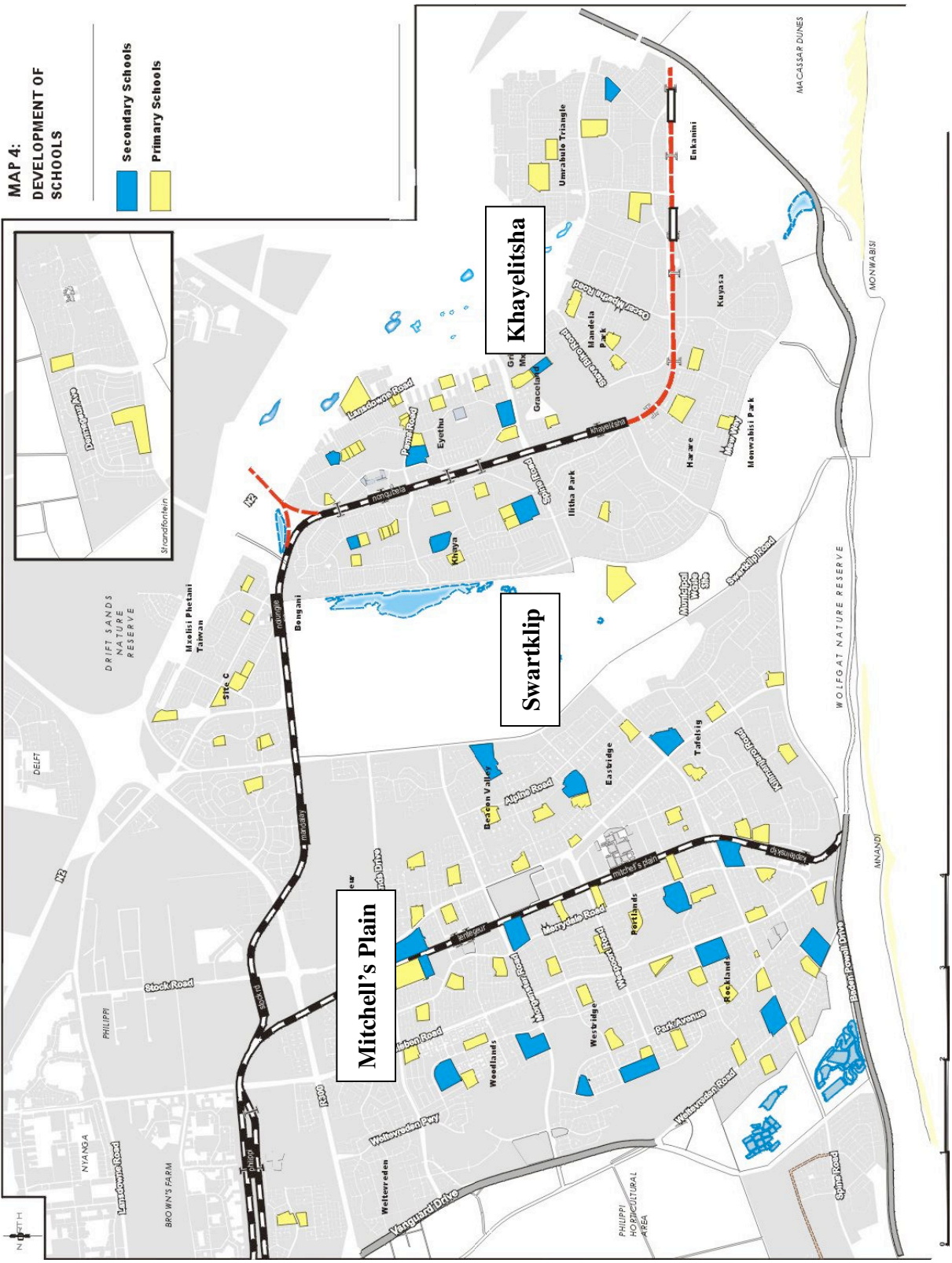


Figure 4- Map of Schools within Khayelitsha and Mitchells Plain

1.1.3 Current State of Extra-Curricular School Facilities

Some serious problems have arisen within the schools. First is the lack of a stable and non-threatening environment for children. It is very difficult for a child to be expected to learn and prosper in such poor conditions. The second, and most relevant problem, is the lack of recreational or educational after school activities. Posner and Vandall (2007) found that children attending after school programs spend more time on academic activities, proving that extra-curricular activities are positive to a child's well-being. Therefore, the lack of after school activities available within Khayelitsha and Mitchells Plain can lead to a negative effect on a child's well-being: lower grades, less engagement with school, and more unstructured free time. With unstructured free time, youths will try to find random, potentially harmful, activities to fill their time, for example gang activity.

Crime in the Cape Town region is very prevalent among youth as well as adults. Youth will follow the examples of their elders, and if those examples are crime and abuse, the cycle will continue for yet another generation. As a result, there is a lack of strong family relationships forcing the youth to turn to gangs for the support they are not getting at home. This will only continue to get worse until South African children and teenagers are given a more positive direction to put their energy (Palmer: 10-17).

If there were more organized activity for children, their learning experience would not be limited to the classroom. Outside activities provide learning experiences that cannot be found in a textbook. This organized activity would also reduce the amount of time that the youth have free to get involved with gangs or other forms of criminal activity.

The majority of the schools in Khayelitsha and Mitchells Plain are sitting on a very large plot of land that is undeveloped beyond the school building. Figure 5 is a picture taken at Westridge Senior Secondary School showing the extent of the open land. It is common to find the school grounds separated from the open land by barbed wire fencing. These large open lots can become a breeding ground for crime because they are not watched and they are not kept well lit. There are a number of schools throughout the settlements that have some type of recreational facilities such as soccer fields or netball courts, but they are poorly maintained, abused, and unused. Many attempts to develop the land have been unsuccessful and aborted, leaving remnants of poor planning such as light posts standing alone, as seen in Figure 5, the picture of Westridge.



Figure 5– Open Land at Westridge Secondary School

1.1.4 Large Sports Complexes

There are currently four large sports complexes throughout Mitchells Plain which combine both indoor and outdoor sports facilities. Swartklip Sports Complex, pictured in Figure 6, is one example of these large complexes. It is projected to be finished by 2009 and will be the largest indoor sports complex in Southern Africa when completed. The other three facilities are found in the Lenteguur, Portlands, and Rocklands suburbs of Mitchells Plain. These facilities cover well over 200 hectares of undeveloped open space (Graham, 2007).

In Mitchells Plain alone, if the open land attached to each of the secondary schools were developed, all of the undeveloped land surrounding the sports complexes could be put to use for other developments or housing. Each of these properties could be evaluated and perhaps a certain section of

the land separated from the sports complex. The benefit of this process would be about 120 hectares of land could become available for future housing developments. This is important to the future of Mitchells Plain because the stresses of the rapidly increasing population are seen every day through the crime and violence.



Figure 6 – Swartklip Sports Complex

1.1.5 Violence Statistics

Inequality and poverty are intricately linked with an increase in crime. If a person believes that what they have is less than what they deserve they will feel the need to take action. If legal actions are not accessible, such as not being able to advance through education or improved wages and jobs, they will find alternate means to “get what they deserve.” When there are many unsatisfied people in a small area such as Khayelitsha or Mitchells Plain, it becomes evident why there is a lot of crime. Also, there is significant racial tension between white, black and coloured South Africans. Law enforcement officers, at least at the higher levels, tend to be white. Black South Africans who have turned to crime, may either consciously or subconsciously feel that they are rebelling against white oppression because of the “white

control” of the law (Palmer, 2007). In the Western Cape alone, there have been 132,767 reported thefts or burglaries in 2004-2005. Another problem previously mentioned was the drug and alcohol cycle. In Western Cape in 2004-2005 there were 30,432 reported cases of drug related crime and 29,871 reported cases of malicious damage to property (Crime Information Analysis Centre, 2005). Vandalism and violence are obviously a serious issue that needs to be addressed. Crime is a problem that is widespread throughout South Africa, not just in the Western Cape, so solutions found to Western Cape issues could easily be applied to other areas.

1.2 Violence Prevention Methods

In the following paragraphs, there are examples of the methods that have been effective in terms of violence prevention within the Cape Flats. Sports based prevention as well as community based prevention will be presented. Certain case studies will be discussed that exemplify basic solutions to preventing violence. The research that has been done is a learning tool that aids in creating a successful crime prevention program through sports and community involvement.

1.2.1 Sports as a Crime Prevention Method

Sports have been proven to have a positive impact on participants. It gives obvious health benefits including muscle development and weight control. Exercise has also been linked to less obvious positive side effects; studies have shown that physical activity can have a positive influence on depressive symptoms (Troost, 2005). This may be for a variety of reasons, but it is often associated with an increase in self-esteem or self-worth that can accompany participating in a sport. Studies in the United States and Finland show evidence that an increase in physical activity can lead to a decrease in addictive behavior; the behaviors can range from bad habits to substance abuse. Results from other studies show that physical activity decreases cigarette smoking in young adults. Also, there are studies proving that an active youth is less likely to participate in binge drinking than a non-active youth (Troost, 2005). Taking care of one’s body through exercise can lead to better decisions and actions and an overall healthier life.

1.2.2 Violence Prevention through Social Development

This project is conducted in the hopes of reducing youth violence, and in order to do this, the best methods for reaching the juvenile population should be understood. One approach is to understand the social development model: "The Social Development Model shows that communities can promote

healthy behaviors by communicating healthy beliefs and clear standards for behavior to young people. Young people will try to live according to those standards if they are bonded to the adults who promote them. Bonding includes strong relationships or attachments to the family, school, and community as well as investment in positive activities, such as school involvement (Hawkins, 2002)." What this means is that in order to promote healthy behaviors and achieve the type of impact this project is aimed at, the juvenile population must be given an opportunity to actively participate in a positive activity, they must have the means to succeed at the activity, and there must be positive reinforcement for good actions and attitudes. The plan for the school facilities should therefore also fulfill these three requirements. Sports are a positive activity, especially when conducted in an atmosphere of camaraderie and respect. Plans need to be set so that children will be taught or coached on the fields. The coaches, most likely volunteers from the community will be the pivotal people. They will maintain the open sport atmosphere, provide the children with the tools to enjoy their new space, and they will be the local role models that can help guide the youths down the best paths. After extensive research on youth development, it is evident that the effect of the project depends greatly on how well the needs of the entire community are met.

1.2.3 Case Studies

In order to establish a general idea of a current approach to violence prevention, case studies were examined. The following case studies have a primary focus on social development and sports as a way to prevent crime and violence.

Midnight Basketball:

Midnight Basketball is an example of a program that aims for crime prevention through sports that has found success in the United States. It involves mandatory workshops that focus on a variety of topics that the youths can then apply to their lives such as alcohol abuse, drug abuse, and AIDS prevention. In order to participate, one is also required to maintain good academic standing and remain out of legal trouble. There is also mandatory community service. These requirements are strictly enforced, so if a youth wants to participate, he must comply with the established rules. In addition to the positive aspects of community service, workshops, and mentorship, the juvenile participants are physically off the streets and playing basketball. They are participating in a healthy activity that teaches discipline, teamwork and leadership, instead of hanging out on the streets. Giving the participants a

structured activity removes them from idle situations where temptation and group pressure can lead to trouble. The introduction of this program and programs similar to it has shown reduced juvenile crime at program locations. The key to the success is the community components, in addition to the sports. The sport can keep the participants physically off the streets, but the lessons learned can keep them on the right path (Hartmann, 2006).

The Homestead Group:

Another group that is making a difference in children's lives is the Homestead Group in Cape Town. This nonprofit organization focuses on taking children off the streets, and helping them change their lives around. The Homestead Group uses soccer as a way to keep the children off the streets and away from the dangers that exist there. As well as keeping the children out of dangerous situations, soccer allows the staff to teach valuable life lessons to the participants. An example of the Homestead group's work can be seen in a now very successful soccer team. The Homestead Team is a soccer team that is comprised of a group of boys who had once been street children. They were homeless and most were abusing substances and had faced abuse and abandonment. The boys were initially very small, and lacked any sort of confidence. After a year of living in a children's home and training together, they are virtually unrecognizable. The focus is on discipline and respect on the field. If they violate the rules there are consequences such as not being allowed to play soccer. As the boys learn these values, they are finally able to stop seeing themselves as worthless. These boys were given a chance to grow in a safe environment and they have flourished; sometimes people just need a chance (Dugmore, 2006).

Soccer Without Borders:

Soccer Without Borders is a non-profit organization and its mission is to use soccer to improve the lives of disadvantaged youths. This organization has participated in multiple projects in the Cape Town area, such as the Desiree Ellis Soccer League. This league sponsors matches between multiple children's group homes in Cape Town and provides the children with an opportunity to exercise and build self-esteem. Off the field, children are educated about topics pertinent to their lives, such as HIV/AIDS. Each participating group home fields a co-ed team, and the games are held weekly. This is the project's first year in existence. The first match was played on March 17th, 2007 at a soccer stadium in Khayelitsha. The program has great potential for positive change as it gives youths an opportunity to participate in beneficial activities in a safe environment (Soccerwithoutborders, 2007).

Soccer Without Borders also works with the Good Hope Seminary Junior School in the Gardens section of Cape Town. Good Hope is attended by children from preschool through 7th grade and exhibits a common problem of local schools: overcrowding. With too many children and not enough resources, physical education classes are not possible. Soccer without Borders has gone to the school and established weekly gym classes for each of the grades. These gym classes are an attempt to offer a more complete educational experience to these disadvantaged children. It also gives the children another way to learn values and life lessons. This program has a positive impact on the lives of the participating children (Soccerwithoutborders, 2007).

The Amy Biehl Foundation:

The Amy Biehl Foundation is an organization that was founded in South Africa in 1997 with the mission to “weave a barrier against violence by emphasizing social, cultural and economic empowerment through its programs” (Amy Biehl, 2007). The organization promotes community-building efforts as a way to reduce crime and violence levels through educational and cultural activities that provide children safe, alternate activities to those found in the townships. Common problems that are faced each day in the townships surrounding Cape Town include sex, drugs, violence, crime, and other negative influences that may affect and hinder a child’s ability to live life to their full potential. The Amy Biehl Foundation affects thousands of children every week through their programs in after school care, sports, music, HIV/AIDS education, creative arts, and computer literacy to name a few.

The Amy Biehl Foundation has also put a large emphasis on creating a sustainable environment and ensures future sustainable income through their efforts. They accomplish this by organizing festivals, concerts, fundraisers and recycling programs. They are able to make such a great impact on the townships surrounding Cape Town largely due to their ability to supply all of these events free of charge. They run solely off of donations that allow the families with a low income to enjoy the community park free of cost.

Abalimi Bezekhaya:

Abalimi Bezekhaya is an urban agriculture and environmental action organization working primarily in Khayelitsha and other townships near Cape Town. Abalimi’s focus is on community gardens, as Abalimi literally means “the planters” in Xhosa, the predominant language in Khayelitsha. Officially, the Abalimi mission is to “empower the disadvantaged through urban agriculture and

environmental programs and projects” (Small, 2007). Abalimi Bezekhaya is able to accomplish their mission through their programs that include growing and selling agricultural and horticultural commodities, training, and facilitation of partnerships between the organization and the community.

Abalimi Bezekhaya founded the first community managed and indigenous floral park in A Section, Khayelitsha in 1995 to celebrate the anniversary of South Africa’s first democratic election. This park did not come easily, however. Prior to the implementation of this park, this section of Khayelitsha was one that people feared to go at night due to the instability in the area. This instability resulted from violence, as well as political divisions. The first attempt to establish a park in Khayelitsha was dismissed when the organizers were run out of the area by local youths throwing rocks at them. It might seem obvious at this point that the locals did not want to take part in any initiative from outsiders attempting to improve their quality of life, but that was proven wrong after the second attempt.



Figure 7 - Manyanani Peace Park, Khayelitsha

Before making a second attempt at implementing a park in A Section, the Abalimi organization took a full year performing door to door consultations of the locals around the proposed park area to get them on board with their plan to build the Manyanani Peace Park. Today, the park is described as “a safe, green, beautiful place in which children, youth cultural and sports groups and old people play, meet, socialize, practice and to work together”(Small, 2007).

The construction phase of the park was completed in three weeks and transformed a once violent, barren area into a green open area that can be enjoyed by everyone. To this day, the park is still in existence and is still community managed. Mrs. Christina Tembi Kaba, who has been living in A Section for a long time, currently leads the Manyanani Peace Park Committee. The Committee employs a caretaker for upkeep and maintenance of the park.

Further developments and improvements to the park have sprung out of its success as a place for leadership and community development. These improvements include a public swimming pool, which was the first, and remains the only public swimming pool in Khayelitsha. The Manyanani Peace Park and management committee have rightfully received numerous awards to honor their success. The future of the Manyanani Peace Park looks promising as they continue to strive for improvements. There is currently a plan in the works to develop a community cultural and environmental center titled Moya we Khaya, or “Spirit of Home.” The aim of this new development is to establish traditional, cultural, social, ethical, family, and environmental values that can be overlooked, but are vital pieces to a successful community (Small, 2007).

Abalimi Bezekhaya has accomplished a difficult and tedious task, and with great success. The Manyanani Peace Park is, and will continue to be a model for future developments of parks in the townships of South Africa, which are all part of the major effort to decrease violence and strengthen the community.

Before taking on a large project, it is vital to research and analyze past projects that are similar to the one at hand. The case studies described offer great insight on the value of sports and recreational facilities and the positive influence they have on the community. By examining the successes and failures of these case studies, much useful information was obtained providing a valuable framework for the future development of sports facilities in Khayelitsha and Mitchells Plain.

1.3 Developing School Facilities

It is now understood what can be expected in terms of the conditions of Khayelitsha and Mitchells Plain. Past examples have also shown the success of sports as a method to deter youths from crime and violence. In the following section, a development plan for the Mitchells Plain schools designed around sports is outlined. Each of the amenities included will be explored, and their positive effects, design concerns, and potential problems will be explained.

1.3.1 A Development Model

In order to understand the mission necessary to implement a project design, one must first start with the “big picture.” By starting from a broad context of application, certain aspects can be refined into a specific form. In this case, a field diagram was developed, exemplifying the aspirations of the project without any constraints. Figure 8 shows a model in which there is no constraint on budget, space, and resources available. The main purpose of this model is to serve as an example of what amenities are possible; it can then be manipulated and rearranged based on the specific needs of a certain community.

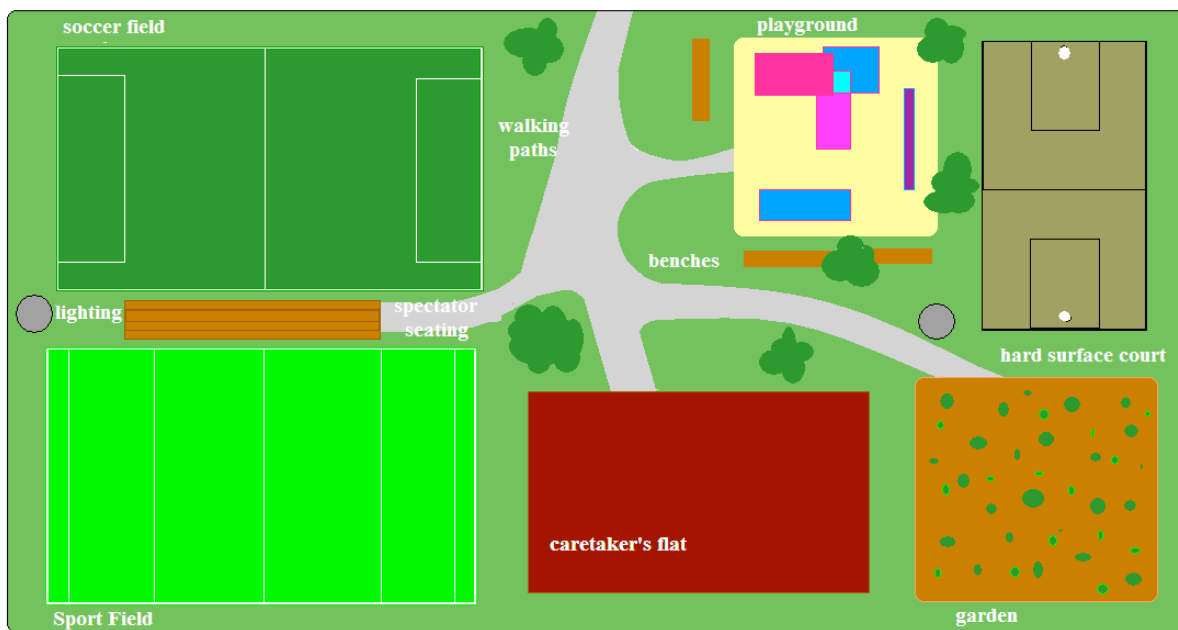


Figure 8 – Development Model

1.3.2 Sport Facilities

The main aspect of the park and the first element of the model is the sport playing grounds or facilities. The addition of sports pitches is important for three reasons: recreation, team-building, and community outreach.

Sports are a great way for children to perform their athletic skills and have fun, but it goes far beyond that. Recreation is essential to a healthy lifestyle, and youth who play sports are generally more active, but the benefits of recreation exceed the workout. The participants are able to learn life skills that

cannot be taught to them in a classroom such as certain leadership and teamwork skills, dedication, and how to be a team player.

Learning how to interact with other children within a competitive atmosphere is perhaps the most difficult aspect of sports. Children can learn a lot about themselves and their limits if they are put to the test in a competition. Sports also teach the children lessons in leadership and teamwork by being part of a team sport. Leadership lessons can be learned by people of all ages through sport competition. These lessons of self-sacrifice, leadership, and team-building cannot be taught in a classroom, but must be learned through successes and failures such as those found around sports.

Individual child growth is not the only gain that comes out of sports. Communities can learn to grow and interact with one another through sports as well. Organized sports offer a reason for many members of the community to get together and interact in a laid-back, social atmosphere. This is important to a community because it can foster growth and development.

Included in our model are two large sports pitches that can be used for multiple sports such as soccer, hockey or rugby. In addition to these fields, there is also a multi-use hard surface court that can be a basketball, netball, or tennis court.

1.3.3 Gardens

Another part of the park is a garden. One of the best qualities of a school or community garden is that it can be molded to address many local needs (Ferris, Norman, Sempik, 2001). In the case of a garden, it would offer three separate dimensions to the facility: a nutritious food supply, an educational environment, and an economic opportunity for community members.

Food is an obvious component of such a garden. In an area where food may be scarce or expensive, the benefit of such a garden is great. By allowing community members to grow their own produce, they are enabled to provide nutritious food for themselves at a very low cost (Lawson, 2004). In schools that already have a functioning soup kitchen; the garden can help provide food.

Along with food, education and recreation are two other products of gardening. The garden can provide a wonderful environment in which students can learn about nutrition, nature, ecology, botany, etc. Interactive learning engages students and may allow those who do not excel in the classroom to succeed in a different manner (Ferris, Norman, Sempik, 2001). This form of learning can also become a wonderful recreational activity. The successful food garden at the Imperial Primary School in Mitchells Plain is shown in Figure 9.



Figure 9 – Imperial Primary School Food Garden

The last dimension that the garden could provide is economic opportunity. Whether a garden manager is needed, or someone is hired to assist in planting, watering, and basic maintenance; there is the prospect of providing a living for someone who is currently unemployed.

Due to the lack of nutrient-rich soil in Khayelitsha and Mitchells Plain, and also due to the high costs of importing materials such as loam, composting is a cost-efficient method to enrich the soil. Composting is the science of breaking down organic materials such as food waste, yard clippings, manures, and clean paper products in combination with dirt and water. The result is a stable organic material that can suppress plant diseases and pests, reduce the need for chemical fertilizers and promote a higher yield of crops (Environmental Protection Agency, 2007). By adding composting to the community garden, people could have access to better food, education, and economic opportunity.

1.3.4 The Community Amenities

Surrounding the fields and the gardens within the model are the aspects that make this development appealing to the community. These are portions that are less sports-oriented and widely used for the enjoyment of everyone within the community.

There is an area designated as bleachers between the two sports fields for spectators. This is important for the community because it supplies an activity for someone not participating, but interested in sports.

A picnic area is something that almost all successful parks have in common. Whether the park itself provides a place to buy food, or the park permits people to bring in food of their own, people and food is usually a winning combination. Picnic areas are a great way to provide fun for an entire family, and should be strongly considered by any park planner.

The best way to make a public park become more pleasing to the eye is the location of foliage and trees. Although the community garden is its own entity, trees and shrubbery provide a presence of nature that for many is relaxing. The urban areas of Cape Town can be filled with several forms of pollution. The idea here is to promote a place of escape to natural surroundings.

Walkways, jogging paths and nature trails are all excellent features to be included in a park design. They can be paved, covered with gravel, or simply dirt paths. Not only do they connect all the different sites of the park, but the paths and walkways themselves can be an attraction of the park. This is where the aspect of nature, with trees, flowers and shrubbery, will be fully utilized (Simonds, Starke, 2006). Whether people come in to view the beautiful landscapes, or to simply get out and exercise, these paths will get much use. In order to help deter any worries about safety, lights must be placed around the walkways to keep them illuminated at night.

1.3.5 The Playground

Implementing a playground is a great addition as it adds something for the younger generation. When planned to provide safety and fun, they are the perfect park attraction, providing a great environment for not only children but for families as well. Within an urban area, this is a place for mothers to allow their children to go and play. What would go into a playground includes things such as slides, swings, decks and monkey bars. Another playground asset that can attract children of all ages is a sand box. Sand allows kids to use their imagination, as well as to build and destroy things without doing any real damage. Adding details such as steering wheels, or storefront designs to the play ground

equipment, allows youngsters to exercise their imagination. This provides an experience beyond running, jumping, and swinging, it makes a whole new world available to them.



Figure 10 – Sample Playground

Because playgrounds are most often built and designed for younger children, safety should be taken into consideration. Playgrounds should be enclosed, having only one or two entrances or exits. This allows children to roam about the area without the worry of them wandering off. Also having the area enclosed helps to keep people off the equipment while the park is closed (Phillips, 1996). Finally, the playground equipment should be built on a soft surface such as a rubberized material or sand as seen in the sample playground in Figure 10.

1.3.6 Multi-use complex

Within the model, there is a small block labeled Caretaker's Flat. The notion behind this is to provide a multi-use building that addresses all of the needs of the park participants. Initially, one may think to put in a concession stand and bathroom. Due to the sport fields, play grounds, and community gardens there will always be people around resulting in both of these amenities being used often. This is

an element of convenience. However, the building shown within the model allows for options, and if the community feels the need for some other indoor facility this building can be adapted accordingly. Other amenities that could be included may be a first aid center and a storage area for maintenance equipment.

As seen from the Manyanani Peace Park case study, a caretaker is a very effective way to deter theft and vandalism. The caretaker becomes part of the community and the participants form a relationship with him/her. With this type of positive security enforcement, the park will have one form of protection from vandalism.

1.3.7 Vandalism Prevention

Vandalism is a problem that must be confronted in the design and operation of parks. However, there are many ways to minimize vandalism that may be considered. Materials used in building the facilities can help to reduce destruction. For example, wood is harder to write on than many other materials, making it a great material to use in places when vandalism is prevalent. Brightly painted benches and picnic tables are proven less often vandalized than those painted a natural color (Phillips, 1996). Plants can also be a great damage deterrent. Ivy, or other vine plants, can be used in walls and buildings to prevent things like graffiti. Another form of vandalism prevention is the addition of tree guards as shown in Figure 11, page 25. Plants with thorns also make effective natural boundaries that can help keep people from crossing into areas they should not be in.

Although plants make wonderful natural boundaries, the most common way to prevent destruction of facilities is to put up fences or other boundaries such as a mural wall. However, there are some types of indigenous plants that can act as effective boundaries such as num-num which is a thorn-based bush. By having only one entrance and exit, and by only allowing people into facilities during certain hours, it is easier to watch for destructive behavior. Finally, lighting can play a big role in deterring defacement of the park. The Manyanani Peace Park uses a large light to illuminate the park at night. Most acts of vandalism take place at night because it is easier to stay hidden under the natural darkness of night. By keeping the facility well lit, people will have a harder time hiding, which will deter many people from damaging the area (Phillips, 1996). Design of a facility can definitely help to limit the amount of vandalism committed; however the bigger area of concern is what causes people to want to destroy property.



Figure 11 – Tree Guard

The most common conditions promoting vandalism are those of overcrowding, low income, and overall low morale. Boredom and lack of meaning to people's lives lead to vandalism, and in most cases, destruction is caused by youths. Usually, it is a means to prove one's masculinity and earn status among one's peers (Phillips, 1996). Because of what drives youths to vandalism, solutions to destruction are more successful when there are not only physical facilities to impede defacement, but also programs to give youths a different outlet.

Many parks have had success with programs that give young adults a sense of pride and responsibility. These programs involve activities such as allowing the youths to help plan and construct the park, planting trees, or plan activities they want to participate in within the park. When they help to plan the park, their ideas are incorporated in it. People are much less likely to destroy facilities that they

want and use. By allowing people to participate in the actual construction of the park and planting of trees, or other plants, they each gain a sense of pride in what they have helped to accomplish. They also gain a sense of ownership and ability. Furthermore, by allowing the community to plan and hold events in the park, the park could become a place they enjoy going to and want to improve (Phillips, 1996).

1.4 Summary

Clearly offering youths the opportunity to participate in sports as an alternative activity to crime or violence is not a new idea. It has been used in many places by many people, and has had much success. By incorporating facilities such as community gardens, playgrounds, picnic areas, and a walking track with sport fields, the idea of community involvement is incorporated. Together, sports and community engagement will assist the Governance and Interface Directorate of Cape Town, South Africa in their efforts to reduce crime and violence in Khayelitsha and Mitchells Plain.

Chapter 2: Methodology

The essential goal of this project was to prepare a plan to guide the development and management of new facilities in Khayelitsha and Mitchells Plain. The plan addressed both community-wide and individual facility planning issues with focus on sports and community involvement.

In order to make the goal of this project more manageable, we broke it down into smaller objectives:

- Investigate the range of facilities and infrastructure which could be included within the scope of the project
- Gather information about the schools within Mitchells Plain and Khayelitsha, then based on that information create a database to aid future site selection
- Create proposals to guide the development of recreational facilities for secondary schools

These objectives are represented in Figure 12.

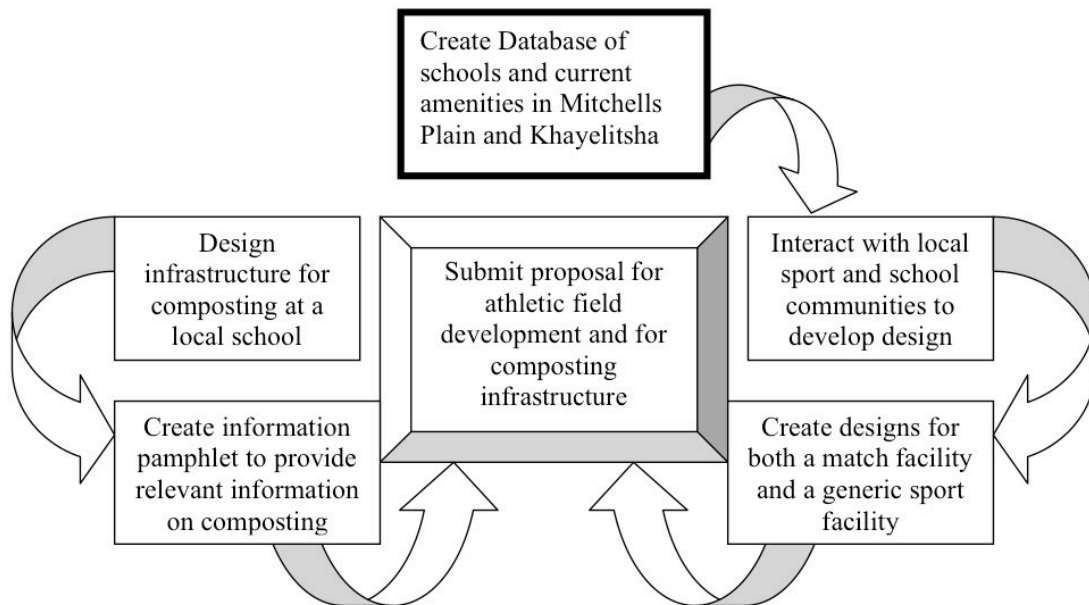


Figure 12- Methodology Flow Chart

By using these objectives as sequential steps in our work process, we were able to lay out a plan for how we would approach and operate through this project. This plan can be seen in Figure 13.

TASK	WEEK							
	Prep	1	2	3	4	5	6	7
Investigation of Facility Possibilities	■	■	■	■	■	■	■	■
Create School Database		■	■	■	■			
Write Initial Proposals for Investment				■	■	■		
Engage Local Community for Design Input					■	■	■	
Submission of Final Design Proposals							■	■

Figure 13- Calendar

2.1 Investigate Possible Park Amenities: Background Research

The first step in planning or designing any space is to understand what the area will be used for, who it will be used by, and what effects the space will have on its environment. In the case of Khayelitsha and Mitchells Plain, the space will be sports fields used mostly by youths in the area. However, in an effort to provide a space for a broader public audience, including not only youths but also adults and young children, we considered facilities that could be designed to complement the sports fields. Some amenities considered were community gardens, walking tracks, playgrounds and picnic areas.

The majority of the two months prior to travelling to Cape Town were spent exploring facility possibilities. It was important to research all of the options, so that upon arrival in Cape Town all applicable information could be shared. The results of our research were summarized in the background section.

2.2 Create Database of School Information

In addition to addressing possible amenities, the current state of the school facilities had to be assessed. In an effort to aid future site selection, as well as provide new projects with a single comprehensive source, creation of a school database was necessary. There are currently over one hundred schools within Khayelitsha and Mitchells Plain. Information on each of these schools was gathered from a number of sources: Cape Town’s Global Information System (GIS), the Western Cape

Education Department's website, maps and on-site analysis. By including data from so many different sources, the information contained within the database is more valuable because it is both qualitative and quantitative. The GIS provided details such as Property ID Numbers, addresses, and the size of the property. The Western Cape Education Department's website provided enrolment numbers as well as telephone numbers.

In order to get the most accurate information about the condition of school facilities, a trip was made to each of the secondary schools within Mitchells Plain. In addition to the aerial photographs collected from the GIS, onsite photographs were taken, and physical assessment forms were completed. These forms included qualitative information such as soil condition, fencing, current sport facilities, and landscaping. A copy of the form is included in Figure 14. Figures 15 and 16 show two examples of the onsite photographs.

Although information about the schools within Khayelitsha and Mitchells Plain is available, there is currently a lack of organization and uniformity in its presentation, making the creation of a database quite challenging. In regards to the schools within Khayelitsha, each of the sources provided information quite different from one another. The sources did not agree on number of schools, location of the schools, nor the names of many schools, and the team was unable to reconcile data regarding Khayelitsha. The Khayelitsha database was presented to Alastair Graham and the VPUU as incomplete with the hopes of future completion.

School Name				
Ground			Sketch	
Grass:	Yes	No		
Soil Type:	Sand	Clay		Dirt
Notes:				
Condition				
Trash	Yes	No		
Vandalism	Yes	No		
Maintenance	Well	Average		Poor
Notes:				
Level				
Overall	Flat	Uneven	Hilly	
Describe potential area for field				
Notes:				
Security				
Entrance	Yes	No		
Security Guards	Yes	No		
Notes:				
Fencing			Other Comments	
Describe Condition:				
Notes:				
Lighting				
Lights on Field	Yes	No		
Light Posts	Yes	No		
Lights on School	Yes	No		
Notes:				
Neighborhood				
Residential	Yes	No		
Main Road	Yes	No		
Train Tracks	Yes	No		
Notes:				
Current Facility				
Rugby Posts	Yes	No		
Cricket	Yes	No		
Soccer	Yes	No		
Baseball	Yes	No		
Basketball/Netball	Yes	No		
Volleyball	Yes	No		
Play Ground	Yes	No		
List Nearby Facilities				

Figure 14 – Physical Assessment Form



Figure 15- Lenteguer Secondary



Figure 16- Aloe High

Based on the data collected, each school was catalogued using three major forms of information. The first was property information found on the GIS system. The second was specific school profiles, and the third was current recreational information, including current facilities available. The database was organized in both hard-copy form and in Microsoft Works Database, Version 8.0. A screen shot of the basic database can be seen in Figure 18, page 35.

For the secondary schools within Mitchells Plain, a second, more detailed, database was created. This database contains specific information about each physical property that was collected by onsite assessments. A screen shot of this database can be seen in Figure 19, page 36.

2.3 Engage Community

Upon the selection of investment sites, we met with different members of the local communities. The aim of these meetings was to gather information regarding the current conditions, as well as obtain design input. Meetings were attempted with different sections of the community including the soccer community, the school community, an environmentalist and city officials. The intent of having a wide range of individuals was to help exclude any politics and submit a well-rounded, unbiased report. The response from the community was challenging for many reasons. For example, the team had difficulty scheduling meetings with various community members; also it was difficult to talk with people in general terms without being given a sales pitch. The team understands that people were only trying to attract positive publicity to help fulfil their needs.

2.3.1 Soccer Community

In order to understand the soccer culture within Mitchells Plain and Khayelitsha, a meeting was held with Shamiel Kolbee, the coordinator of the Mr. Price Soccer League. The Mr. Price Soccer League is comprised of about five hundred players from Mitchells Plain and includes age divisions of under-9, under-11, under-13, under-15, and under-17. Currently there are sixty fields within Mitchells Plain, but oftentimes students are not allowed to access the fields during the week, leaving the players without an area to practice.

During our initial meeting with Mr. Kolbee, he also described the forty club teams already in place in Mitchells Plain, and the soccer academy he runs. The club teams are regional and include players from around Mitchells Plain. These teams provide students with the opportunity to play soccer year round by supplying a place to play when their high school team is not in season. The academy is currently looking to upgrade their program by developing fields and constructing a facility to house their changing rooms, equipment rooms, and board rooms.

After creating a basic design layout, a meeting was held with some of the coaches from the local soccer leagues. This meeting was held in order to get feedback about the design proposal for Westridge Secondary School as well as gain insight as to what the community would like to see developed at any of the secondary schools within Mitchells Plain. The ideas and opinions heard are listed below:

- Swimming Pool at one or more secondary schools
- Outdoor Stage (specifically at Cedar Secondary School which specializes in art)
- There is a need to develop ownership and awareness

- The sports facilities at Westridge need an entrance separate from the school
- There is currently netball leagues being set up throughout Mitchells Plain
- In terms of management:
 - The board should consist of people from each of the following groups:
 - School governing board
 - Residents association
 - Neighbourhood watch
 - School soccer league
 - Soccer academy
 - School administration
 - The board should not be a voting group but should have to reach consensus
 - Money raised at from the sports facilities will go back into Westridge Secondary School
 - The duties of the caretaker will be the soccer community's responsibility
 - The caretaker should be held accountable by the board

These ideas were very helpful and will be incorporated into the Westridge proposal, library of school amenities and the management plan.

2.3.2 Environmental Expert

Once the proposals had begun to take shape it was necessary to fill in many details for the design possibilities. A meeting was arranged with Lewine Walters, the Acting Area Manager of the South Central District for Nature Conservation, City of Cape Town. This group works not only in nature preservation, but in environmental education and community involvement. Currently, Nature Conservation works with the schools to create a lesson plan that incorporates nature into the curriculum. However, this program is not as successful as it could be. This is due largely to the fact that travel is necessary to experience nature. If different nature zones were created throughout the school's property, students could experience diverse floras and faunas during class hours. Some of the zones could include: wetlands, dunes, or useful plants.

Also we received a list of indigenous plants. These will be farther researched and incorporated into both the Westridge and library of school amenities in terms of borders, grasses, and general landscaping.

2.3.3 Community Park

Exploring examples of successful community endeavors provides valuable information that can be used in the development of school proposals. As mentioned in the background, the Manyanani Peace Park is an open access community park developed with the intention of reducing violence and crime. An onsite visit provided the team with an assortment of ideas about useful components that could be incorporated into the school recreational proposals. The Peace Park has a mural painted on one of its walls as seen in Figure 17. The mural humanizes the wall and seems to be a great addition to the park. Also, the park showed examples of trash containers and tree guards that will be essential to any development. The park lighting was interesting, as a single light post lit the entire park; this could be a possible design for sport facility lighting. Most importantly, the visit to the park also demonstrated that a space can be well maintained and enjoyed if the community supports it.



Figure 17 – Mural Wall

2.3.4 Conclusion

Many aspects of the community were taken in to consideration, but the team hoped to involve the community more in the design process. Due to a lack of resources and support available as well as the limited time of the project, certain community members were not able to be included. Although meetings were few and far between, the team extracted as much information as possible from the successful meetings held. The team was very careful to avoid making decisions that were not based on fact in order to make the need for development more credible.

2.4 Write Proposals for Schools Best Suited for Investment

The information gathered within the database will provide one source of information for future development planners. In addition, the database served as a valuable tool for the team the creation of development proposals. They include a design layout for match facilities at Westridge Secondary School and a library of possible amenities.

2.4.1 School Best Suited for Sport Matches

After determining the soccer community's wishes, the need for a specific match play and advanced training facility became apparent. The school selected to house this sport facility was the Westridge Secondary School; it was chosen due its size, location, current facilities and community support.

The proposal is a development plan for Westridge Secondary School. It contains a design layout with information about each design component. Along with the proposal, a management guide was created to aid in the organization of the proposed facilities. Alastair Graham received the proposal and management guide with the aim of developing a successful sports facility.

2.4.2 Sport Development at Other Schools

In coordination with the development plan for Westridge Secondary School, which may provide a facility for match play, a proposal was written for sports development at the other secondary schools within Mitchells Plain. This development could provide practice fields for the soccer teams, as well as include other recreational facilities such as basketball/netball courts, rugby pitches, and playgrounds.

This proposal is a collection of possible opportunities for school development. Each possible facility is described including sizes, benefits and maintenance. Alastair Graham will also receive this library of amenities with the aim of inspiring recreational development for all of Mitchells Plain.

2.5 Composting

Mitchells Plain Town Centre produces an excessive amount of organic waste. Currently, there is not a beneficial method for its disposal in place. Rather than wasting this organic material, it could be recycled through composting. Composting would also be an advantageous addition to a school because of its educational opportunity.

The school chosen to house a composting site must meet the following criteria:

- The school must be near the Mitchells Plain town centre in order to facilitate transportation of the composting materials from informal traders to the school
- The school should already have a garden in place
- The school would preferably be a primary school for educational purposes

A school that fulfils all of the composting site criteria is Imperial Primary School. Firstly, it is located near the Mitchells Plain town centre, and it already has a flourishing garden. A picture of the current garden can be seen in Figure 9, page 17. This garden shows that the school already has a support

system for extra-curricular projects; therefore a composting project may have a greater chance of success. Secondly, the children, attending Imperial Primary School, are at an age where composting lessons may have a large impact.

Chapter 3: Results

Through research, on site analysis, and interviews a great deal of information was gathered. The following chapter contains three main sections. First, it presents a compilation of Mitchells Plain Secondary School information in database form. Second, there are proposals for school recreational development. Third, there is a pamphlet to teach basic composting.

3.1 Database

The database of schools within Mitchells Plain has been designed to be a tool for future developers. It contains both property and school specific information for the primary and secondary schools within Mitchells Plain. The database has been developed within Microsoft Works Database Version 8.0 and can be viewed as a spreadsheet or workbook. A screen shot of the spreadsheet view can be seen in figure 18, and a workbook screen shot can be found in section H of the appendix.

	School Name	Size	Maintained	Pollution	Level	Lighting	Soil	Grass	Train Tracks	Facilities Now	Note:
1	Aloe High	7.04	Well	None	Flat field area	light post but no light	dirt & sand	Yes	Yes	N/A	
2	Beaconhill Secondary School	5.27	Poor	Trash	Large Area is flat, side of school is hills	N/A	Clay	Some	N/A	Gardens	Clay becomes water logger in winter, and hard in summer, have piles of topsoil ready
3	Cedar Secondary	6.63	Well	None	Flat field area	N/A	dirt & sand	Yes	N/A	N/A	
4	Glendale Senior Secondary	6.8	Poor	Trash	No flat areas, all sand dune area	N/A	dirt & sand	Some	N/A	Near Rocklands Sports Centre	Piles of Sand: may be for Construction
5	Lentegaur High	7.9	Poor	Trash	Flat field area, sand dunes	light posts but no lights	Sand	Yes	Yes	N/A	
6	Mitchells Plain Islamic High	4.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7	Mondale Senior Secondary	6.69	Poor	None	Hilly area, scenic but not suitable for sports	N/A	dirt & sand	Yes	N/A	Indoor Recreational Facility Nearby, Volleyball Court	
8	Oval Noord Secondary (Oval North)	6.78	Well	None	Flat field area	N/A	dirt & sand	Yes	N/A	Basketball nearby	Piles of Sand: may be for Construction
9	Portland Secondary	6.22	Poor	None	Flat field area	N/A	dirt & sand	Yes	Yes	N/A	
10	Princeton High	6.33	Poor	Trash	Flat field area	Small Side Lights	dirt & sand	Yes	N/A	N/A	
11	Rocklands Secondary	6.94	Poor	Trash	Flat field area	N/A	dirt & sand	Yes	N/A	Basketball Courts, Rugby Pitches, Possible Indoor Gym	
12	Spine Road Senior Secondary	5.66	Well	Trash	Flat field area	N/A	dirt & sand	Yes	Yes	Basketball Court, Cricket Facilities, Rugby Pitches, Small Garden	
13	Strandfontein Secondary	7.06	Well	None	Not flat	N/A	Sand	Some	N/A	N/A	
14	Tafelsig Secondary School	5.83	Poor	None	Flat field area	Several Light posts	dirt & sand	Yes	N/A	N/A	
15	Westridge Senior Secondary	6.54	Well	None	Flat	Several Lights up	dirt & sand	Yes	N/A	Paved courts (2)	
16	Woodlands Secondary	6.17	Poor	Trash	Flat field area	N/A	dirt & sand	Yes	N/A	Basketball Court	

Figure 19 – Secondary School Database

3.2 Match Play – Westridge Proposal

The Westridge proposal began with funding from the German Development Bank Kreditanstalt für Wiederaufbau (KfW) to build soccer pitches at schools in Mitchells Plain. The school information, especially regarding school size and total enrollment, led to the decision to develop a secondary school rather than a primary school. Secondary schools possess larger land allotments and higher enrollments; a field at a secondary school location could have a greater impact than one at a primary school.

After determining that a secondary school should be developed, the needs of the soccer community needed to be ascertained. Meetings with the coordinator of the Mr. Price Soccer League in Mitchells Plain, and various soccer coaches provided the following information. Due to lack of facilities open to the youth population, the high school teams need fields to practice and play on. The decision was to first develop a high-end match play facility at one high school, where all the high schools could hold their games. This would alleviate part of the field accessibility problem for students. The next step would be to develop practice fields at the other fifteen secondary schools. The potential locations of the match facility were reviewed, and the consensus was that Westridge Secondary School would be the best location due to its size, layout, current structures, and positive attitude of its school administration.

The specific design plan was also discussed with the soccer community representatives. To summarize the specific plan, Figure 20 was developed. This figure shows the three proposed soccer pitches to be developed at the match specific site. In addition to the soccer pitches, the figure also shows a netball court, a caretaker's flat and a small playground. The entire facility would be enclosed and lit.

The location of these elements is labeled. The complete Westridge Development Proposal can be found on Page 38.

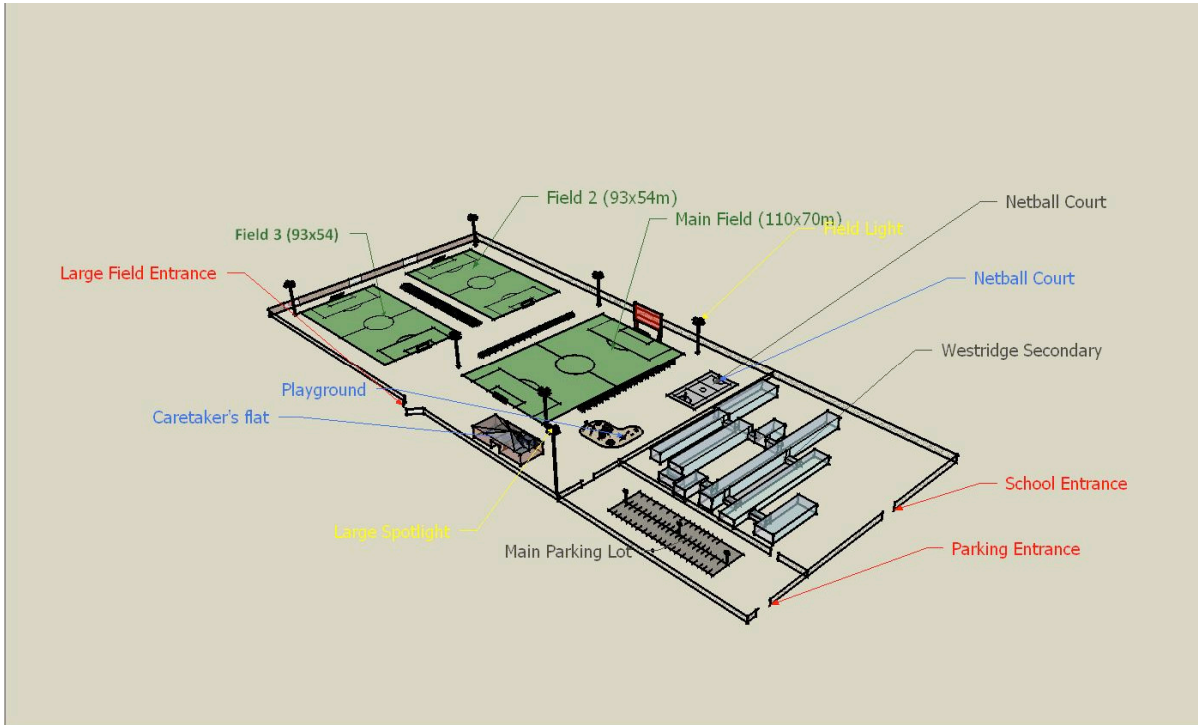


Figure 20- Match Site Summary

2007

**Westridge Senior Secondary Sports
Development Proposal**



By:
Michael Case
Eric DeStefano
Elizabeth Glasson
Charlotte Paige McAuliffe

INTRODUCTION

Students from Worcester Polytechnic Institute have initiated the following proposal. The aim of this proposal is to serve as an example of what is possible with the development of a secondary school in Mitchells Plain. This proposal is intended for presentation to various city officials for the City of Cape Town in the aim of inspiring the development of the open land surrounding the Mitchells Plain secondary schools.

This document includes the following:

- **Part I** – A brief background description of the school and the vision of an integrated sports development plan, followed by a preliminary architectural brief.
- **Part II** - The development approach, detailing the proposed aspects of the sports facilities

Part I

Background

Westridge Senior Secondary School is located in the Westridge Estate, in the center of Mitchells Plain. Like many other settlements, Mitchells Plain is stricken with poverty, drugs and violence. The challenge of post-apartheid development is to decrease violence and drug use among the youth population, as they hold the key to a successful future. The City of Cape Town and various soccer organizations have been working to address these problems and offer an alternative to substance abuse. Soccer is used as the underlying motive behind this development because it provides opportunities for positive activity and teaches valuable life lessons such as leadership and teamwork.

After assessing the needs of the local soccer organizations, it has become apparent that the current sports facilities are not adequate. A solution to this problem is to develop the open land surrounding the Mitchells Plain secondary schools in order to give the organizations better access to high quality soccer facilities. Due to the heavy wear on grass fields during daily practices, a facility specially designed for match play is needed.

Westridge Senior Secondary School was chosen as the location for match play facilities for many reasons. The criteria for selecting the site were mainly the size of the open area, topographical fit, and location. Westridge Secondary School has approximately four and a half hectares of flat open land, and it is located in the center of Mitchells Plain, between a nearby residential area and a main road. In addition, Westridge Secondary has existing lighting structures that would be incorporated in the design proposal.

According to the Western Cape Education Department, Westridge Secondary is a school that accepts all eligible learners that reside near the school regardless of religion, race, academic ability or financial needs. This school has a reputation for using technology in education with almost 60 computers now available to the students. Although money has been invested to improve the school with items such as computers, many non-academic needs have not been addressed. Extra-curricular activities are essential to producing healthy well-rounded students. The development of sport facilities would address the need for non-academic activities as well as provide an opportunity for the community to interact with the students in a positive environment.

Sports Development Plan

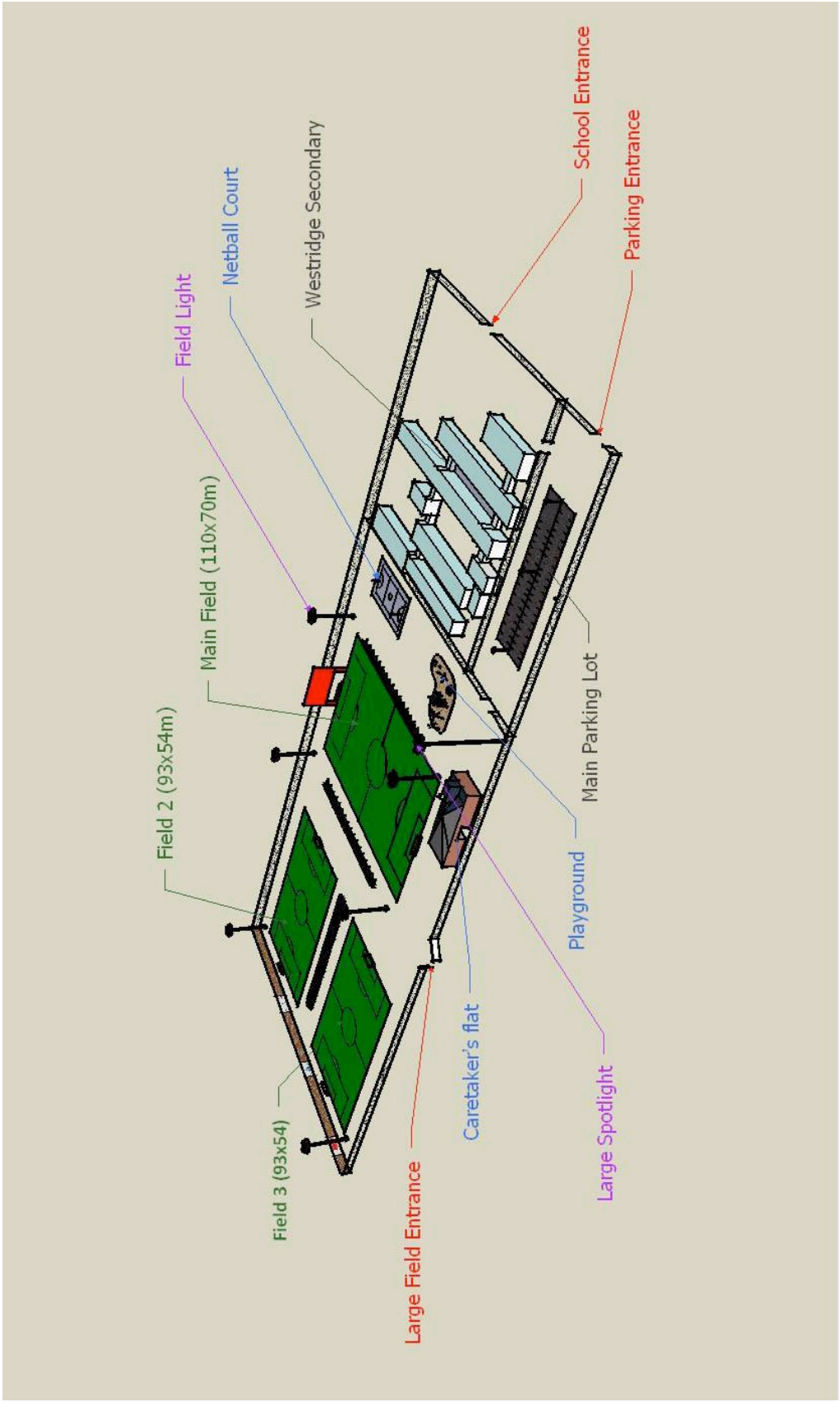
Westridge Senior Secondary has the potential to become a center of social activity in the Westridge Estate of Mitchells Plain. The major intention of sports development is to promote recreation and learning that cannot be found in a classroom, in addition to providing an anti-crime environment after school, at night and on the weekends. In order to facilitate this development, it is necessary to upgrade the existing structures, as well as install new facilities.

There are pre-existing soccer organizations throughout Mitchells Plain that would benefit from sports development. The regional soccer clubs and the local secondary school league, the Mr. Price League, are in need of more fields throughout Mitchells Plain. Through the development of Westridge Senior Secondary, these organizations would have access to well-maintained match facilities. In addition to these facilities, Westridge Senior Secondary School may be the home of the Mr. Price Soccer Academy currently under development.

Preliminary Architectural Brief

New facilities include:

- 1. Outdoor Sports and Recreation Centre**
 - 1.1. Multiple Soccer Pitches for Match Play
 - 1.2. Changing Rooms
 - 1.3. Equipment Storage Area
 - 1.4. Netball Court
- 2. Caretaker's Flat**
 - 2.1. Security and Vandalism Prevention
 - 2.2. Facility Upkeep
- 3. Health Facilities**
 - 3.1. Bathrooms
 - 3.2. First Aid
- 4. Community Facilities**
 - 4.1. Playground Area
 - 4.2. Snack Shed
 - 4.3. Spectator Area
- 5. Additional Works**
 - 5.1. Landscaping
 - 5.2. Parking Area
 - 5.3. Facility Boundaries
 - 5.4. Upgrading Existing Facilities
 - 5.5. Scoreboard



Part II

Site Development

I. GENERAL STRATEGY

The primary goal of this facility is to supply the youth with quality soccer pitches to be used as match fields. The secondary goal is to develop Westridge Secondary as a center of community activity. The community would be able to go to this facility as spectators to watch the soccer matches. By opening the facilities for community access, revenue could be generated by charging for parking and admission. Other developments such as the playground and spectator stands would benefit all members of the community by creating an environment that serves all ages. This creates a safe and positive environment where all members of the community could interact and have fun.

II. THE FACILITIES

The following section will describe in detail each of the amenities included in the Preliminary Architectural Brief.

1. Outdoor Sports and Recreation Centre

1.1 Multiple Soccer Pitches for Match Play



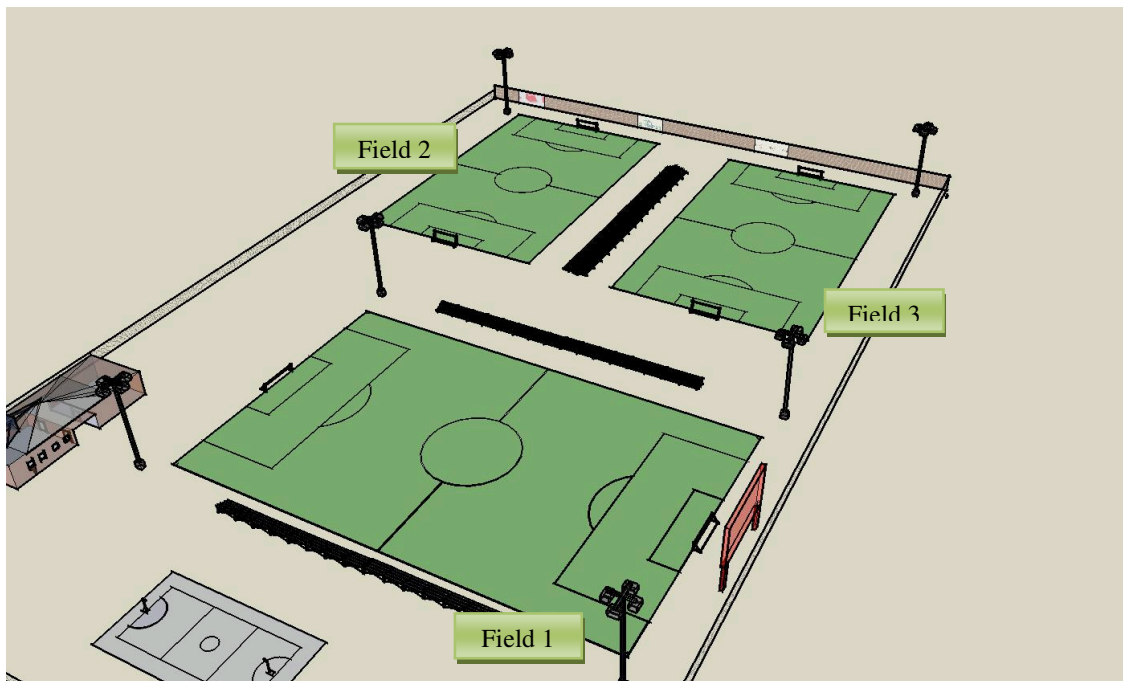
Current Facilities at Westridge Secondary School

There are many characteristics of Westridge Secondary that make it an ideal place for implementation of multiple soccer pitches. Not only does it have a large amount of open area, there are also pre-existing light structures and natural wind protection. Three soccer fields would be constructed. Through the participation of outside donors, there is the possibility of an artificial turf field to be developed on this site. The benefit of artificial turf is that it requires less maintenance and because of its durability, it is more resilient than a traditional grass field.

The main match play field would be 110m by 70m large enough to accommodate a semi-professional team, while the other two fields would be slightly smaller at 93m by 54m. Their proposed locations could be seen in the layout. If an artificial turf field is implemented, it would be placed in the Field 1 location. Field 2 and Field 3 would be grass fields.

The appropriate irrigation systems would have to be implemented for these grass fields to maintain the highest quality playing surface during the summer. Drainage plans should also be considered for both the artificial turf field and the grass fields. In order of the least to the most expensive, the four types of drainage are undrained, pipe-drained, pipe and slit drained and suspended water table. The four main types of drainage should be considered to determine the most suitable system for Westridge. For more information on the construction and maintenance of soccer pitches as well as detailed descriptions of the types of drainage systems, visit the following website:

<http://www.sportengland.org/naturalturf.pdf>.



3D Model of Possible Amenities

1.2 Changing Rooms

In order to fully accommodate soccer matches and eventually accommodate guest teams, changing rooms with lockers and benches are a necessity. Not only would this provide the soccer teams a place to prepare for a match, it also provides a place for the players to store their personal equipment. Different types of lockers could be installed and the possibility of having coin operated lockers could

provide a source of revenue. It is also important to include enough lockers and adequate space for the teams to move around easily. The changing rooms would also include a shower area equipped with hot and cold water.

1.3 Equipment Storage Area

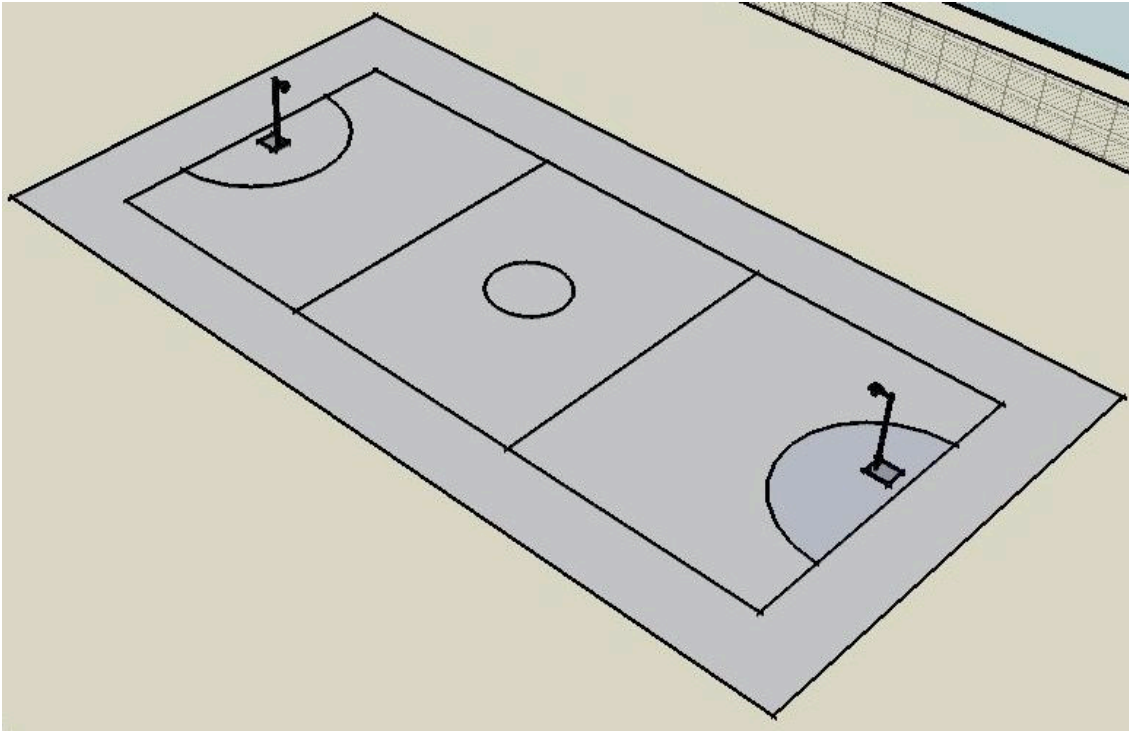
Equipment storage areas would provide a safe place to store team equipment such as soccer balls or other practice gear. This would also be the place to keep items such as the nets for the goals to prevent vandalism of the equipment. The storage places would be locked at all times, with restricted access to prevent theft. The maintenance equipment could be stored here as well. Easy access to the equipment room is important, and a garage-style door could be implemented for large equipment.

1.4 Netball Court



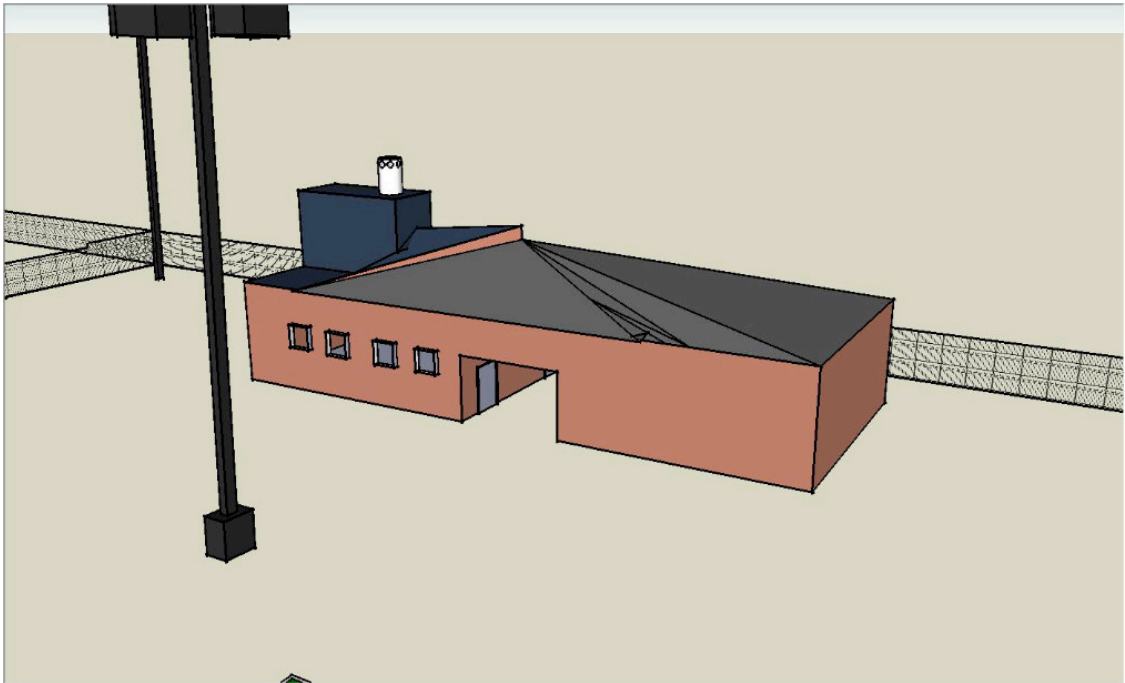
Location of Paved Surface at Westridge Secondary School

There is already a paved court on the site, as seen in the picture above, but it is in very poor condition. This area would be developed into a netball court to provide more extra-curricular activities. The netball area would be approximately 32m long by 18m wide. A rubberized paint would be applied to the surface of the court to help prevent injury, and new hoops would be erected. The netball court is important because there are currently netball leagues being formed throughout Mitchells Plain.



3D Model of Possible Netball Court

2. CARETAKER'S FLAT



3D Model of Possible Multi-Use Facility and Caretaker's Flat

2.1 Security and Vandalism Prevention

A building would be constructed that would serve to house a caretaker to provide twenty-four hour protection for the facilities. Security is vital to the success of the fields because if the area is not a safe haven, then the community would not participate. The caretaker would do periodic security checks as well as provide a safe place in case of an emergency. In addition to the issue of security, vandalism of school property is very common and is another major problem. The presence of a caretaker at all times would help to deter vandalism of the school and the facilities.

2.2 Facility Upkeep

The caretaker would also be responsible for keeping the fields in good condition, mowing the grass, and cleaning up any trash to keep the property looking clean and aesthetically pleasing at all times.

3. HEALTH FACILITIES

3.1 Bathrooms

A bathroom area, with hot and cold running water, would be constructed to provide safe sanitation at the facility. There would be separate latrines for males and females as well as door locks for safety. The bathroom facilities must be constructed to accommodate everyone in terms of religious needs, or people with disabilities. Sinks equipped with anti-bacterial hand soap are a necessity in all bathrooms.

3.2 First Aid

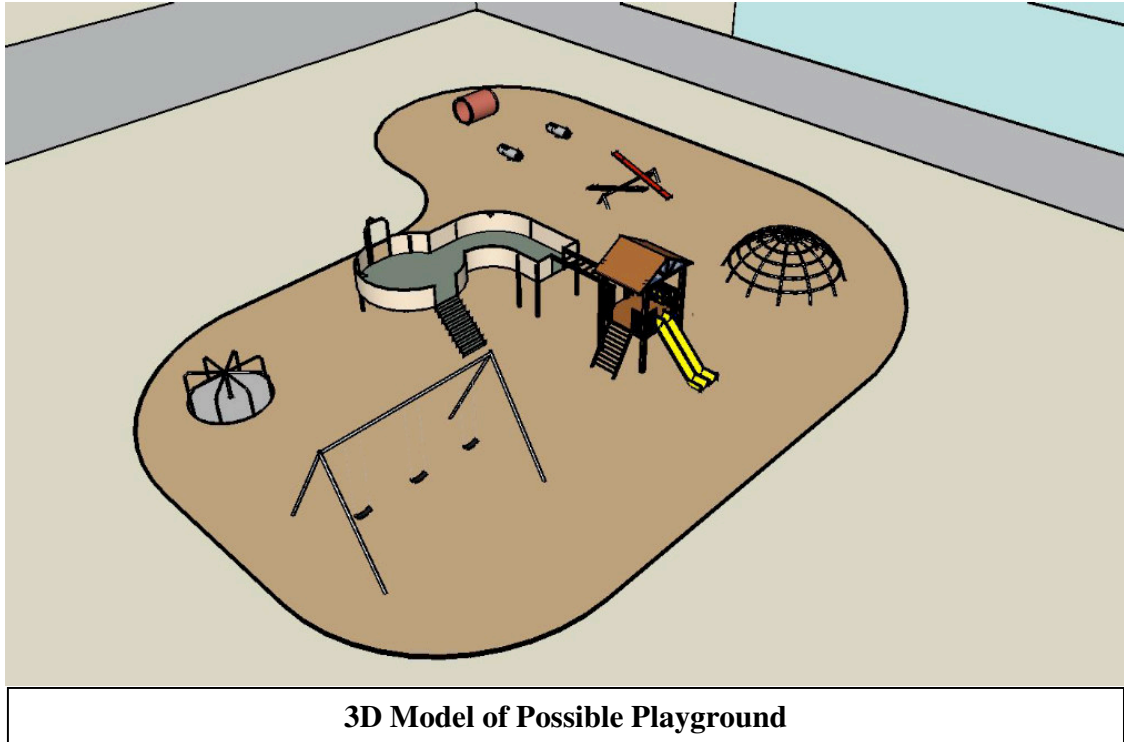
The caretaker would have access to first aid equipment and supplies that would be made available to anyone that gets injured using the facilities. A supply of materials such as band-aids, rubber gloves, ice packs, and gauze would be kept in the first aid center.

4. COMMUNITY FACILITIES

4.1 Playground Area

In order to meet the needs of the community as a whole, activities must be provided for children of all ages. A playground is a tool that provides activities for the youngest members of the population. Playgrounds also provide children with an interactive safe environment where they could play, learn, and grow. Many playgrounds include equipment such as swings, slides, monkey bars, and raised decks to play on. Adding details such as steering wheels, or storefront designs to the playground equipment allow kids to exercise their imagination. This provides an experience beyond running, jumping, and swinging, it makes a whole new world available to them.

Another playground asset that could attract children of all ages is a sand box. Sand allows kids to use their imagination, as well as to build and destroy things without doing any real damage. One great way to incorporate sand into the design of a playground would be to cover the area under the play equipment with sand. This would not only allow children to play in the sand but also provide a soft material to land on.



3D Model of Possible Playground

Because playgrounds are most often built and designed for younger children, safety should be taken into consideration. Playgrounds could be enclosed, having only one or two entrances or exits. This allows children to roam about the area without the worry of them wandering off. Any tall equipment should include guardrails so that children do not easily fall off. Slides, if not attached to a deck, should have a platform up top so that children may situate themselves before sliding down. Another safety precaution that should be taken is to use kid-friendly materials. If a playground is going to be sitting in direct sunlight, it is best to use materials with rough textures and heat reflective colors. Finally there should obviously be no areas where children might become entrapped, nor jagged or sharp pieces that could cause cuts or wounds.

4.2 Snack Shed

A snack shed would be developed on the property to provide food and beverages during the soccer matches. This is a concept that has potential to provide revenue to the facility in order to help pay for the expenses of facility maintenance. The snack shed would need someone from the community to work inside as the vendor, possibly as a volunteer.

4.3 Spectator Area

In order to provide additional amenities for the community, there needs to be some development on an area where spectators could sit to watch the soccer matches. Spectator stands would be installed to cover a maximum viewing area. Stands should be placed in between fields in order to cover multiple pitches. The proposed locations for these bleachers could be seen in the layout diagram.

5. Additional Works

5.1 Landscaping

Work would be done on the current landscape of the property to provide the best possible surface for soccer pitches. Further landscaping developments would be implemented to include irrigation and fertilization systems. These improvements are necessary for the maintenance of the fields.

Trees and flowers add significantly to the aesthetic value of the property. Trees could also be used as wind barriers to protect against harsh winds affecting soccer play. Indigenous trees and flowers would be planted throughout the area to prevent the addition of a species that would not survive. According to the nature conservation division of Cape Town, there are many types of indigenous flowers and trees that could be planted on the Westridge property. Indigenous flowers such as the rooikappie, candelabra, or the wild cineraria would add a lot of color to the area. In addition, the num-num plant is a bush with large thorns that could be used as one way to mark a perimeter or border. One must avoid planting random flowers or trees because there are many species that would not be able to survive on the Westridge Secondary School property.

5.2 Parking Area

There is a potential to significantly increase the size of the parking area in order to accommodate more people. The parking area would be lit and accessible from the main entrance to the school, and access to the parking area could be controlled through the use of a gate. Handicap accessible parking spaces must be included close to the entrance to the facilities. By lining the long edges of the parking lot with trees, shaded parking spots would be provided for the summer. By introducing a small fee for parking vehicles, further revenue would be provided.

5.3 Facility Boundaries

At the far end of the lot away from the school there is the option to install an advertisement wall. Space on this wall could be sold to advertise local businesses. Space could be sold on a time basis, thus providing a source of sustainable revenue. In order to protect the school facilities during weekend matches, a fence must be constructed along the edge of the school and the parking lot with a gate that could be locked. A separate entrance to the parking lot must be installed, as well as another entrance directly to the fields large enough to fit emergency and construction vehicles.

5.4 Upgrading Existing Facilities

The current facilities at Westridge Senior Secondary need investment in order to improve their condition. Improvements needed include repairing the existing fence surrounding the property to provide more efficient security. Another improvement is to repaint the buildings to cover up the graffiti; this would improve the cleanliness and look of the area. Trash cans should be placed strategically throughout the facilities to avoid littering. Areas that require trash cans are outside of the snack shed, spectator areas, parking areas, and bathrooms. Plastic trash cans should be avoided because they are flammable and they are more susceptible to vandalism. Finally, there are currently lights that could be upgraded and relocated as well as more lights installed to provide the ability to have soccer matches at night.

5.5 Scoreboard

There would also be a scoreboard installed on the property at the end of the large soccer field to display the score and game time during soccer matches.

3.3 Library of Recreational Amenities

As previously mentioned, the match play facility is only the first step towards fulfilling the community's needs. The other fifteen secondary schools also need new facilities. In an attempt to aid the design plans of these other schools; a bank of possible facility options was created. A group of school employees was presented with this bank, and they provided their input as to what they would like added to the possible options. Hopefully, other schools will see the success of Westridge, and want to develop their own land. This library can then serve as a useful tool to aid the design process. The complete Library of Recreational Amenities can be found on [page 51](#).

Recreational Reference Guide for Mitchells Plain Secondary Schools

Eric DeStefano
Michael Case
Elizabeth Glasson
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WPI

2007

INTRODUCTION

The following reference guide has been initiated by students of Worcester Polytechnic Institute. The purpose of this document is to serve as a guide for facility possibilities to aid the future upgrade of the Mitchells Plain Secondary Schools. Each of the amenities mentioned include a brief description of what type of space is needed as well as links to further information. The last section of the document is to act as an interactive guide in order to assist in developing preliminary design layouts.

This document includes the following:

- **Part I** – A brief background description of 15 secondary schools and the vision of a generic sports development plan, followed by a list of possible facility developments
- **Part II** - A detailed background of possible facilities for implementation at the secondary schools in Mitchells Plain.
- **Part III** – A design tool for school, sport or community members.

Part I

Background

Mitchells Plain, like many other settlements, is stricken with poverty, drugs and violence as a result of the apartheid era. The challenge of post-apartheid development is to decrease violence and drugs among the youth, as they hold the key to a successful future.

Sport is one potential way to get youths away from such negative activities. Sports are a great positive activity in that they allow youths to expel extra energy, as well as teach valuable life lessons such as leadership, teamwork, and hard work.

The youth population within Mitchells Plain is extremely large, making up nearly fifty percent of the population. To accommodate so many students, there are sixteen secondary schools in Mitchells Plain. Each school has on average six hectares of land. This land is currently undeveloped and due to vandalism and crime, in most cases, the students do not have access to it. This land is the ideal resource in that it can be developed into sports facilities. Although developments have been made to improve the schools, extra-curricular needs have not been addressed. Extra-curricular activities, such as sports, are essential to producing healthy well rounded students.

School Facility Development Plan

The secondary schools in Mitchells Plain have the potential to become centers of social activity. The major intention of this proposal is to create a bank of facility possibilities that could be used at any of the secondary schools within Mitchells Plain. The development of schools will promote recreation and learning that cannot be found in a classroom in addition to providing an anti-crime environment after school, at night and on the weekends. In order to facilitate this, it is necessary to use the existing facilities and resources, as well as to develop new facilities.

Possible Facility Brief

Possible facilities include:

1. Sport Surfaces

- 1.1. Soccer Pitches
- 1.2. Netball (or Basketball) Courts
- 1.3. Rugby Pitches
- 1.4. Cricket Pitch
- 1.5. Baseball Fields
- 1.6. Hockey Fields
- 1.7. Volleyball Courts
- 1.8. Track
- 1.9. Tennis Courts

2. Sports Buildings

- 2.1. Caretaker's Flat
- 2.2. Equipment Storage Area
- 2.3. Bathrooms
- 2.4. Changing Rooms
- 2.5. First Aid Resources
- 2.6. Mural Wall

3. Community Involvement

- 3.1. Playground Area
- 3.2. Gardens
- 3.3. Walking Path
- 3.4. Picnic Area
- 3.5. Landscaping
- 3.6. Amphitheatre
- 3.7. Swimming Pool

Part II

I. Use:

The following is a collection of facility possibilities. When a school is beginning preparation for development, the school, sport organizations, and community can read through the following information about facility options. While reading, one can consider what amenities would best suit the property and the needs of the particular group.

II. The Facilities

1. SPORT SURFACES

1.1 Soccer Pitches

Soccer is one of the most popular sports for the youth population within Mitchell's Plain. There is currently a high school soccer league and a club soccer league in place within Mitchell's Plain. The soccer pitches could serve as practice facilities for both these leagues as well as an additional resource for the school.

A soccer field requires anywhere from 90 to 120 meters in length and 45 to 90 meters in width. Depending on the condition of the soil at each secondary school there is the possibility of either grass fields or artificial turf. The majority of schools will have grass soccer pitches because of cost; however grass does require more maintenance. Irrigation is going to be necessary for grass pitches as well as mowing and the painting of field lines. For a few of the schools that do not have suitable land for the growth of grass, artificial turf fields are an option. This requires more money upfront but should require little to no maintenance. Any minor maintenance would involve the nets and goal frame; fixing any dents, scratches, holes, or vandalism.

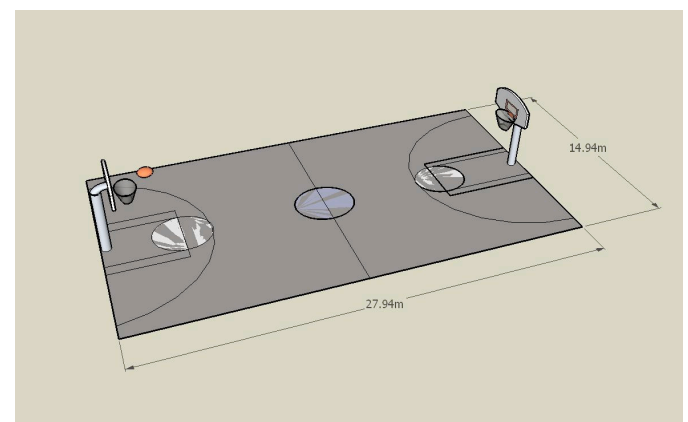
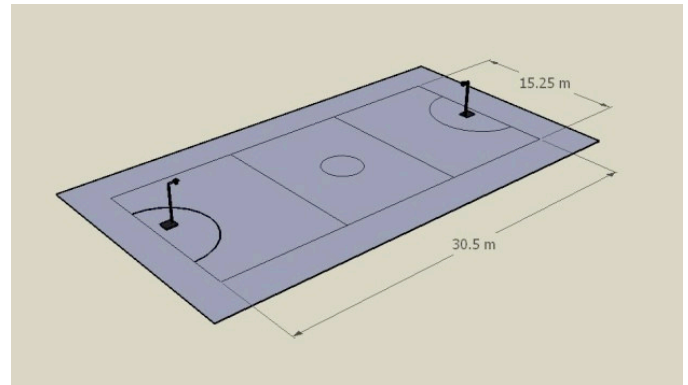


For more information visit:
-<http://www.soccerhelp.com>
-<http://www.fifa.com>
-<http://sportsvl.com/soccer/index.htm>

1.2 Netball (or Basketball) Courts

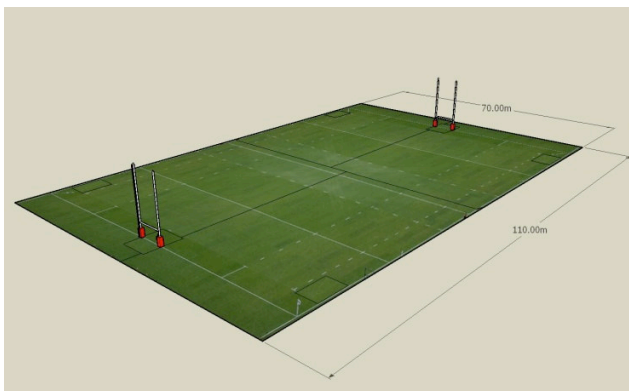
Netball is an increasingly popular sport among the female population in Mitchell's Plain. A piece of land, measuring 30.5 meters long and 15.25 meters long, can be paved and then painted over with a special surface treatment to rubberize the court. This should help to reduce injuries when players fall. Nets would need to be installed and lines painted on the court. Upkeep would be minimal, involving only repairing any damage done to the court or hoops.

Basketball is very similar to netball, in the amount of space as well as the design and upkeep. The biggest difference would be the type of hoops that would need to be installed on the court.



For more information visit:

- <http://www.netball.org>
- <http://sportsvl.com/ball/netball.htm>



For more information visit:

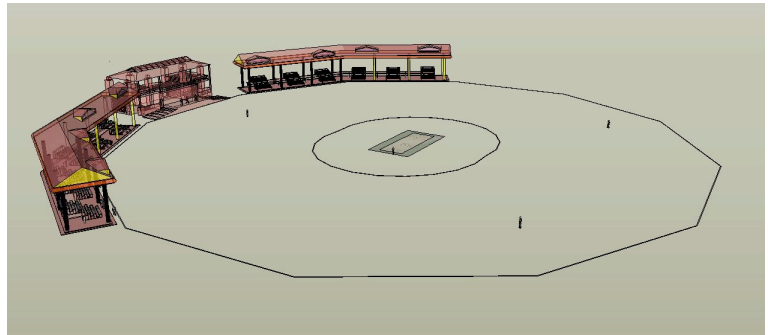
- <http://www.planet-rugby.com/>
- <http://sportsvl.com/ball/rugby/rugbyunion.htm>

1.3 Rugby Pitches

Rugby is a very popular sport throughout South Africa. A rugby pitch requires a field that's dimensions cannot exceed 144 meters in length and 70 meters in width. Field lines must be painted and goal posts must be installed into the field. Upkeep would include mowing the grass as well as painting field lines, the goal posts should require little to no maintenance once put in place. The grass type is the same as soccer. Overall, it can be a great addition to any school.

1.4 Cricket Pitches

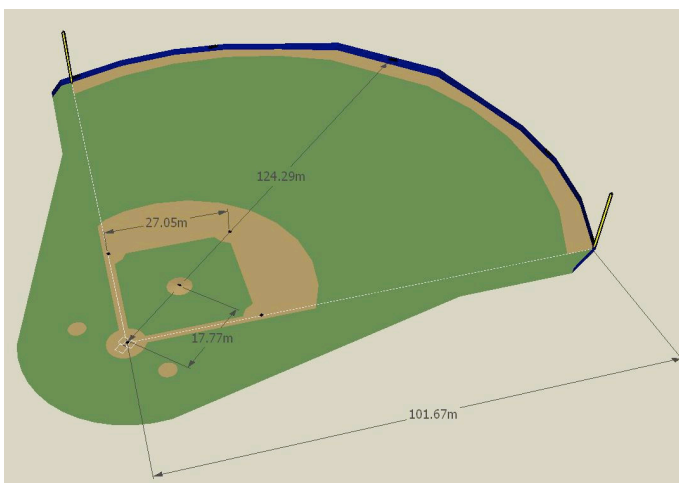
Cricket is another popular sport all over South Africa and may find a home in Mitchell's Plain. The typical size of field includes a pitch 3 m wide and 20-22 meters long, which is settled in an oval field. This is the infield, which is set in a larger circle which has a diameter ranging from usually 137 meters to 150 meters. the maintenance for a Cricket pitch can be more demanding, as the grass must withstand 3 -5 hours of usage. Also, it must be even throughout, with no undulations or depressions and well consolidated, giving good and appropriate ball bounce.



For more information visit:

- <http://icc-cricket.yahoo.com/>

- <http://sportsvl.com/ball/cricket/crickethome.htm>



For more information visit:

- http://www.baseball-almanac.com/stadium/baseball_field_construction.shtml

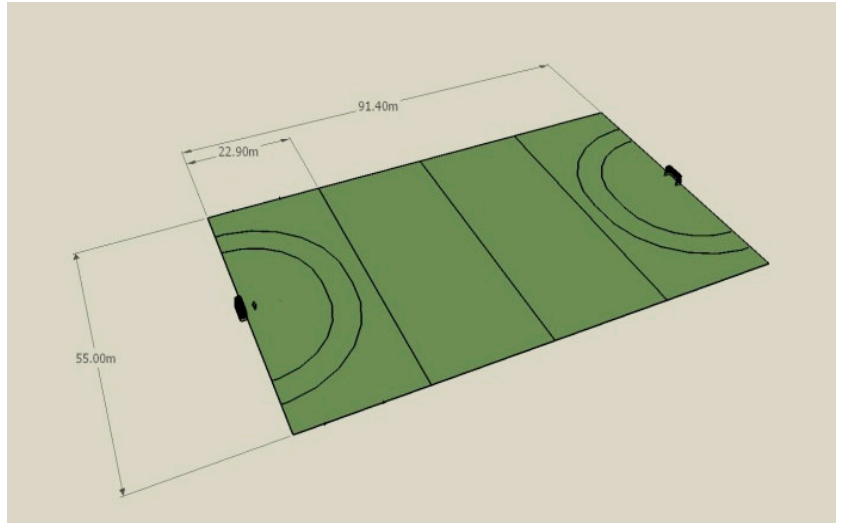
- <http://sportsvl.com/ball/baseballhome.htm>

1.5 Baseball field

Baseball fields require a diamond with sides of 27.4 meters. The pitcher's mound is 18.39 meters away from home plate and its surface should be dirt. The outfield size can vary, however the larger the amount of space the better. The infield around the diamond should be level and, there should be four bases, one at each corner of the diamond. The paths between the four bases should be dirt. The outfield and infield are made out grass. A homerun wall or fence is usually put at the end of the outfield to clearly mark the homerun area. Maintenance would include upkeep of the pitcher's mound, the bases, the infield and mowing the grass. The upkeep is just as demanding for baseball as cricket, requiring no undulations or depressions. Further developments would include dugouts where the team that is batting sits, and a bullpen area for the pitchers to warm up.

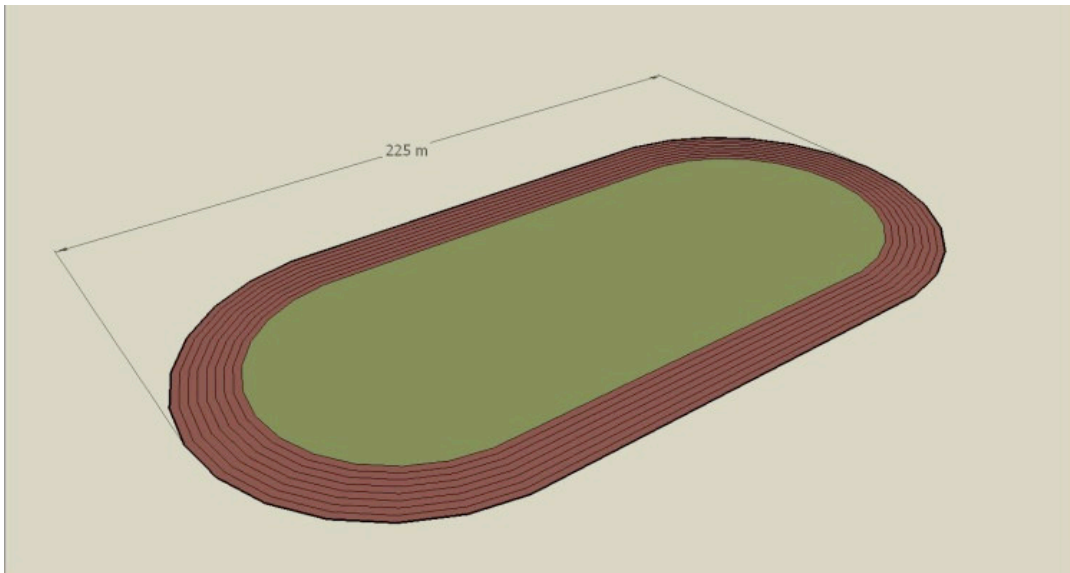
1.6 Hockey Fields

Another grass field would be a hockey field. This field requires a piece of land measuring 91.44 meters in length and 55 meters in width. Maintenance would include mowing of the grass, upkeep of the goals, and painting of the field lines.



For more information visit:

- <http://www.fihockey.org>
- <http://sportsvl.com/ball/hockey.htm>

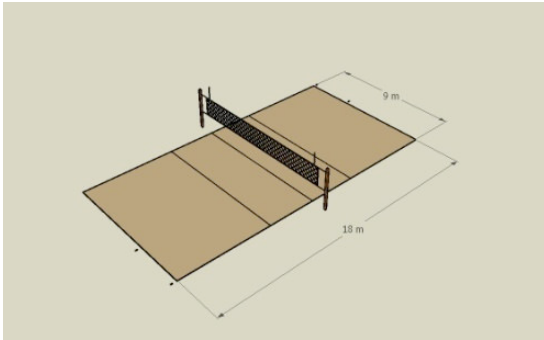


1.7 Track

A track of either grass, dirt, or a rubberized surface could also be included in any school. The track is usually an oval and measures a quarter of a mile. A track is big enough that it could actually be constructed around many of the sports fields, thus taking up less space. Upkeep of a track would include maintaining the surface of the track and the lines which define runners' lanes and distances.

For more information visit:

- <http://sportsbuilders.org/page.php?id=618&from%5B%5D=11>
- <http://www.runningusa.org/>

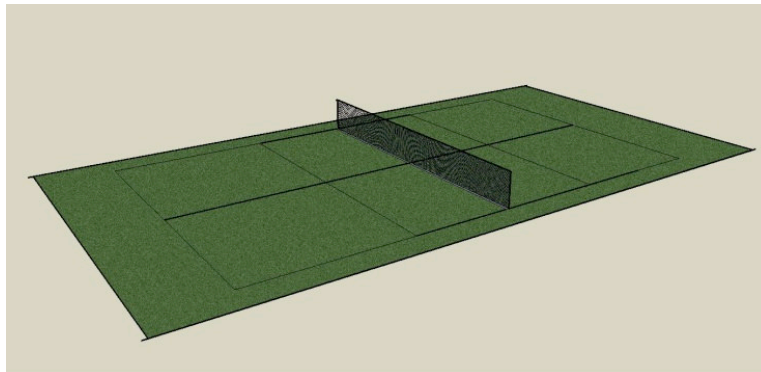


1.8 Volleyball Courts

Volleyball courts could be made of either sand or a rubberized surface, such as the one used for netball courts. Realistically, volleyball is one of the simplest games to set up. The area required would be 18 meters long and 9 meters wide. A volleyball net would be installed across the middle of the court. Maintenance would depend on whether it was sand or a rubberized court, both would involve repairing the net as well as making sure the lines of the court were visible and in good condition.

For more information visit:

- <http://sportsvl.com/ball/volleyball.htm>
- <http://www.vbref.org/ref/courtspecs.html>



1.9 Tennis Courts

Tennis courts can be built of either clay, grass or a hard rubberized surface. They require an area with length 23.78 meter and width 10.97 meters. A net would be installed across the middle of the court, and the court lines (for both singles and doubles) would be painted onto the court. Maintenance would include the net, the court and court lines.

For more information visit:

- <http://sportsvl.com/ball/tennis.htm>
- <http://sportsbuilders.org/page.php?id=16&from%5B%5D=11>

2. STRUCTURES

2.1 Caretaker's Flat

Each school should construct a caretaker's flat. This will be the home to the person in charge of maintenance and security. As caretaker of a property, the person will be responsible for keeping the fields in good condition. This includes mowing the grass, painting field lines, and cleaning up trash to keep the aesthetic value of the property. Also a priority of the caretaker will be to help ensure the security of the property. Security is vital to the success of the fields because if the area is not safe, then the community will not participate. Also, vandalism of school property is very common and is a major problem. Security will be provided through the caretaker doing periodic security checks as well as providing a safe place in case of an emergency.

2.2 Equipment Storage Area

Equipment storage areas will provide a safe keeping place to store team equipment such as sport balls or other practice equipment. This will also be the place to keep things such as the nets for the goals to prevent vandalism of the equipment. The storage places will need to be locked at all times with restricted access to prevent theft.

2.3 Bathrooms

A bathroom area, with hot and cold running water, will be included to provide safe sanitation at the facility. There will be separate latrines for males and females as well as door locks for safety.

2.4 Changing Rooms

Changing rooms would provide an area where teams could change before and after practice, as well as a safe place to keep their belongings while on the field. Showers with hot and cold water could be included for after practice. These showers could be added depending on the availability of water.

2.5 First Aid Resources

The caretaker will have access to first aid equipment and supplies in case of an injury. This service will be provided to increase the safety of the facility. Materials such as band aids, ice packs, and gauze will need to be kept in the first aid center.

2.6 Mural Wall

One way of creating boundaries for the property is through a mural wall. This is simply a wall, of any height or length that will be built along a property border. This wall can be covered in murals; this is a great way to beautify the wall and area. Also it is a great way to involve community artists. Another option with a mural wall is advertising; a company can pay to have their logo put up on the wall.

3. COMMUNITY INVOLVEMENT

3.1 *Playground Area*

Playgrounds provide children with an interactive safe environment where they can play, learn, and grow. Many playgrounds include equipment such as swings, slides, monkey bars, and raised decks to play on. Adding details such as steering wheels, or store front designs to the play ground equipment, allow kids to exercise their imagination. This provides an experience beyond running, jumping, and swinging, it makes a whole new world available to them.

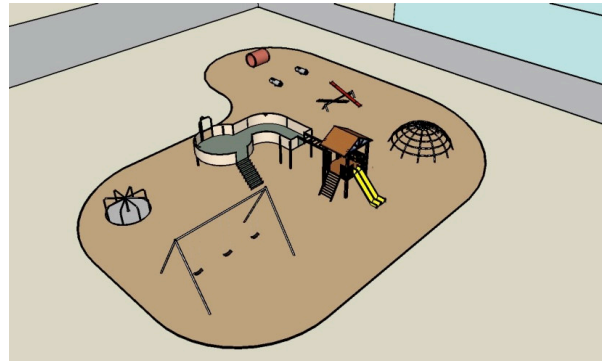
Another playground asset that can attract children of all ages is a sand box. Sand allows kids to use their imagination, as well as to build and destroy things without doing any real damage. One way to incorporate sand into the design of a playground would be to cover the area under the play equipment with sand. This would not only allow children to play in the sand but also provide a soft material to land on.

Because playgrounds are most often built and designed for younger children, safety should be taken into consideration. Playgrounds could be enclosed, having only one or two entrances or exits. This allows children to roam about the area without the worry of them wandering off. Any tall equipment should include guardrails so that children do not easily fall off. Slides, if not attached to a deck, should have a platform up top so that children may situate themselves before sliding down. Another safety precaution that should be taken is to use kid friendly materials. If a playground is going to be sitting in direct sunlight, it is best to use materials with rough textures and heat reflective colors. Finally there should obviously be no areas where children might become entrapped, no jagged or sharp pieces that could cause cuts or wounds.

For more information visit:

<http://www.wbdg.org/design/playground.php>

<http://www.peacefulplaygrounds.com/resources.htm>



3.2 Gardens

A community garden, of any size or shape, could be a great amenity to the local area. Gardens are places of social, nutritional and educational value. Within a community, people can take part in enjoying the visual gratification of a beautiful garden. Also, people could be allotted a portion of the garden where they could grow flowers or food. In an area where food may be scarce this could provide an effective way to improve nutrition.

With respect to education, a school could use the garden as a place to teach gardening, nutrition, and nature. Many schools do not have a curriculum that incorporates environmental learning with nature. Types of gardens that could be implemented could contain different forms of botanical habitats such as mini wetlands, forest, and dunes. These habitats allow a teacher to compose a lesson with hands on activities.

Another aspect of a nature that could be incorporated into any garden site is composting. Due to the lack of nutrient-rich soil in the boundaries of Mitchell's Plain, and also due to the high costs of importing materials such as loam, composting is a cost-efficient method to supplement the soil. Composting is the science of the breaking down of organic materials such as food waste, yard clippings, manures, and clean paper products in combination with dirt and water. Once broken down these materials can suppress plant diseases and pests, reduce the need for chemical fertilizers and promote a higher yield of crops.

For more information visit:

www.thegardenhelper.com/vegetables.html

<http://www.gardenaesthetics.com>

<http://www.communitygarden.org>

3.3 Walking Path

Walkways, jogging paths and nature trails are all excellent features to be included. They can be paved, covered with gravel, or simply dirt paths. Not only do they connect all the different sites of the facility, but the paths and walkways themselves can be an attraction of the site. These paths can be lined with benches, this will allow people rest during their walk but also provide a pleasant place to sit and enjoy the views.

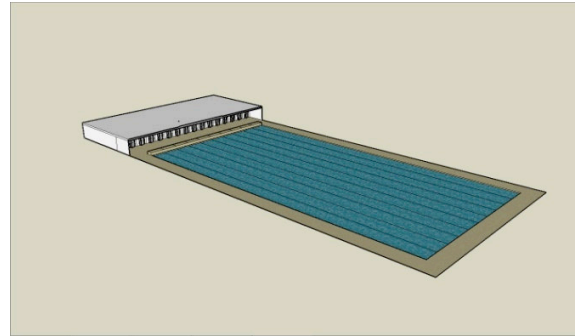
3.4 Landscaping

Landscaping is crucial to the sustainability of any development. This includes management of the grass and local plant life as well as irrigation. Also, adding certain landscaping elements give an area more aesthetic value. Adding trees will provide shading, privacy and security. Adding flowers and other forms of plant life to the grounds are pleasing to the eye. Adding other things such as a pond could make the area very unique and distinguishable.

Indigenous flowers such as the rooikappie, candelabra, or the wild cineraria will add a lot of color to a garden. In addition, the num-num plant is a bush with large thorns that can be used as one way to mark a perimeter or border. One must avoid planting exotic flowers or trees because there are many species that will not be able to survive in all soil types.

3.5 Swimming Pool

There is currently a lack of public swimming pools throughout the settlements. Swimming provides an excellent form of physical activity. Beyond the physical gains of swimming, it also provides a relief from hot temperatures. However, swimming pools do have some drawbacks. They require a lot of expensive maintenance and they are also dangerous because there is the threat of people drowning.



3.6 Amphitheatre

There is a variety of talent throughout Mitchell's Plain that can be showcased through concerts or shows held at an amphitheatre. Amphitheatres can vary in size and shape to accommodate the different needs of any school. A roof can be installed over the staging area to project the sound volume, protect against weather, and increase the aesthetic appeal of the theatre. The amphitheatre should be constructed out of concrete or stones to prevent weathering.

3.7 Picnic Area

A picnic area is something that almost all successful community areas have in common. Whether the site itself provides a place to buy food, or permits people to bring in food of their own, people and food is usually a winning combination. Picnic areas are a great way to provide fun for an entire family, and should be strongly considered. Most picnic areas include shade, provided by trees or some man-made structure. Because people enjoy the shade, it is hard to maintain grass in the picnic areas. Sand, dirt or gravel are great options to replace the grass.



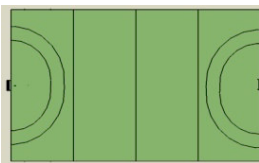
For more information visit:

- <http://www.landscapingideasonline.com>
- <http://landscaping.about.com/>

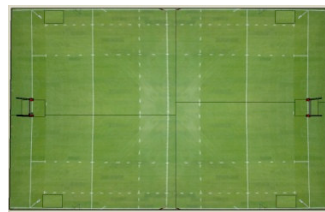
Part III

INSTRUCTIONS

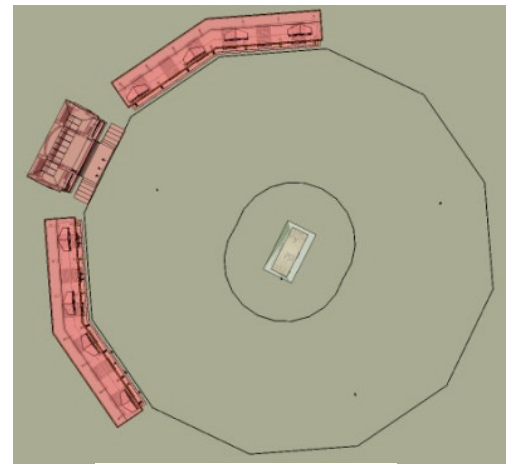
After deciding which options may be best suited for the school, a design layout can be made. Pages 13 through 28 contain aerial photographs of each secondary school in Mitchells Plain. Below, there are cut-outs, which are approximately proportional to the aerial photos of each school. Cut out the preferred amenities and configure them on the aerial photograph of a particular to begin forming preliminary design layouts.



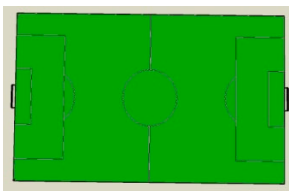
Hockey Field



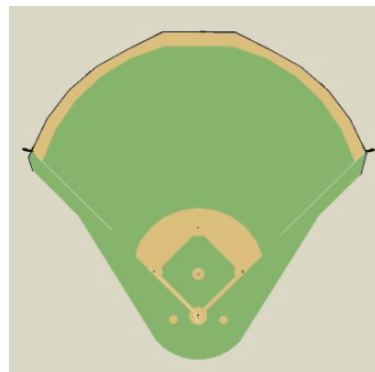
Rugby Field



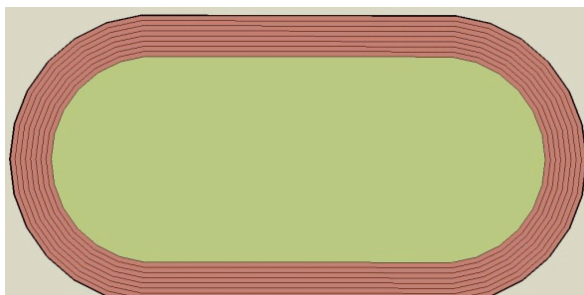
Cricket Grounds



Soccer Field



Baseball Field



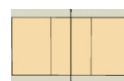
Running Track



Basketball Court



Tennis Court



Volleyball Court

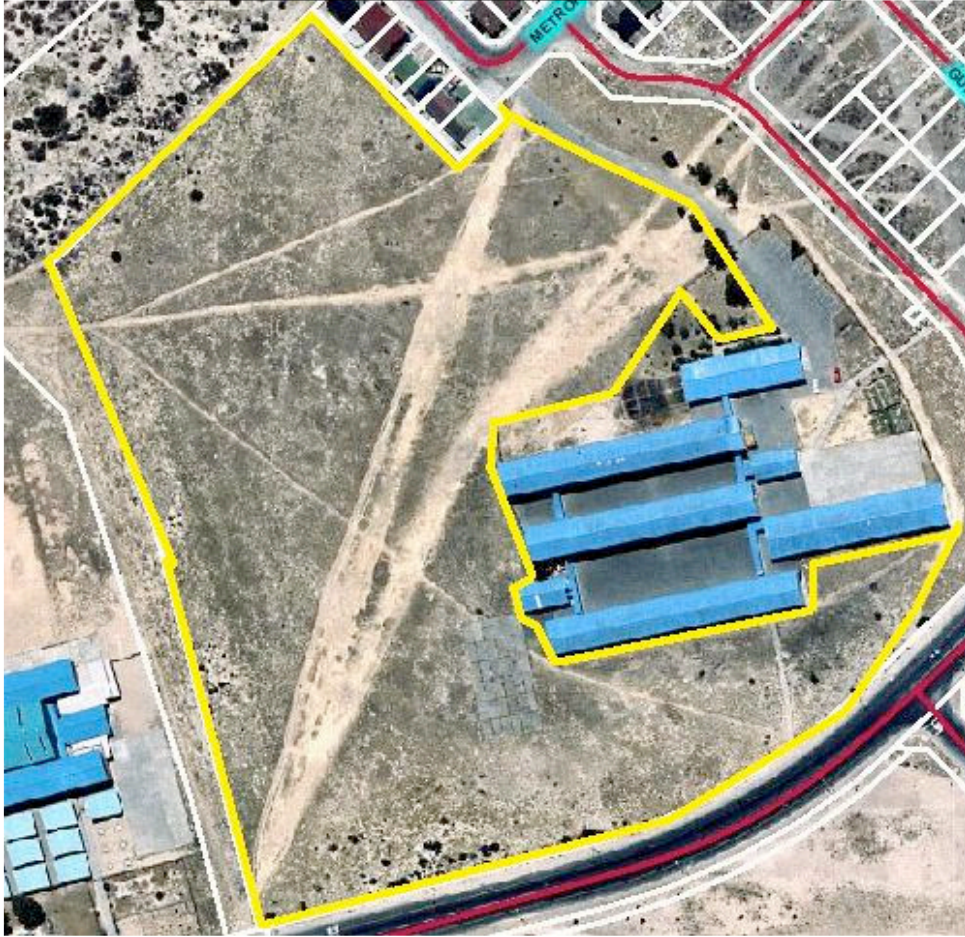


Netball Court

ALOE SECONDARY



BEACON HILL SECONDARY



CEDAR SECONDARY



GLENDALE SENIOR SECONDARY



LENTEGUER SECONDARY



MONDALE SENIOR SECONDARY



OVAL NORD SECONDARY



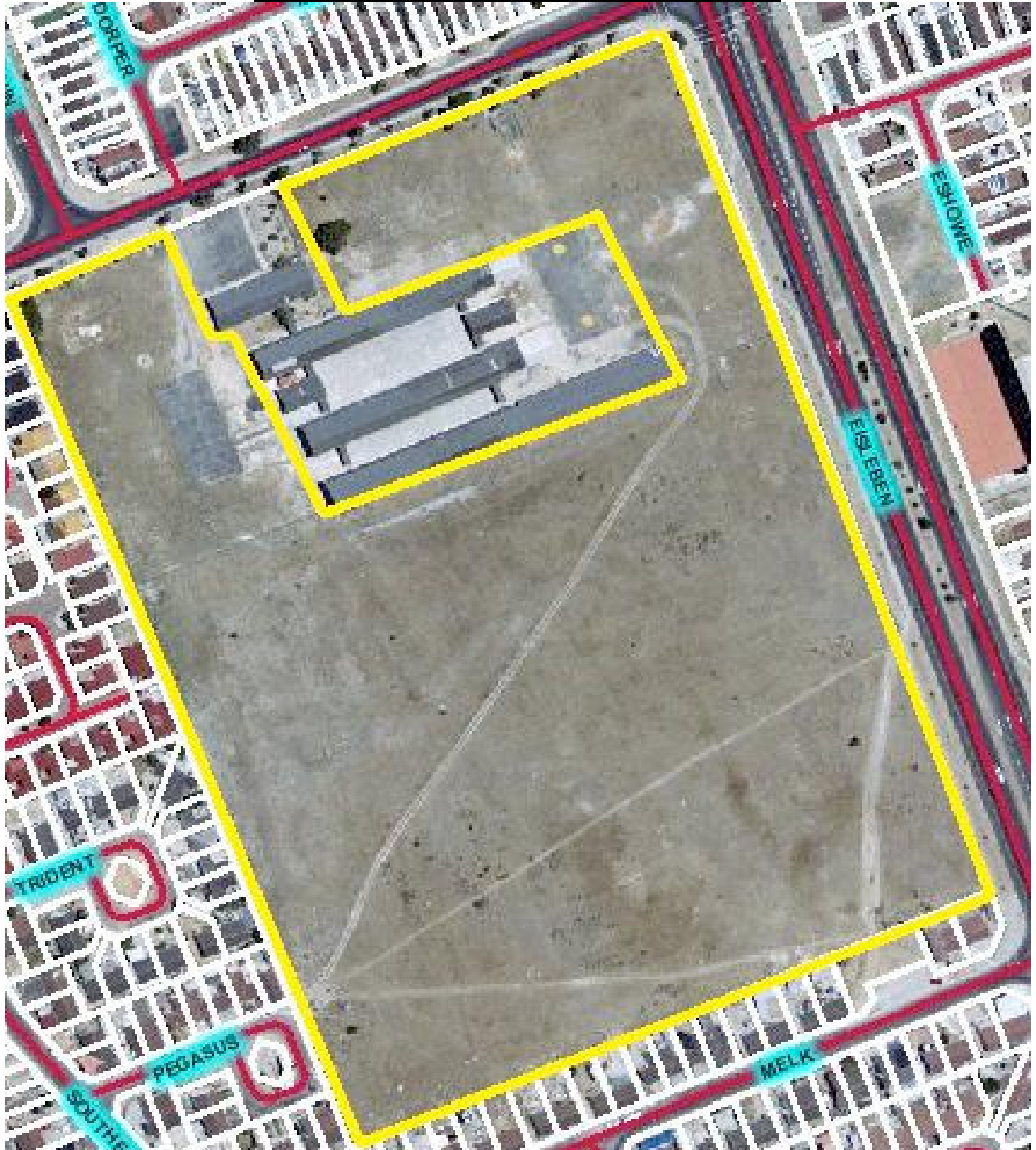
PORTLAND SECONDARY



PRINCETON SECONDARY



ROCKLANDS SECONDARY



SPINE ROAD SENIOR SECONDARY



STRANDFONTEIN SECONDARY



TAFELSIG SECONDARY



WESTRIDGE
SECONDARY



WOODLANDS SECONDARY



3.4 Management Guide

A management guide was developed to aid in the successful future of the facilities. Based on conversations with the sport community, school community, and city officials the following management plan was designed. It contains a proposed management infrastructure including an executive board, fundraising committee, and caretaker. It also addresses responsibilities and privileges of various stakeholders. The proposed management plan can be found on page 79.

Sport Facility Management Guide

Created by:

Michael Case

Eric DeStefano

Elizabeth Glasson

Charlotte Paige McAuliffe



In order for any sports facility to be successful it must not only be designed well, but also run in a sustainable and organized manner. A quality management plan that addresses a variety of issues is essential to the success of any facility. In the following management framework, these issues and major considerations are presented along with suggestions that have been comprised by our team.

Who: Who should be included in management?

The first step in setting up any management plan is to determine who should be involved. In order to develop valuable suggestions for this area, research and interviews were conducted in Mitchells Plain with the local community. From their input, the following groups were seen as the most important stakeholders. It is important to note that anyone with a strong interest and role in the daily activities could have a more active role in a management plan. Please note that the following are suggestions; any interested and active parties could be added.

- **Soccer Clubs:** to include soccer coaches and players from all the different soccer leagues.
 - **Reason:** The facility could be managed with the aid of 2-3 local soccer clubs. They have had previous success managing themselves and their input could be valuable.
- **School:** to include Headmaster/Headmistress and school governing board.
 - **Reason:** Since the facilities will be resting on their land, the schools should have an active role in management.
- **Community:** to include neighbors of the school, soccer spectators, and any other community members.
 - **Reason:** In order for such facilities to be accepted and protected, the community should have a part in managing the facilities.
- **City Officials:** to include any key personnel from the City of Cape Town.
 - **Reason:** Their input is important as they are the governing body of the area.

From the list above, a projected list of wants and needs of each stakeholder is shown below. These were ideas expressed by the soccer and school officials interviewed in Mitchells Plain.

Projected Wants and Needs of Stakeholders:

Needs/Stakeholders	Soccer Clubs	School	City Officials	Community
Access:	Caretaker's Flat, Fields, Parking Lot (for spectators)	Caretaker's Flat, Fields and Courts, Parking Lot (during school hours), Entire Facility	N/A	Facility (to view the soccer clubs and school events)
Scheduling:	Practice during the week, match play on weekends	Physical education during school hours, practice time for school teams, specially scheduled events	N/A	N/A
Maintenance:	Field and Sport Equipment	Entire Facility	N/A	Entire Facility
Authority:	Scheduling, Decision Making	Ownership of Land, Decision Making	Decision Making	Decision Making
Fiscal:	Money made at soccer matches goes back into facility maintenance and development	Do not want to be solely responsible for expenses	Initial development costs	N/A
Secure Facility:	Yes	Yes	Yes	Yes
Other Needs:	N/A	N/A	Public Relations	N/A

What: What will the management be in charge of?

After determining who should be involved in management the next step is to determine what the administration will be accountable for. Based on interviews, the three major areas of management are finances, maintenance, and scheduling.

In terms of finances, below are questions to be considered (with possible suggestions):

- **Will the facility have an income?**
 - Local Schools have a limited budget and because of this, affording to keep the school running can be challenging at times. Soccer Clubs also have a limited budget, and the city will not continually pay for facilities. Therefore, it would be best if internal revenue was produced.
- **If so, how could it be collected?**
 - Money could come from fees collected from parking, admissions and field time usage. Also, if concessions were sold, either by an external (traders) or internal group (management), profits could go towards the facility.
- **Could there be external sources of income?**
 - Based on the management success of the Mr. Price league in Mitchells Plain, donations and sponsorships are possible. Also, if there were a large section of wall for billboards, advertising could be implemented.

- **What are possible ongoing expenses of the field?**
 - The utilities (electricity, water, etcetera), caretaker wages, and repairs/replacement are basic forms of facility expenses. However, any organization should plan for unexpected costs

Another form of management could involve the scheduling of the facilities.

Since there are several stakeholders, there are a few questions that could be considered. Below are suggestions of suitable responses to those questions:

- **Who will have access to the facility?**
 - The school for physical education and specially scheduled events
 - Sport Teams: they will need to practice and hold matches on the fields
 - Community: possible community events could be held
- **When will those stakeholders have access?**
 - The school
 - During school hours for physical education
 - Scheduled events (ex. Carnival for school)
 - Sport Teams
 - After school for practice
 - Weekends for matches
 - Community
 - Scheduled events (ex. Community concert)

Another form of management involves the upkeep and maintenance of the facilities. While visiting local parks, a caretaker was the most important feature we noted. The sports community also expressed a need for a caretaker that would live on the grounds of the facilities. Having a caretaker can be a valuable security resource as well as an effective way to maintain the facility. Essentially their responsibilities could include:

- Landscaping
- Field Maintenance
- Equipment Upkeep
- Security Checks

However, there should be incentives for the caretaker. Those incentives could include:

- Wages
- Housing
- Contract
- Access to Equipment

How: How should the management be structured?

There are many different ways that management can be organized. From the research done in Mitchells Plain, there were many different opinions expressed. Since there can be many stakeholders for these recreational facilities, a decision making board may be the most inclusive idea. For example, based on the interviews with school administrators and sport officials, this is a possible setup of a management board, with representatives from each of the following groups:

- School Administration
- School Governing Board
- Residents' Association
- Neighborhood Watch
- School Soccer League
- Soccer Academy (Westridge Secondary School)
- Sport Leagues
- The facility caretaker should be present on the board, but without decision making power because the board is the caretaker's employer

Some notable matters could be resolved from creation of such a board. Below are two concerns along with possible suggestions:

Power Struggles

Due to the number of groups who have an invested interest in this facility, decision making could turn into a power struggle between groups. In order to facilitate decision making that fairly involves each stakeholder, a management board should be developed. Decisions will be made on a consensus basis, meaning that all members of the board must agree before any decision is final. This should help to promote compromise as well as reduce politics.

Lack of Funds

In addition to the main management board, a fundraising committee should be established and managed by the treasurer. This committee would be responsible for seeking funds to ensure there is an

adequate amount of money available. Lack of funding is a definite danger to the success of any recreational facility. Without adequate funding and budgeting, maintenance and repairs would be impossible. The committee should create on-going relationships with businesses, sport organizations, or any other potential sponsors. These groups can then sponsor an event or team, pay to advertise at the facility, or simply make donations. Along with raising funds, the committee should help the treasurer prepare a budget so the facility is able to run for a substantial period of time even with a lack of income.

3.5 Composting

In order to provide a composting educational tool to the school, a lesson plan and a composting educational pamphlet were developed. These tools will aid in the implementation and management of a successful composting system for Imperial Primary School. The principal objectives of this lesson plan are:

- To provide teachers with a simple composting curriculum, that will be variable based their creative ideas
- To give students a general understanding of composting, including scientific lessons and importance

In an attempt to address these objectives, one useful research source found was a previous Interactive Qualifying Project done in Puerto Rico in 2005. This case study covered sustainable waste management for McNeil Consumer Healthcare and their main task was to create and present a lesson plan for composting at a high school. The intent of this project was for personal composting for students at their homes.

Another useful source was found on Teacher's Domain, a website that offers lesson plans for different types of curriculums. Within the Teacher's Domain database there were various activity tools for students from kindergarten to fifth grade including the building of a composting site, scientific experiments, creative projects and worksheets.

When designing an education plan it was necessary to understand the audience. For this case, the target audience was a primary school. The plan was simple and made to be informative, interactive, interesting, and most importantly, fun. Keeping a child's interest is crucial to their participation, and fun activities are great tools to stimulate interest. The plan was created with pictures and as few words as possible. The teachers will be the primary facilitators of this program. The lesson plan created can be found in Section D of the Appendix on page 95.

To serve as another educational tool, a basic introduction to composting pamphlet was created. Information regarding materials, design, and upkeep are included. The pamphlet can be found in Figures 21 and 22.

What is Composting?

Composting is the recycling of plant materials in combination with soil and water to produce a nutrient rich soil. By adding nutrients to the soil, you will have a better garden that will produce more fruits and vegetables. Also, by using compost, your soil will help defend against the pests that may destroy your crops.



Produced By:

Michael Case
Eric DeStefano
Elizabeth Glasson
Charlotte Paige McAuliffe



Sources Used:

Earth 911:
<http://www.earth911.org>

Washington State Department of Ecology:
<http://www.ecy.wa.gov>

US Environmental Protection Agency
<http://www.epa.gov>

Composting for Kids:
<http://sustainable.tamu.edu/slidesets/kidscompost/cover.html>

COMPOSTING



How to set up and
maintain your
compost pile

Brought to you by students from
Worcester, Massachusetts, USA



Figure 21- Composting Pamphlet

How do I set up a compost pile?

Why should I use composting?

What is good and bad to add?

Step 1: Set up a bin made out of chicken wire somewhere you can easily get to. It can be as large as you want, but about 3 feet high. Also, make sure it is in a place where it can be watered.

Step 2: Start with a layer of brown materials about 3-4 inches thick.

Step 3: Add a 3-4 inch layer of green material.



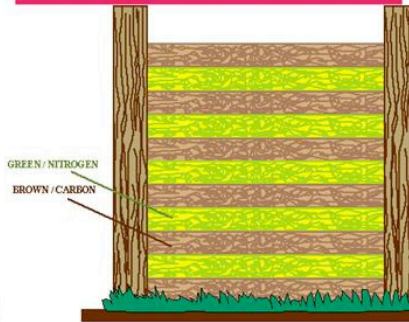
Step 4: Sprinkle a shovel full of soil evenly on top which will add very small organisms to the bin.

Step 5: Water the layer until it's moist.

Step 6: Repeat the layers and watering until the bin is full.

Step 7: Wait about 2 months for the organisms to break down the nutrients. This soil is rich in nutrients for a better garden.

1. Suppresses plant diseases
2. Moderates soil temperature
3. Improves water-holding capacity of soil
4. Provides many nutrients
5. Degrades pollutants
6. Improves nutrient-holding capability of soil
7. Supplies a lot of organic matter
8. Better, healthier fruits and vegetables
9. More crops will be produced
10. Balances the pH level of the soil



GOOD:

- Dried Leaves
- Woodchips
- Sawdust
- Ashes
- Pine Needles
- Grass Clippings
- Vegetable Scraps
- Plants
- Coffee Grounds
- Dead Weeds
- Water

BROWN MATERIALS (Carbon)

GREEN MATERIALS (Nitrogen)

BAD:

- Meat Products
- Dairy Products
- Fish Products
- Diseased Garden Plants
- Human or Animal Waste
- Live Weeds
- Chemically Treated Wood
- Coal or Charcoal Ash

Figure 22- Composting Pamphlet Cont.

Chapter 4: Looking to the Future

4.1 Recreational Development

One positive result of developing school land for recreational use is that it will allow other land to be redistributed for different developments. For example there are currently five large sport complexes within Mitchells Plain. These regional sports complexes were poorly designed and implemented. There are large amounts of unused land around them, and the used land is not optimally laid out. By constructing sports fields at the schools there will be less dependence on these compounds. The hope is that these complexes will release some of their vacant land for other developments such as housing. Land released for residential development would serve two purposes. There is currently a severe lack of housing; this land could help that problem. The new neighborhoods would increase the safety around the sports complexes and provide homes for families. Also, by releasing this land for development, the money gained could be invested back into the school facilities. This would help with the sustainability of the new facilities.

Another positive result would be the influx of other forms of corporate and scholastic investment throughout Mitchells Plain. By developing soccer fields at each of the schools, soccer talent will continue to grow. Using each of the fields as a source of income, companies will invest in advertisements and more funding around Mitchells Plain. With respect to scholarships, soccer talent may one day yield collegiate funding. Currently, there are no forms of university scholarships available for soccer players.

4.2 Composting

Composting was a small part of this project; however the work that was completed has set up a system for one school to use. This system includes a how-to-compost guide and a lesson plan for teachers. The guide, as seen in Section D of the Appendix on page 95 includes information about why to compost and how to compost. Composting is not only beneficial to gardening but also serves as an educational tool. It is the hope of the team that this composting system will be effective and a future team will continue the work of composting within Mitchells Plain. There is a large amount of organic waste being produced by the traders within Mitchells Plain and this organic waste is the perfect compost material. Composting could benefit many schools, gardens, and people throughout Mitchells Plain.

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APPENDICIES

A. Playgrounds

A playground is a great asset for any park. It is a source entertainment for children of any age. Not only do playgrounds provide a fun environment for play but also a vibrant environment for learning. Children at the playground develop social skills by playing with other kids and having to share or take turns. Muscles and developed and fitness is encouraged by the active environment (Phillips, 1996). Nature becomes a part of the child's life, through trees, plants, and even insects or animals that may be encountered while visiting a playground. However, one must keep in mind; the most important thing that a playground provides to a community is fun.

Any tall equipment should include guardrails so that children do not easy fall off. Slides, if not attached to a deck, should have a platform up top so that children may situate themselves before sliding down. Another safety precaution that should be taken is to use kid friendly materials. If a playground is going to be sitting in direct sunlight, it is best to use materials with rough textures and cool colors as these are heat reflective. Depending on the climate of the region, one may want to consider finding ways to shade part, or all, of the park so that it can be used for longer hours without so much worry about the heat. Finally there should obviously be no areas where children might become entrapped, no jagged or sharp pieces that could cause cuts or wounds (Phillips, 1996).

Picnic areas should include the obvious picnic table, however many parks have found it helpful to also provide BBQ grills and areas for their attendees. Most picnic areas include shade, provided by trees or some man-made structure. Because people enjoy the shade, it is hard to maintain grass in the picnic areas. Pine needles or mulch are often solutions, however dirt or gravel will work just as well. If a park does want to have grass within the picnic area, they need to be sure that the grass can get the proper amount of sun, that lawn mowers are able to move around within the picnic area and that the grass does not get killed by too many people walking on it (Simonds, Starke, 2006).

B. Gardens

Community gardens had a large surge in popularity in the United States of America during World War I and II. This was largely due to a shortage in food (Lawson, 2004). According to the United States Department of Agriculture most people should eat one to two cups of fruit a day, and one to three cups of vegetables, (the amount varies depending on age and sex). These foods are rich in vitamins, such as A, E and C, fiber, and potassium.

When planning for a garden a few things must be considered; earth, sun, and water. Consider earth, the soil needed for a garden must have nutrients, each year the nutrients will be replenished as plants die and decay, also the soil should not be too rocky, too dry, or have too much clay. Sun obviously plays a major role in plant development, because of this; be sure not to pick a location for your garden that is in the shade all day.

C. Science of Composting, Methods, and Benefits

Composting is a process by which organic waste materials can be decomposed to nutrient rich soil enhancement. There are two different types of composting that can be explored. The first type is an aerobic process. By aerobic, the microorganisms that break down the organic material require an open-air environment and produce a lot of heat. The heat generated by converting carbon to nitrogen can actually reach 160 degrees Fahrenheit, sterilizing the compost heap from any unwanted bacteria, harmful germs, and unpleasant odors. Using an aerobic process requires steady management but can be done in almost any environment. The timetable for fertile compost is efficient as well, needing less than a few weeks to produce fertile compost for the soil's benefit. The second type of process is anaerobic. Oppositely, the environment needed has to be contained as the microorganisms involved reject air and produce copious amounts of odors. The timetable here is less efficient, requiring a very long time (6 months or more) to fully decompose. For the purposes of the project, an aerobic composting process will be utilized just due to the efficiency aspect. If the composting pile could not be managed, an anaerobic process would be considered. However, with the help of the community, a simple composting program with aerobic piles is best.

Compost has the ability to improve the chemical, physical, and biological characteristics of soils. It improves water retention in sandy or dry soils and promotes soil structure in clay soil by increasing the stability of soil aggregates. Chemically, adding compost to soil increases soil fertility by cation exchange capacity. Soil becomes more suppressive to harmful pathogens by becoming active on a microbial level. Enhanced microbial activity also speeds up the decomposition of synthetic organic compounds such as pesticides. Compost supplements the reduction the bioavailability of heavy metals—an important quality in the remediation of contaminated soils (Bourgault, 2005).

D. Composting Lesson Plan

Composting for Young Minds



A Lesson Plan for Composting For Grades K – 7

Created by:
Michael Case
Eric DeStefano
Elizabeth Glasson
Charlotte Paige McAuliffe

In Association With:

Alastair Graham and the VPUU



Prerequisites

These lesson plans were designed with stand-alone activities, but also with open ended sessions for the instructor to incorporate creative ideas. Adding your ideas to this curriculum is critical to its success.

Mission

Composting is a simple and fun way to naturally recycle materials and fertilize soil. With the growing need for recycling, composting is not only a great learning tool, but also essential for helping the environment. Teaching students about the unique science of composting allows them to learn in a more interactive way that can be carried outside the classroom and applied at home. This lesson plan is a guide that shows how to set up and maintain a compost pile capable of providing nutrients for a garden. This lesson plan will present several different teaching activities that are informative and fun.

So Let's Compost!

I. Grades K-3 Lessons

A. Lesson 1

Subject: Introduction to Composting

Overview: In this lesson, students learn about the value of renewable resources and a general introduction to composting. Trees, fresh water, and clean air are important parts of the environment and pollution needs to be prevented to save these resources. Conservation, the practice of using natural resources in a way that ensures their continuing availability to future generations, is one approach. Through this lesson, students will learn about a basic form of conservation: composting.

Objectives:

- Present the idea of composting and what it means
- Establish the difference between the two types of materials: Good materials (Green and Brown) and Bad materials

Materials:

- Blackboard and Chalk
- Paper
- Coloring materials

For the Teacher:

Write the following “Composting Do's and Don'ts” on a large sheet of paper or on the blackboard. Make sure this list is visible during the composting portion of this lesson

- **GOOD MATERIALS:**
 - ✚ **Green Materials:** Leaves, grass, weeds, small garden clippings, , fruit and vegetable scraps (peels, skins, or seeds), coffee grounds (including the paper filter),
 - ✚ **Brown Materials:** Pine needles, wood ash, bark, nutshells, tea bags, sawdust, newspaper, paper towels, napkins
- **BAD MATERIALS:** Meat, fish, bones, dairy products, vegetable oils, fats, human or pet waste, charcoal ash, plastic food packaging and glass containers

Lesson:

1. Start by first trying to introduce the simple concept of composting to the class by putting the word “RECYCLE” on the board. On simple pieces of paper and with crayons, ask the students to draw a picture of what recycling means. After, ask students to talk about what they drew and why.
2. Make a list of what can and cannot be recycled with the class.
3. Now ask the class “what is composting?” Allow the students to share ideas. Explain connection of recycling to composting. Put the list of good and bad materials on the board.

4. Explain the idea of a good material to compost and a bad one. Hand out Worksheet 1.

Follow Up

1. For homework, ask the students to make a list of 5 items at their home and discuss why or why not they can be composted. If they can be composted, ask them if they are “GREEN” or “BROWN”
2. Assign Worksheet 2 for more understanding

B. Activities

Cake Metaphor (Grades K-7)

Purpose – To give a comparison that the students can relate to composting

Materials –

- Cake that is large enough for the class
- Cake baking ingredients (sugar, eggs, butter, flour, milk)
- Serving Materials

Directions

- I. Present the cake and the idea of composting. Ask how they are related
- II. Show the class the comparison: A cake is like a finished compost pile. Its ingredients can be mixed together, but that does not make a Cake. In order to fully make the cake it must be baked well. Like the cake, a compost pile is not made by just mixing materials. It has to sit and be turned (like baking) to make a good compost pile.
- III. After discussion, cut and hand out cake to class
- IV. Leave time for questions

II. Grades 4-7 Lessons

A. Lesson 1

Subject: Introduction to Composting

Overview: In this lesson, students learn about the value of renewable resources and a general introduction to composting. Trees, fresh water, and clean air are important parts of the environment and pollution needs to be prevented to save these resources. Conservation, the practice of using natural resources in a way that ensures their continuing availability to future generations, is one approach. Through this lesson, students will learn about a basic form of conservation: composting.

Objectives:

- Present the idea of composting and what it means
- Establish three types of materials: Green, Brown, and Unusable

Materials:

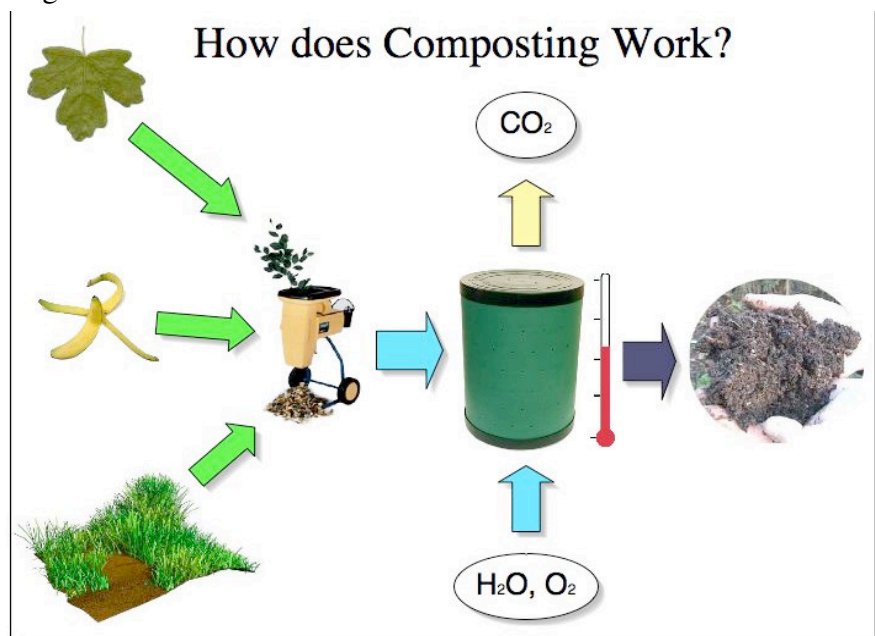
- Blackboard and Chalk
- Paper
- Coloring materials

Background: Pollution is a growing problem due to overuse of landfills, littering, and an increase in waste volume. The effects of pollution can lead to health problems and contaminated resources.

There have been several forms of conservation that have been used to reconcile the situation. The two main forms are composting and recycling.

Composting is a very effective and basic way to help the environment. Biological materials such as leaves, food scraps and grass clippings are collected and shredded into small pieces. The waste is then allowed to sit in a bin or container for a period of time with occasional mixing and watering. Small microorganisms within the pile digest the material and produce the compost product which is rich in nutrients. These organisms require oxygen, water and food, and they produce compost and carbon dioxide. Compost piles generate heat, which is due to the microorganisms' activity and reproduction.

Backyard composting for your school requires organic, biodegradable materials such as yard trimmings, food scraps and some paper/wood products. Be careful to avoid any metals, meat or dairy products because they may lead to pollution or attract pests. The pile should be placed in a dry, shaded place to avoid too much or too little moisture. It may be placed in a backyard, but not too close to any



buildings. To properly maintain the pile it must be periodically turned and watered. A successful compost pile generates heat and does not smell bad. Therefore, bad odors or a lack of heat are indicative of a problem. Finally, the end product can be used as a substitute for fertilizer in gardens and houseplants. Composting is easy to do, good for the environment and produces a useful product.

For the Teacher:

Write the following “Composting Do's and Don'ts” on a large sheet of paper or on the blackboard. Make sure this list is visible during the composting portion of this lesson

- **COMPOSTABLE MATERIALS:** Leaves, grass, weeds, small garden clippings, pine needles, wood ash, bark, nutshells, fruit and vegetable scraps (peels, skins, or seeds), coffee grounds (including the paper filter), tea bags, sawdust, newspaper, paper towels, napkins
- **UNUSABLE MATERIALS:** Meat, fish, bones, dairy products, vegetable oils, fats, human or pet waste, charcoal ash, plastic food packaging and glass containers

Lesson:

1. Ask the class “what is composting?” Allow the students to share ideas. Explain connection of recycling to composting. Put the list of good and bad materials on the board.
2. On a piece of paper, tell the students to make their own list of materials that are not on the board. Think up at least 5 of each type of material (Green, Brown, and Unusable)
3. Ask the students what they had for lunch. Discuss if both the lunch and the trash from the lunch can be compostable.

Follow Up

4. For homework, ask the students to make a list of 5 items at their home. For each item, write a few sentences explaining if it is compostable or not.
5. Write an essay about how composting is good for the environment.

B. Lesson 2

Subject: Brainstorming a Composting site

Overview: In this lesson students will look at how to set up a composting site. They will design and build a composting site for the school in several steps. During the planning and construction phases, place a plastic bucket with a lid in the classroom to collect the students' lunch scraps and other compostable materials.

Materials:

- Chicken wire
- Shovel
- Work gloves
- Biodegradable waste material

Background: Pollution is a growing problem due to overuse of landfills, littering, and an increase in waste volume. The effects of which can lead to health problems and contaminated resources. There have been several forms of conservation that have been used to reconcile the situation. The two main forms are composting and recycling.

Composting is a very effective and basic way to help the environment. Biological materials such as leaves, food scraps and grass clippings are collected and shredded into small pieces. The waste is then allowed to sit in a bin or container for a period of time with occasional mixing and watering. Small microorganisms within the pile digest the material and produce the compost product which is rich in nutrients. These organisms require oxygen, water and food, and they produce compost and carbon dioxide. Compost piles generate heat, which is due to the microorganisms' activity and reproduction.

Backyard composting for your school requires organic, biodegradable materials such as yard trimmings, food scraps and some paper/wood products. Be careful to avoid any metals, meat or dairy products because they may lead to pollution or attract pests. The pile should be placed in a dry, shaded place to avoid too much or too little moisture. It may be placed in a backyard, but not too close to any buildings. To properly maintain the pile it must be periodically turned and watered. A successful compost pile generates heat and does not smell bad. Therefore, bad odors or a lack of heat are indicative of a problem. Finally, the end product can be used as a substitute for fertilizer in gardens and houseplants. Composting is easy to do, good for the environment and produces a useful product.

Lesson:

1. Hand out Pamphlet on
2. Discuss the idea of building a compost site with the class. Ask for student participation and brainstorm ideas for the design. Consider size, shape, material and more. Write all ideas on the board, discuss and select the best one. Also, choose a location for the site on school property.
3. Take students to the designated site and construct the bins as previously discussed. Try to delegate small jobs to different student so as to involve as many people as possible.
4. Once the bins are set up, discuss any possible design improvements (water runoff collector, bin cover, etc.)

Follow-up: Now that the bins are set up, go back to the list of potential variables previously brainstormed and choose a few of interest. How could you design an experiment to explore these concepts? Refer to the following lesson plans for a few examples.

Worksheet 1

NAME _____

DATE _____

What Kind of Materials are these?
Good, Bad? If Good, then Green or Brown?

















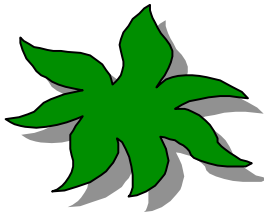
Green and Brown Bin

Cut and Paste items from next page inside bin. Make sure the green materials go in the green section and brown materials go in the brown section





Cut and Paste These Shapes



Worksheet 3

NAME _____

DATE _____

Creating a Recipe for Composting

Make a little recipe for Composting.

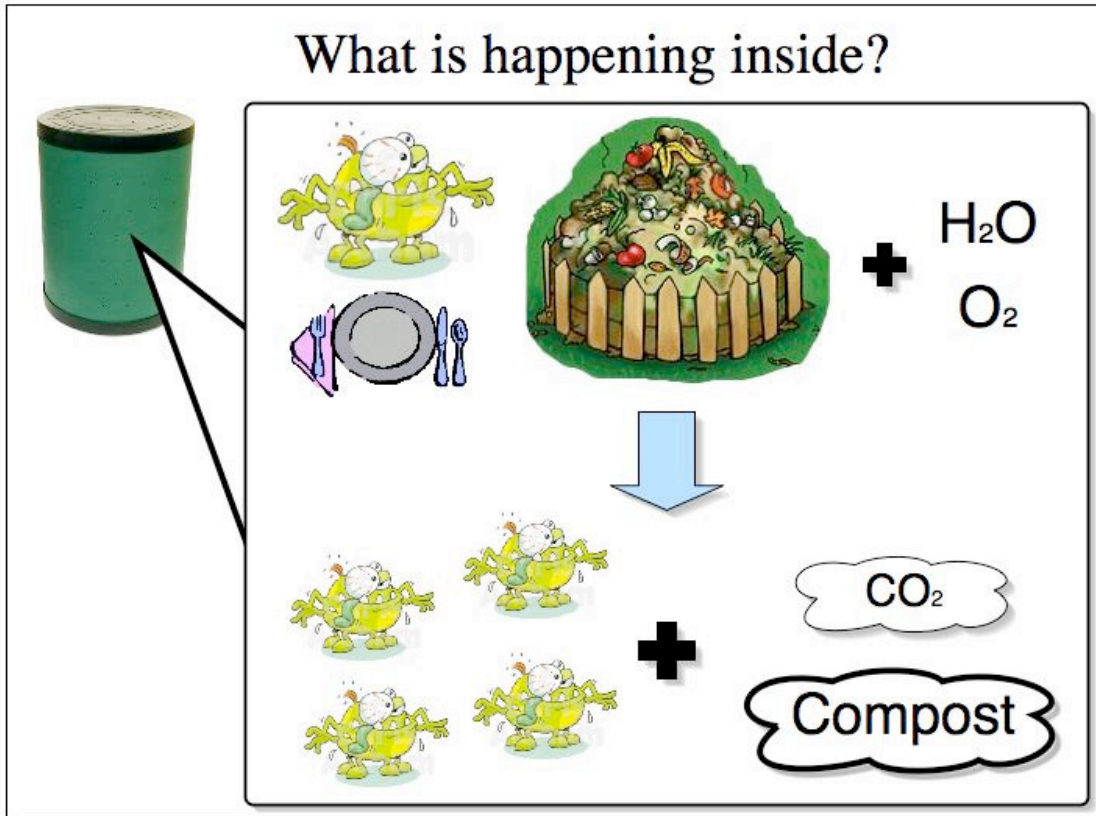
Compost Pile

Ingredients: _____

Mix:

Cook:

Finished:



Write a story about the picture above. Be creative.

E. Safety Precautions within Parks

When planning a park in an area that has flooded in the past, it is best to take some precautionary measures in the design and set up of the park. Materials used should not be supplies that easily rust or corrode. Any equipment that could possibly be moved by a flood should be moved to higher ground or chained in place. For example, picnic tables should all be stacked and chained together; also trashcans should be moved into storage. Any electrical outlets, or wiring for lights should be set up to be as high off the ground as possible. This way, if floodwaters do rise, damage to the lighting and electrical systems will be kept to a minimum. A drainage system may also be needed for sport fields, however for open fields, gardens and green areas, it is best to let the natural drainage system work. The plants in these areas will assist in the fight against erosion, as well as retain some of the moisture for dryer parts of the year (Simonds, Starke, 2006). Flooding can cause major damage but designing and planning for the worst can avoid much damaged.

Another precaution to be taken when designing a park involves walkways. When designing for walkways, one must keep in mind that intersections cause traffic. Although traffic is not necessarily a negative thing, it should be kept to a minimum. One way of doing that is to widen the path when coming to an intersection. This gives people greater room to move about and around each other. Also paths should be widened with the curves (Simonds, Starke, 2006). Allow nature to help shape the trails and avoid sharp angles or turns. This will make them more pleasant to look at and more enjoyable to walk on.

F. Violence Prevention through Urban Upgrading (VPUU)

Through its couple of years in existence, the VPUU has set in motion many positive improvements in Khayelitsha and Mitchells Plain. Its goals have been to increase safety, upgrade low income neighborhoods and improve the socio-economic economic situation of the townships (Graham, 2007). The strategy of the organization is to prevent crime and violence works in three approaches: situational, social and institutional crime prevention. Situational crime prevention consists of implementing ways of creating safer situations. Examples of this include creating safe urban spaces, safe walkways, business opportunities, and sports and recreation in public spaces. Currently, the VPUU is designing certain safe buildings. These buildings are very brightly lit at night and provide security to specific areas of high crime. Social crime prevention consists of using programs and public intervention. Leadership conflict mediators within schools as well as anti-rape support and legal advice are just some of the programs that can be used. Volunteer civic patrols are also very successful. Institutional crime prevention is using the input of the community to manage crime and find new ways to prevent it. Combining these three approaches, the VPUU links local, citywide, provincial and national leadership. The most important idea that is prevalent throughout all of these methods is using the community as a tool through participation and ownership. Since the program's implementation, it is recognized for its dedication to the city (Graham, 2007).

G. Annotated Bibliography

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- *This is a great source that goes in depth into some case studies done in the townships of Cape Town for public works. This will be a great source as to someone's input to doing a project and what we should look for by their successes/failures.*
- [2] "Amy Biehl Foundation Trust" 2007. <<http://www.amybiehl.co.za>>.
- *This source outlines the Amy Biehl Foundation's program to implement Peace Parks in South Africa and the estimated costs associated with these parks.*
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- *This is a source that discusses the social dynamics of community oriented organization of certain developments*
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- *This source summarizes this issues that surround sports and race both pre and post – apartheid. This issues surrounding the initial boycott, the initiative to integrate sports, and how it became a part of post-apartheid politics.*
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- *This paper outlines the state of violence that can be found among South African schools.*
- [10] Dugmore, Heather. "Glue to Goalposts– How sixteen street kids turned into soccer stars" 2006, retrieved on 9/19/2007. <http://homestead.org.za/news_article11.htm>.
- *This source is an article that was published by The Homestead Organization in South Africa. It explains the success story of a group of boys who were taken off the streets and have improved their lives through soccer. The article is useful, but finding this organization already in place in Cape Town is also extremely useful.*
- [11] Environmental Protection Agency. (2007). *Composting*. Retrieved October 31, 2007. <<http://www.epa.gov/compost/basic.htm>>
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- [12] Ferris, J., Norman, C., & Sempik, J. (2001). People, land and sustainability: Community gardens and the social dimension of sustainable development. *Social Policy & Administration*, 35(5), 559-9.
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- *This is a book filled with many case studies of different parks around the United States of America. It lists many of the challenges faced by these parks, how they were overcome, and what made each of these parks a success. Also the book does include a breakdown of statistics, including budgets and dates of planning, for each park case study.*
- [14] Graham, A. (2007, November 11). (M. Case, Interviewer).

- Alastair Graham was our project sponsor who works for VPUU in Cape Town and the surrounding townships. We completed numerous discussions involving all aspects of our project.

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- [23] Palmer, Michele. The Capacity Building Programme for Youth at Risk in the Western Cape: A Community Based-Alternative for Rehabilitation and Reintegration, 2004. Retrieved September 1, 2007 from < http://etd.uwc.ac.za/usrfiles/modules/etd/docs/etd_init_4963_1175158794.pdf>
- *This source outlines research that explores the juvenile crime in the Western Cape. It provides useful data about some of the reasons behind the crime, including racial tension, poverty, alcoholism etc. It gives related studies and gives an useful image of the problem we are dealing with.*
- [24] Phillips, L. E. (1996). Parks: Design and management. New York, New York: McGraw Hill Company.
- *This book is a great resource for design and management of parks. It includes everything from grasses to vandalism to playground design. In the book are some case studies but also more general information. Included in this book is a lot of information about things like what the safe slope of a slide should be, or what different ways there are to clean off graffiti. It is full of actual "how to" information.*
- [25] Posner, J. K., & Vandell, D. L. "After-school activities and the development of low-income urban children: A longitudinal study." [Electronic version]. *Developmental Psychology*, (3), 868-79. (1999).
- *This source links education and after school activities*

- [26] Puhalla, J., Krans, J., & Goatley, M. (1999). *Sports fields: A manual for the design, construction and maintenance* (1st ed.). Chelsea, Michigan: Ann Arbor Press.
- This book provides most necessary information on how to design, construct, and maintain all types of sports fields. It also talks about the different types of grass as well as drainage and irrigation systems.
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- [28] Simonds, J. O., & Starke, B. W. (2006). *Landscape architecture, A Manual of environmental planning and design* (Fourth ed.) McGraw Hill Companies, Inc.
- *This book is a great resource for all planning necessities. Including design of many basic open spaces; lights, walkways, plants, etc. Also a great resource within this book is an entire section related to site selection, how to determine what you are looking for and then how to most efficiently find it.*
- [29] Small, R. (2007). Interviewer Case, M. (Ed.), *The Manyanani Peace Park*.
- *This was an electronic communication received from Rob Small after an e-mail sent requesting more information about the Manyanani Peace Park. It describes what they went through in setting up their first park and provides a lot of insight on what to look for in preparing our proposal.*
- [30] Smith, Andy; Waddington, Ivan. "Using 'Sport in the Community Schemes' to Tackle Crime and Drug use among Young People: Some Policy Issues and Problems." European Physical Education Review (2004). Retrieved on September 1, 2007 from <<http://epe.sagepub.com/cgi/content/abstract/10/3/279>>
- *This source summarizes research that explores using sports as a crime prevention method in Europe. It summarizes the need as juvenile crime is on the rise, and explores whether sports can actually help to reduce crime.*
- [31] South African Police Service. "Crime in the RSA per Police Area for April to March 2001/2002 to 2004/2005." 2005. <http://www.iss.co.za/CJM/stats0905/province/wc_prov_total.pdf>

- *This source gives the violence statistics specific to Western Cape from 2004-2005. Crime is broken down into different types i.e. vandalism and murder. The statistics are given in number of cases reported in 2004-2005*

[32] "South African Urban Desert Transformed Into Greens." June 2002.
<http://www.afrol.com/News2002/sa013_cape_flats.htm>.

- *This source explains their process of transforming South African urban areas into productive green environments, and how they are using the gardens in the schools, and to improve the quality of life.*

[33] Trost, Stewart. (2005). *Discussion paper for the development of recommendations for children's and youth's participation in health promoting activity*. Accessed on October 5, 2007. <[http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/E6B023029F7D7D6CA25705100815E68/\\$File/Physical_Discussion.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/E6B023029F7D7D6CA25705100815E68/$File/Physical_Discussion.pdf)>

- *This paper offers insight to activities such as sports resulting in healthier lifestyles and less substance abuse.*

[34] *Two Township Schools (School Construction)*. Vol. 221, 2007.
<http://find.galegroup.com/itx/infomark.do?&contentSet=IAC-Documents&type=retrieve&tabID=T002&prodId=AONE&docId=A166855812&source=gale&reprod=AONE&userGroupName=mlln_c_worpoly&version=1.0>.

- *This sources is a GALE group article and it provides background on two schools in particular that can give a lot of insight to the constraints that are placed in the area to construct fields*

[35] UNDP (2003). *Human Development Report 2003*, New York: Oxford University Press, p285.

- *This source detailed the enrollment of kids in school and amount of money spent on education.*

Mitchell's Plain School Database

2007

Submitted By:

Mike Case

Eric DeStefano

Elizabeth Glasson

Charlotte McAuliffe

In Conjunction with

Alastair Graham and the VPUU



Violence Prevention through Urban Upgrading

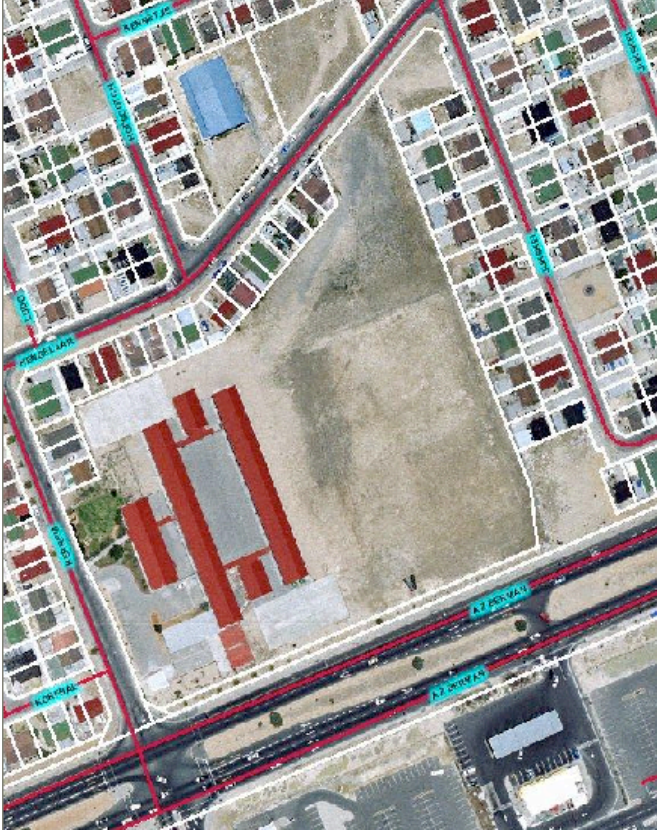
	School Name	Address	Phone Number	Property ID	ERF Number	Estate	Owner	Size	Enrollment
1	"A Z Berman Primary	21 Hengelaar Street	(021) 3767802	162238	32278	Beacon Valley	Republiek Van Suid-Afrika	2.44	1249
2	Agape School For Cerebral Palsied	0 Spine Road	021-3924162	131216	21190	Tafelsgig	Agape School For Cerebral Palsied Children	3	177
3	Aloe High	Aloe	(021) 3710552	148124	17416	Lentegeur	Republiek Van Suid-Afrika	7.04	1117
4	Aloeweg Primary	Aloe	021-3761321	144236	13314	Lentegeur	Republiek Van Suid-Afrika	2.36	784
5	Alpine Primary	Hengelaar Street	021-3761321	161153	31187	Beacon Valley	Republiek Van Suid-Afrika	2.53	1202
6	Beacon Training Centre	163 Park Avenue		132399	1207	Westridge	Beacon Training Centre	1.48	
7	Beaconhill Secondary School	1 Derby Street	(021) 3761300	164400	34444	Beacon Valley	Provincial Government-Western Cape	5.27	1108
8	Beaconview Primary	52A Wanderers Crescent	021-3761079	162453	32496	Beacon Valley	Republiek Van Suid-Afrika	2.55	1264
9	Buckingham Primary	Merrydale		150314	19611	Portland	Republiek Van Suid-Afrika	2.55	
10	Caradale Primary	Caravelle	021-3912079	156752	26294	Rocklands	Republiek Van Suid-Afrika	2.18	547
11	Caravelle Primary	Weltevreden	021-3926603	145084	14163	Rocklands	Republiek Van Suid-Afrika	2.6	639
12	Cascade Primary	34 Buttress Street	021-3976030	158817	28820	Tafelsgig	Republiek Van Suid-Afrika	2.48	909
13	Cedar Secondary	Weltevreden	(021) 3925737	140756	9520	Rocklands	Republiek Van Suid-Afrika	6.63	1168
14	Cornflower Primary	2 Cornflower Street	021-3743451	156330	25872	Lentegeur	Republiek Van Suid-Afrika	2.36	1250
15	Dennegeutlaan Primary	169 Dennegeur Avenue	021-3933475	166891	37006	Strandfontein	Republiek Van Suid-Afrika	2.79	1073
16	Duneside Primary	Angus Road	021-3921819	150830	20127	Westridge	Republiek Van Suid-Afrika	2.11	427
17	Eastville Primary	15 Gold	021-3923362	156315	25857	Eastridge	Republiek Van Suid-Afrika	2.34	1100
18	Eislebenweg Primary	11 Caravelle	021-3923362	149631	18927	Rocklands	Republiek Van Suid-Afrika	2.5	865
19	Glendale Senior Secondary	11 Caravelle	(021) 3927161	152371	21780	Rocklands	Republiek Van Suid-Afrika	6.8	1228
20	Harvester Primary	Kweker Road	021-3719402	137984	6709	Westridge	Republiek Van Suid-Afrika	2.5	716
21	Hazeldene Primary	Hazeldene Avenue	021-3921110	146184	15452	Portland	Republiek Van Suid-Afrika	2.35	799
22	Hillside Primary	41 Ajax Way	021-3741106	131325	84	Woodlands	Republiek Van Suid-Afrika	2.39	591
23	Hillside Primary	Cormorant	021-3925230	138866	7619	Rocklands	Republiek Van Suid-Afrika	2.37	440
24	Huguenot Primary	2 Huguenot Avenue	021-3976003	158494	28485	Tafelsgig	Republiek Van Suid-Afrika	2.53	1152
25	Hyacinth Primary	Hyacinth Street	021-3761125	165547	35651	Lentegeur	Republiek Van Suid-Afrika	2.48	989
26	Imperial Primary	35 Riley Crescent	021-3761105	159931	29961	Beacon Valley	Republiek Van Suid-Afrika	2.39	1927
27	Jamaica Primary	Merrydale	021-3713073	136258	4957	Portland	Republiek Van Suid-Afrika	2.3	635
28	Lantana Primary	Lantana	021-3711142	156749	26291	Lentegeur	Republiek Van Suid-Afrika	2.43	1078
29	Lentegeur High	Highlands	(021) 3714161	148345	17639	Lentegeur	Republiek Van Suid-Afrika	7.8	1598
30	Liesbeek Primary	3 Liesbeek Road	021-3714860	140262	9022	Portland	Republiek Van Suid-Afrika	2.16	896
31	Littewood Primary	Lohengrin Street	021-3976001	160537	30571	Eastridge	Republiek Van Suid-Afrika	2.5	1292
32	Meadowridge Primary	55 Kreupelhout	021-3761145	152255	21631	Lentegeur	Republiek Van Suid-Afrika	2.57	819
33	Merrydale Primary	Merrydale	021-3713010	136700	5404	Lentegeur	Republiek Van Suid-Afrika	2.52	807
34	Mitchells Plain Islamic High	Shepard Way	(021) 3915730	138123	6848	Westridge	Mitchells Plain Islamic Trust	4.48	
35	Mitchells Plain Primary	2 Park Avenue	021-3710800	131830	636	Westridge	Republiek Van Suid-Afrika	2.62	972

	School Name	Address	Phone Number	Property ID	ERF Number	Estate	Owner	Size	Enrollment
36	Mondale Senior Secondary	Montagu Drive	(021) 3927031	152866	22298	Portland		6.68	1349
37	Montagu Drive Primary	Montagu Drive	021-3924104	146379	15647	Portland	Provincial Government- Western Cape	2.67	1035
38	Naluxolo Primary	21 Oliver Tambo Drive	021-3720186	328029	4045	Weltevreden Valley	Provinsie Van Die Wes Kaap	2.3	1043
39	Northwood Primary	Eros Way	021-3717510	131481	258	Woodlands	Republiek Van Suid-Afrika	2.45	737
40	Oval Noord Secondary (Oval North)	43 Oval Street North	(021) 3761067	167044	37159	Beacon Valley		6.78	1367
41	Parkhurst Primary	2 Silversands Avenue	021-3718910	134868	3565	Westridge	Republiek Van Suid-Afrika	2.54	1154
42	Portland Primary	Wespoort	021-3715010	137095	5812	Portland	Republiek Van Suid-Afrika	2.53	550
43	Portland Secondary	Morgenster Road	(021) 3744141	139182	7936	Portland	Republiek Van Suid-Afrika	6.22	1298
44	Princeton High	Bergsig Avenue	(021) 3712447	151499	20803	Woodlands	City of Cape Town	6.33	1186
45	Ridgeville Primary	96 Mustang Way	021-3927020	132794	1473	Westridge		2.53	403
46	Rocklands Primary	Capricorn	021-3922010	143679	12464	Rocklands	Republiek Van Suid-Afrika	2.6	580
47	Rocklands Secondary	Eisleben	(021) 3927139	142870	11655	Rocklands	Republiek Van Suid-Afrika	6.94	1346
48	Seaview Primary	59 Pyrenees	021-3974616	172162	42315	Tafelsig	Republiek Van Suid-Afrika	2.51	908
49	Spine Road Senior Secondary	38 Boeing	021-3929179	142687	11472	Rocklands	Republiek Van Suid-Afrika	2.42	816
50	Spine View Primary	Spine Road	(021) 3929463	153791	23233	Rocklands	Republiek Van Suid-Afrika	5.68	1309
51	Springdale Primary	Coral	021-3929040	144628	13707	Rocklands	Republiek Van Suid-Afrika	2.67	547
52	Strandfontein Primary	Merrydale	021-3716910	141305	10083	Lentegeur	Republiek Van Suid-Afrika	2.48	919
53	Strandfontein Secondary	39 Frigate Road	021-3932110	14561	14929	Strandfontein	Republiek Van Suid-Afrika	2.7	893
54	Tafelsig Primary	1 Weißelegen Avenue	(021) 3932100	145659	14927	Strandfontein	Republiek Van Suid-Afrika	7.06	815
55	Tafelsig Secondary School	42 Olifantshoek Street	021-3976040	154340	23803	Tafelsig	Republiek Van Suid-Afrika	2.43	1103
56	Waverest Primary	58 Assegaalbos Street	(021) 3976031	152597	22029	Tafelsig	Republiek Van Suid-Afrika	5.83	1396
57	Weltevreden Primary	Spine Road	021-3913232	143225	12010	Rocklands	Republiek Van Suid-Afrika	2.54	594
58	Weltevreden Valley Core Primary	The Cedars Avenue	021-3921213	141124	9888	Rocklands	Republiek Van Suid-Afrika	2.45	275
59	Wespoort Primary	36 Oliver Tambo Drive	021-3719739	325840	5511	Weltevreden Valley	Republiek Van Suid-Afrika	1.41	1041
60	West End Primary	5 Merrydale	021-3926604	146208	15476	Portland	Republiek Van Suid-Afrika	2.27	881
61	Westville Primary	Erica Street	021-3712400	147048	16319	Lentegeur	Republiek Van Suid-Afrika	2.3	1282
62	Woodlands Secondary	28 Silversands Ave	(021) 3717400	132398	1206	Westridge		6.54	1026
63	Woodville Primary	2 Boschhof Way	021-3925510	147385	16656	Westridge	Republiek Van Suid-Afrika	2.71	874
64	Yellowwood Primary	1 Flora Road	(021) 3710610	131517	294	Woodlands	Republiek Van Suid-Afrika	6.17	1068
65		Juno Road	021-3716510	131525	309	Woodlands	Republiek Van Suid-Afrika	2.61	1001
66		2 Skeletone Street	021-3922194	158618	28621	Tafelsig	Republiek Van Suid-Afrika	2.73	738
67		37 Baobab Street		156299	25841	Eastridge	City of Cape Town	0.2	
68		0 Galaxy Street		143966	12751	Rocklands	Mitchells Plain Islamic Trust	0.26	

School Specific Database with Aerial Photos



Violence Prevention through Urban Upgrading



School Name: **A Z Berman Primary**
Address: 21 Hengelaar Street
Owner: Republiek Van Suid-Afrika
Phone Number: (021) 3767802
Enrollment: 1249
Property ID: 162238
Size: 2.44
ERF Number: 32278
Suburb: Mitchells Plain
Estate: Beacon Valley



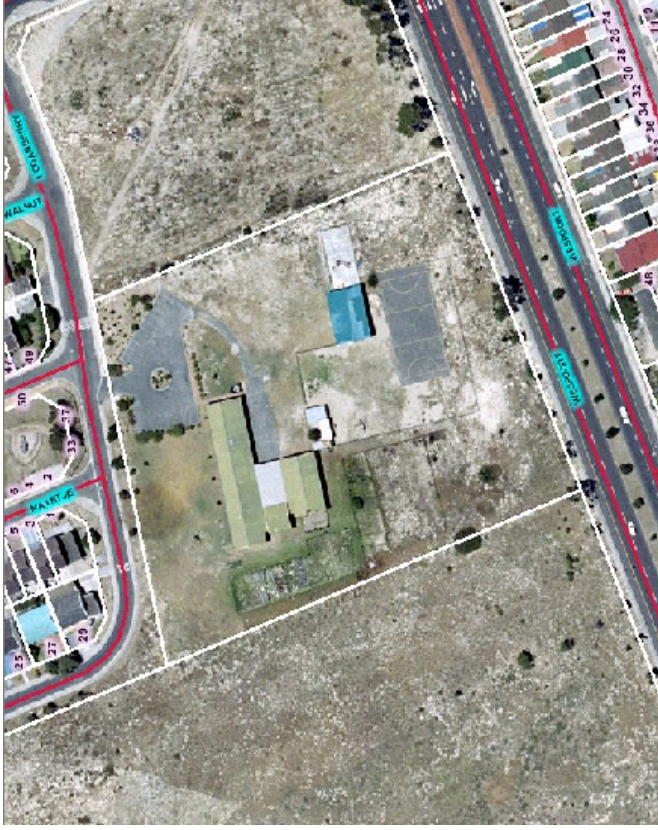
School Name: Agape School For Cerebral Palsied
Address: 0 Spine Road
Owner: Agape School For Cerebral Palsie
Phone Number: 021-3924162
Enrollment: 177
Property ID: 131216
Size: 3
ERF Number: 21190
Suburb: Mitchells Plain
Estate: Tafelsig



School Name: Aloeweg Primary
 Address: Aloe
 Phone Number: 144236
 Property ID: 144236
 ERF Number: 13314
 Estate: Lenteguur
 Owner: Republiek Van Suid-Afrika
 Enrollment: 784
 Size: 2.36
 Suburb: Mitchells Plain



School Name: Aloe High
 Address: Aloe
 Phone Number: (021) 3710552
 Property ID: 148124
 ERF Number: 17416
 Estate: Lenteguur
 Owner: Republiek Van Suid-Afrika
 Enrollment: 1117
 Size: 7.04
 Suburb: Mitchells Plain



School Name: Beacon Training Centre
 Address: 163 Park Avenue
 Phone Number:
 Property ID: 132399
 ERF Number: 1207
 Estate: Westridge
 Owner: Beacon Training Centre
 Enrollment:
 Size: 1.48
 Suburb: Mitchells Plain



School Name: Alpine Primary
 Address: Hengelaar Street
 Phone Number: 021-3761321
 Property ID: 161153
 ERF Number: 31187
 Estate: Beacon Valley
 Owner: Republiek Van Suid-Afrika
 Enrollment: 1202
 Size: 2.53
 Suburb: Mitchells Plain



School Name: Beaconhill Secondary School
 Address: 1 Derby Street
 Phone Number: (021) 3761300
 Property ID: 164400
 ERF Number: 34444
 Estate: Beacon Valley

Owner: Provincial Government-Western C
 Enrollment: 1108
 Size: 5.27
 Suburb: Mitchell's Plain

School Name: Beaconview Primary
 Address: 52A Wanderers Cre
 Phone Number: 021-3761079
 Property ID: 162453
 ERF Number: 32496
 Estate: Beacon Valley

Owner: Republiek Van Suid-Afrika
 Enrollment: 1264
 Size: 2.55
 Suburb: Mitchell's Plain



School Name: Caradale Primary
 Address: Caravelle
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3912079
 Enrollment: 547
 Property ID: 156752
 Size: 2.18
 ERF Number: 26294
 Suburb: Mitchell's Plain
 Estate: Rocklands



School Name: Buckingham Primary
 Address: Merrydale
 Owner: Republiek Van Suid-Afrika
 Phone Number: 150314
 Enrollment: 255
 Property ID: 19611
 Size: 2.55
 ERF Number: 19611
 Suburb: Mitchell's Plain
 Estate: Portland



School Name: Cascade Primary
Address: 34 Buttress Street
Phone Number: 021-3976030
Property ID: 158817
ERF Number: 28820
Estate: Tafelsig
Owner: Republiek Van Suid-Afrika
Enrollment: 909
Size: 2.48
Suburb: Mitchells Plain



School Name: Caravelle Primary
Address: Weltevreden
Phone Number: 021-3926603
Property ID: 145084
ERF Number: 14163
Estate: Rocklands
Owner: Republiek Van Suid-Afrika
Enrollment: 639
Size: 2.6
Suburb: Mitchells Plain

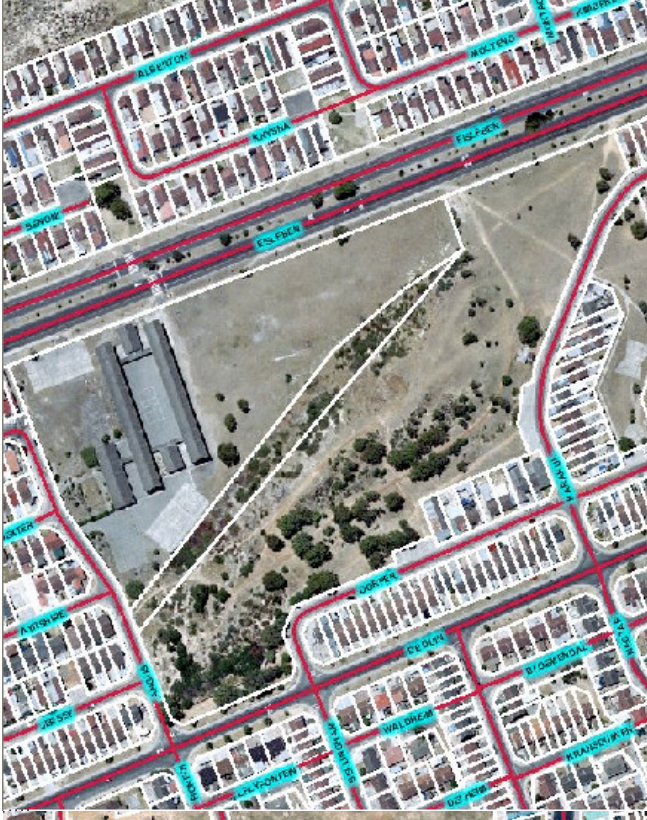


School Name: Cornflower Primary
 Owner: Republiek Van Suid-Afrika
 Address: 2 Cornflower Street
 Phone Number: 021-3743451
 Enrollment: 1250
 Property ID: 156330
 Size: 2.36
 ERF Number: 25872
 Suburb: Mitchells Plain
 Estate: Lenteguur

School Name: Cedar Secondary
 Owner: Republiek Van Suid-Afrika
 Address: Weltevreden
 Phone Number: (021) 3925737
 Enrollment: 1168
 Property ID: 140756
 Size: 6.63
 ERF Number: 9520
 Suburb: Mitchells Plain
 Estate: Rocklands



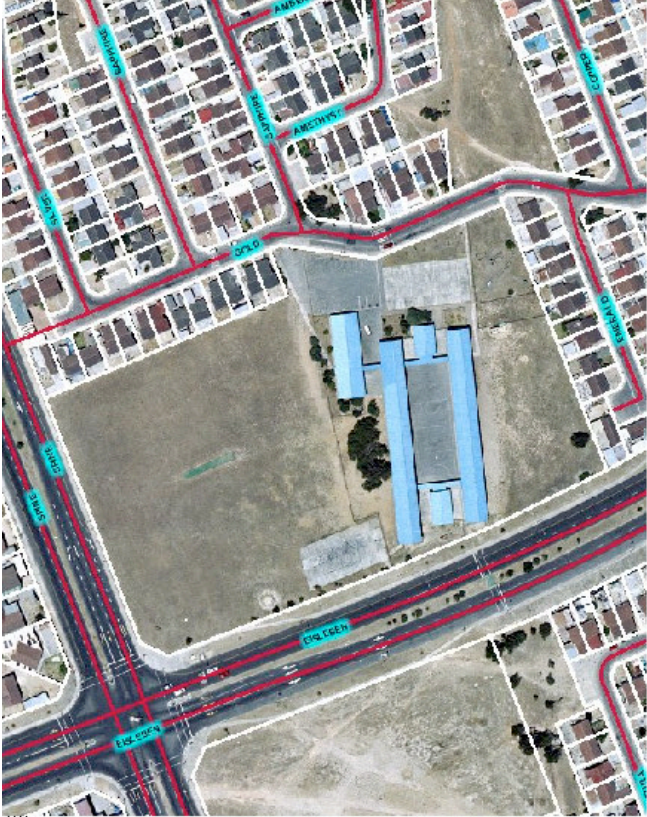
School Name: Dennegoutlaan Primary
 Owner: Republiek Van Suid-Afrika
 Address: 169 Dennegoutlaan Ave
 Phone Number: 021-3933475
 Enrollment: 1073
 Property ID: 166891
 Size: 2.79
 ERF Number: 37006
 Suburb: Mitchells Plain
 Estate: Strandfontein



School Name: Duneside Primary
 Owner: Republiek Van Suid-Afrika
 Address: Angus Road
 Phone Number: 021-3921819
 Enrollment: 427
 Property ID: 150830
 Size: 2.11
 ERF Number: 20127
 Suburb: Mitchells Plain
 Estate: Westridge



School Name: Eastville Primary
 Address: 24 Maroela Street
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3928131
 Enrollment: 1100
 Property ID: 156315
 Size: 2.34
 ERF Number: 25857
 Suburb: Mitchells Plain
 Estate: Eastridge



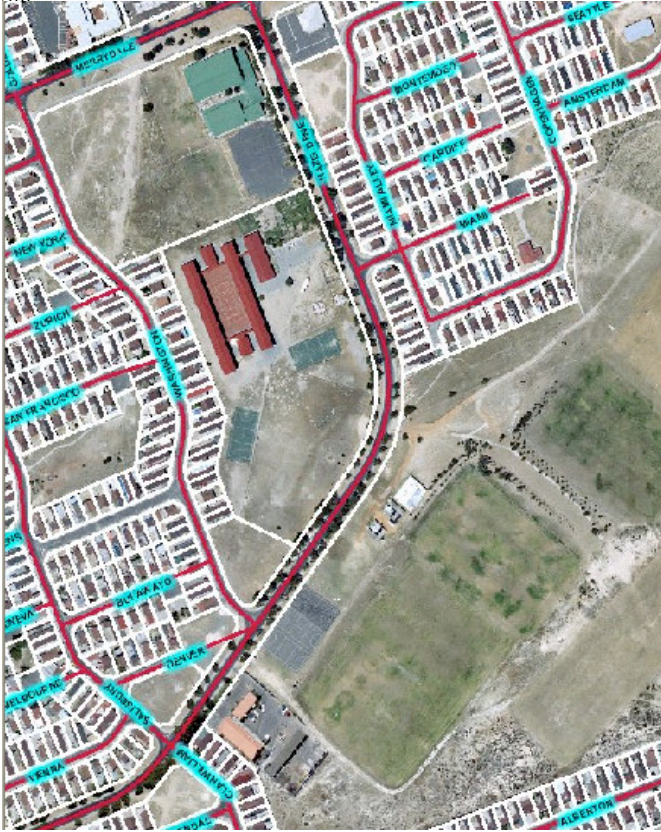
School Name: Eislebeunweg Primary
 Address: 15 Gold
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3929362
 Enrollment: 865
 Property ID: 149631
 Size: 2.5
 ERF Number: 18927
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Glendale Senior Secondary
 Address: 11 Caravelle
 Phone Number: (021) 3927161
 Property ID: 152371
 ERF Number: 21780
 Estate: Rocklands
 Owner: Republiek Van Suid-Afrika
 Enrollment: 1228
 Size: 6.8
 Suburb: Mitchells Plain



School Name: Harvester Primary
 Address: Kweker Road
 Phone Number: 021-3719402
 Property ID: 137984
 ERF Number: 6709
 Estate: Westridge
 Owner: Republiek Van Suid-Afrika
 Enrollment: 716
 Size: 2.5
 Suburb: Mitchells Plain



School Name: Hazeldene Primary
 Address: Hazeldene Avenue
 Phone Number: 021-3921110
 Property ID: 146184
 ERF Number: 15452
 Estate: Portland
 Owner: Republiek Van Suid-Afrika
 Enrollment: 799
 Size: 2.35
 Suburb: Mitchells Plain



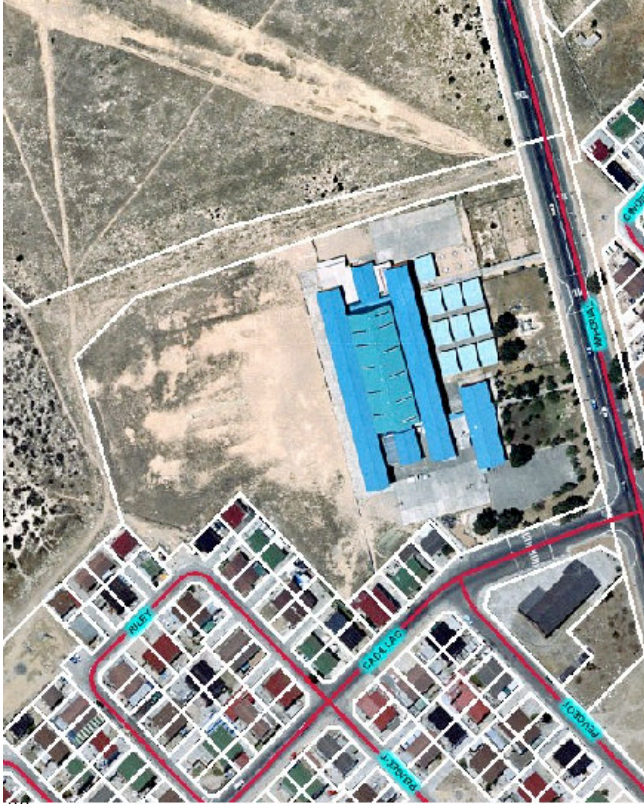
School Name: Highlands Primary
 Address: 41 Ajax Way
 Phone Number: 021-3741106
 Property ID: 131325
 ERF Number: 84
 Estate: Woodlands
 Owner: Republiek Van Suid-Afrika
 Enrollment: 591
 Size: 2.39
 Suburb: Mitchells Plain



School Name: Hillside Primary
 Address: Cormorant
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3925230
 Enrollment: 440
 Property ID: 138866
 Size: 2.37
 ERF Number: 7619
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Huguenot Primary
 Address: 2 Huguenot Avenue
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3976003
 Enrollment: 1152
 Property ID: 158494
 Size: 2.53
 ERF Number: 28485
 Suburb: Mitchells Plain
 Estate: Tafelsig



School Name: Imperial Primary
 Address: 35 Riley Crescent
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3761105
 Enrollment: 1927
 Property ID: 159931
 Size: 2.39
 ERF Number: 29961
 Suburb: Mitchells Plain
 Estate: Beacon Valley



School Name: Hyacinth Primary
 Address: Hyacinth Street
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3761125
 Enrollment: 989
 Property ID: 165547
 Size: 2.48
 ERF Number: 35651
 Suburb: Mitchells Plain
 Estate: Lenteguur



School Name: Lantana Primary
 Address: Lantana
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3711142
 Enrollment: 1078
 Property ID: 156749
 Size: 2.43
 ERF Number: 26291
 Suburb: Mitchells Plain
 Estate: Lenteguur



School Name: Jamaica Primary
 Address: Merrydale
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3713073
 Enrollment: 635
 Property ID: 136258
 Size: 2.3
 ERF Number: 4957
 Suburb: Mitchells Plain
 Estate: Portland



School Name: Lentegeur High
 Address: Highlands
 Owner: Republiek Van Suid-Afrika
 Phone Number: (021) 3714161
 Enrollment: 1598
 Property ID: 148345
 Size: 7.8
 ERF Number: 17639
 Suburb: Mitchells Plain
 Estate: Lentegeur



School Name: Liesbeeek Primary
 Address: 3 Lesbeeek Road
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3714860
 Enrollment: 896
 Property ID: 140262
 Size: 2.16
 ERF Number: 9022
 Suburb: Mitchells Plain
 Estate: Portland



School Name: Meadowridge Primary
 Owner: Republiek Van Suid-Afrika
 Address: 55 Kreupelhout
 Phone Number: 021-3761145
 Enrollment: 819
 Property ID: 152255
 Size: 2.57
 ERF Number: 21631
 Suburb: Mitchells Plain
 Estate: Lentegur



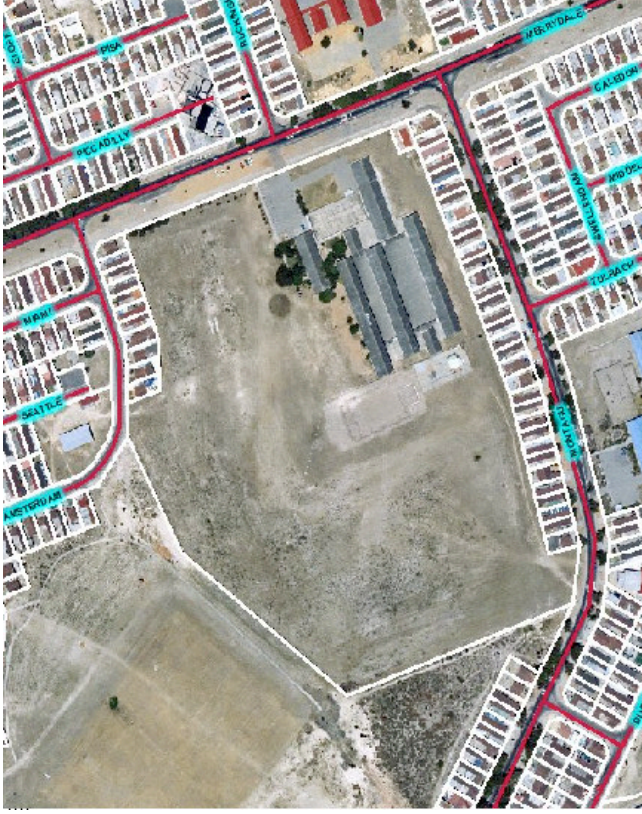
School Name: Littlewood Primary
 Owner: Republiek Van Suid-Afrika
 Address: Lohengrin Street
 Phone Number: 021-3976001
 Enrollment: 1292
 Property ID: 160337
 Size: 2.5
 ERF Number: 30571
 Suburb: Mitchells Plain
 Estate: Eastridge



School Name: Merrydale Primary
 Owner: Republiek Van Suid-Afrika
 Address: Merrydale
 Phone Number: 021-3713010
 Enrollment: 807
 Property ID: 136700
 Size: 2.52
 ERF Number: 5404
 Suburb: Mitchells Plain
 Estate: Lenteguur



School Name: Mitchells Plain Islamic High
 Owner: Mitchells Plain Islamic Trust
 Address: Shepard Way
 Phone Number: (021) 3915730
 Enrollment:
 Property ID: 138123
 Size: 4.48
 ERF Number: 6848
 Suburb: Mitchells Plain
 Estate: Westridge



School Name: Mondale Senior Secondary
 Address: Montagu Drive
 Owner:
 Phone Number: (021) 3927031
 Enrollment: 1349
 Property ID: 152866
 Size: 6.68
 ERF Number: 22298
 Suburb: Mitchells Plain
 Estate: Portland



School Name: Mitchells Plain Primary
 Address: 2 Park Avenue
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3710800
 Enrollment: 972
 Property ID: 131830
 Size: 2.62
 ERF Number: 636
 Suburb: Mitchells Plain
 Estate: Westridge



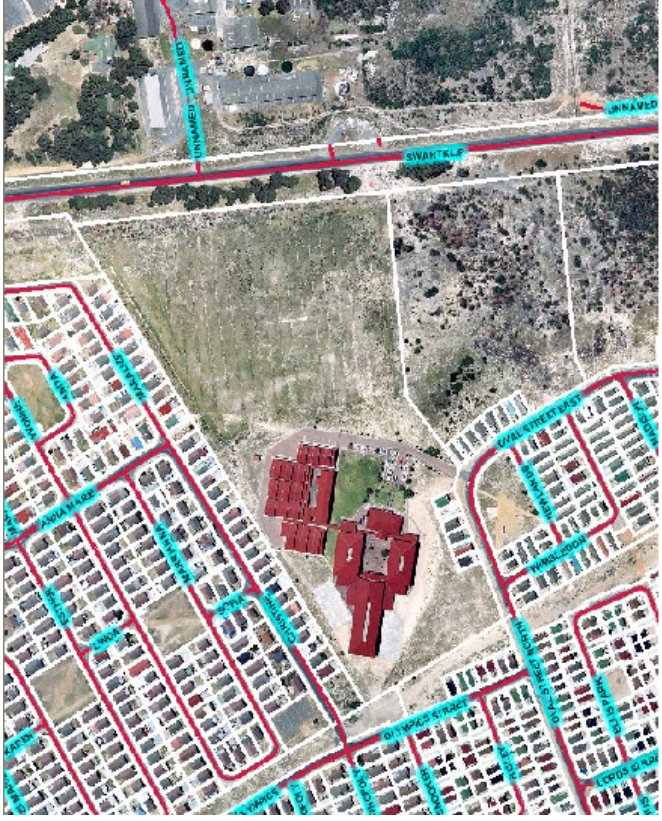
School Name: Montagu Drive Primary
 Owner: Provincial Government- Western C
 Address: Montagu Drive
 Phone Number: 021-3924104
 Enrollment: 1035
 Property ID: 146379
 Size: 2.67
 ERF Number: 15647
 Suburb: Mitchells Plain
 Estate: Portland



School Name: Naluxulo Primary
 Owner: Provinsie Van Die Wes Kaap
 Address: 21 Oliver Tambo Dri
 Phone Number: 021-3720186
 Enrollment: 1043
 Property ID: 328029
 Size: 2.3
 ERF Number: 4045
 Suburb: Mitchells Plain
 Estate: Weltevreden Valley



School Name: Northwood Primary
Address: Eros Way
Phone Number: 021-3717510
Property ID: 131481
ERF Number: 258
Estate: Woodlands
Owner: Republiek Van Suid-Afrika
Enrollment: 737
Size: 2.45
Suburb: Mitchells Plain



School Name: Oval Noord Secondary (Oval North)
Address: #3 Oval Street North
Phone Number: (021) 3761067
Property ID: 167044
ERF Number: 37159
Estate: Beacon Valley
Owner:
Enrollment: 1367
Size: 6.78
Suburb: Mitchells Plain



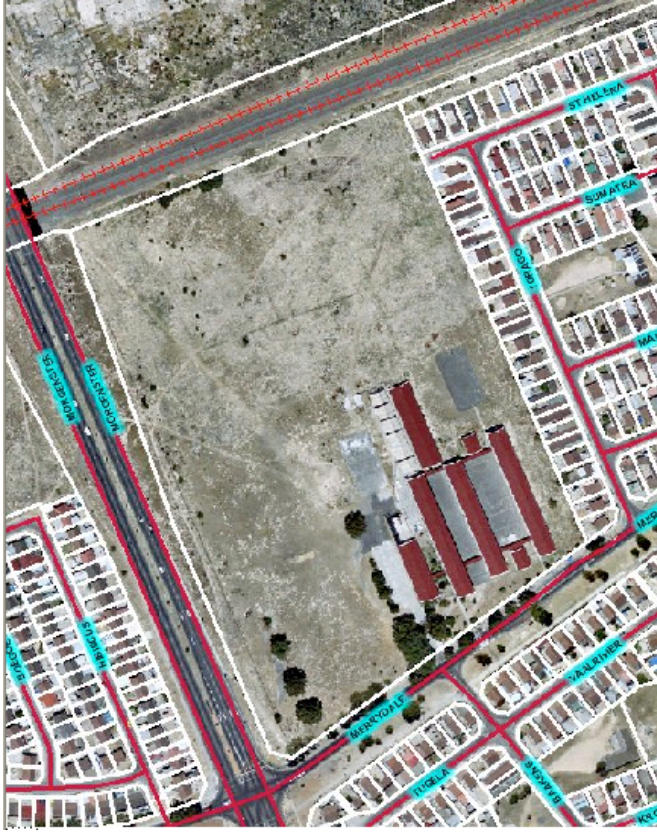
School Name: **Portland Primary**
 Address: **Wespoort** Owner: **Republiek Van Suid-Afrika**
 Phone Number: **021-3715010** Enrollment: **550**
 Property ID: **137095** Size: **2.53**
 ERF Number: **5812** Suburb: **Mitchells Plain**
 Estate: **Portland**



School Name: **Parkhurst Primary**
 Address: **2 Silversands Avenue** Owner: **Republiek Van Suid-Afrika**
 Phone Number: **021-3718910** Enrollment: **1154**
 Property ID: **134868** Size: **2.54**
 ERF Number: **3565** Suburb: **Mitchells Plain**
 Estate: **Westridge**



School Name: Princeton High
 Address: Bergsig Avenue
 Owner: City of Cape Town
 Phone Number: (021) 3712447
 Enrollment: 1186
 Property ID: 151499
 Size: 6.33
 ERF Number: 20803
 Suburb: Mitchells Plain
 Estate: Woodlands



School Name: Portland Secondary
 Address: Morgenster Road
 Owner: Republiek Van Suid-Afrika
 Phone Number: (021) 3744141
 Enrollment: 1298
 Property ID: 139182
 Size: 6.22
 ERF Number: 7936
 Suburb: Mitchells Plain
 Estate: Portland



School Name: **Rocklands Primary**

Address: Capricorn
Owner: Republiek Van Suid-Afrika
Phone Number: 021-3922010
Enrollment: 580
Property ID: 143679
Size: 2.6
ERF Number: 12464
Suburb: Mitchells Plain
Estate: Rocklands



School Name: **Ridgeville Primary**

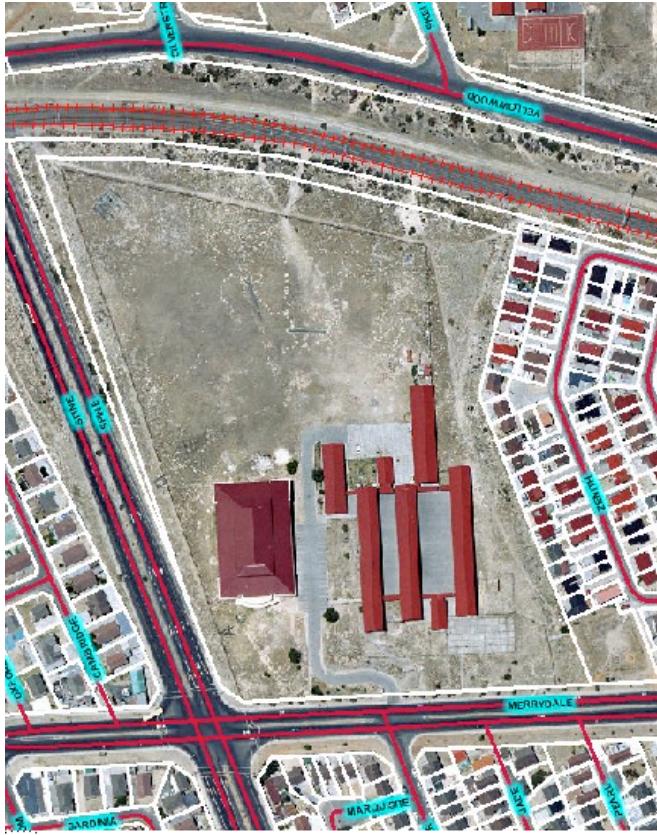
Address: 96 Mustange Way
Owner:
Phone Number: 021-3927020
Enrollment: 403
Property ID: 132794
Size: 2.53
ERF Number: 1473
Suburb: Mitchells Plain
Estate: Westridge



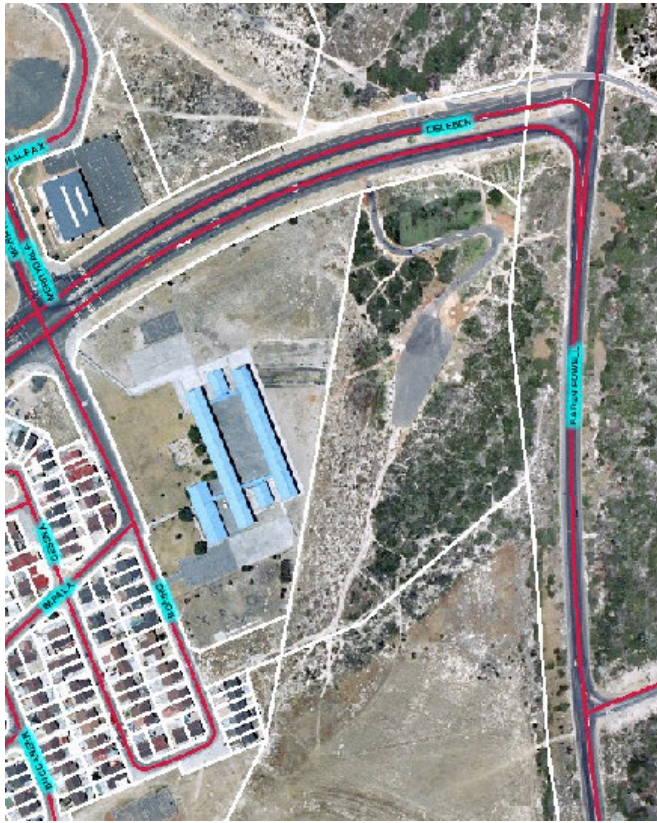
School Name: Searidge Park Primary
 Owner: Republiek Van Suid-Afrika
 Address: 59 Pyrenees
 Phone Number: 021-3974616
 Enrollment: 908
 Property ID: 172162
 Size: 2.51
 ERF Number: 42315
 Suburb: Mitchells Plain
 Estate: Tafelsig



School Name: Rocklands Secondary
 Owner: Republiek Van Suid-Afrika
 Address: Eisleben
 Phone Number: (021) 3927139
 Enrollment: 1346
 Property ID: 142870
 Size: 6.94
 ERF Number: 11655
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Spine Road Senior Secondary
 Address: Spine Road
 Owner: Republiek Van Suid-Afrika
 Phone Number: (021) 3929463
 Enrollment: 1309
 Property ID: 153791
 Size: 5 68
 ERF Number: 23233
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Seaview Primary
 Address: 38 Boeing
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3929179
 Enrollment: 816
 Property ID: 142687
 Size: 2 42
 ERF Number: 11472
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Springdale Primary
 Address: Merridyale
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3716910
 Enrollment: 919
 Property ID: 141305
 Size: 2.48
 ERF Number: 10083
 Suburb: Mitchells Plain
 Estate: Lentegeur



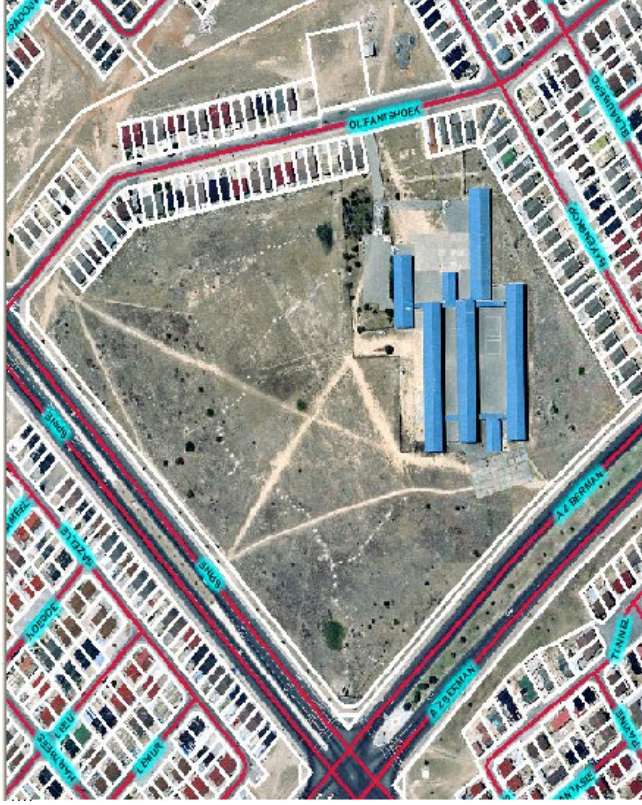
School Name: Spine View Primary
 Address: Coral
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3929040
 Enrollment: 547
 Property ID: 144628
 Size: 2.67
 ERF Number: 13707
 Suburb: Mitchells Plain
 Estate: Rocklands



School Name: Strandfontein Primary
Address: 39 Frigate Road
Owner: Republiek Van Suid-Afrika
Phone Number: 021-3932110
Enrollment: 893
Property ID: 14561
Size: 2.7
ERF Number: 14929
Suburb: Mitchells Plain
Estate: Strandfontein



School Name: Strandfontein Secondary
Address: Welgelegen Avenue
Owner: Republiek Van Suid-Afrika
Phone Number: (021) 3932100
Enrollment: 815
Property ID: 145659
Size: 7.06
ERF Number: 14927
Suburb: Mitchells Plain
Estate: Strandfontein



School Name: Tafelsig Secondary School
 Owner: Republiek Van Suid-Afrika
 Address: 58 Assegaibos Stre:
 Phone Number: (021) 3976031
 Enrollment: 1396
 Property ID: 152597
 Size: 5.83
 ERF Number: 22029
 Suburb: Mitchells Plain
 Estate: Tafelsig



School Name: Tafelsig Primary
 Owner: Republiek Van Suid-Afrika
 Address: 42 Olifantshoek Stre:
 Phone Number: 021-3976040
 Enrollment: 1103
 Property ID: 154340
 Size: 2.43
 ERF Number: 23803
 Suburb: Mitchells Plain
 Estate: Tafelsig



School Name: Weltevreden Primary
 Address: The Cedars Avenue
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3921213
 Enrollment: 275
 Property ID: 141124
 Size: 2.45
 ERF Number: 9888
 Suburb: Mitchell's Plain
 Estate: Rocklands



School Name: Wavcrest Primary
 Address: Spine Road
 Owner: Republiek Van Suid-Afrika
 Phone Number: 021-3913232
 Enrollment: 594
 Property ID: 143225
 Size: 2.54
 ERF Number: 12010
 Suburb: Mitchell's Plain
 Estate: Rocklands



School Name: Weltevreden Valley Core Primary
Address: 36 Oliver Tambo Dri
Phone Number: 021-3719739
Property ID: 325840
ERF Number: 5511
Estate: Weltevreden Valley
Owner:
Enrollment: 1041
Size: 1.41
Suburb: Mitchell's Plain



School Name: Wespoort Primary
Address: 5 Merrydale
Phone Number: 021-3926604
Property ID: 146208
ERF Number: 15476
Estate: Portland
Owner: Republiek Van Suid-Afrika
Enrollment: 881
Size: 2.27
Suburb: Mitchell's Plain



School Name: West End Primary
 Address: Erica Street
 Phone Number: 021-3712400
 Property ID: 147048
 ERF Number: 16319
 Estate: Lentegent
 Owner: Republiek Van Suid-Afrika
 Enrollment: 1282
 Size: 2.3
 Suburb: Mitchells Plain



School Name: Westridge Senior Secondary
 Address: 28 Silversands Ave
 Phone Number: (021) 3717400
 Property ID: 132398
 ERF Number: 1206
 Estate: Westridge
 Owner:
 Enrollment: 1026
 Size: 6.54
 Suburb: Mitchells Plain



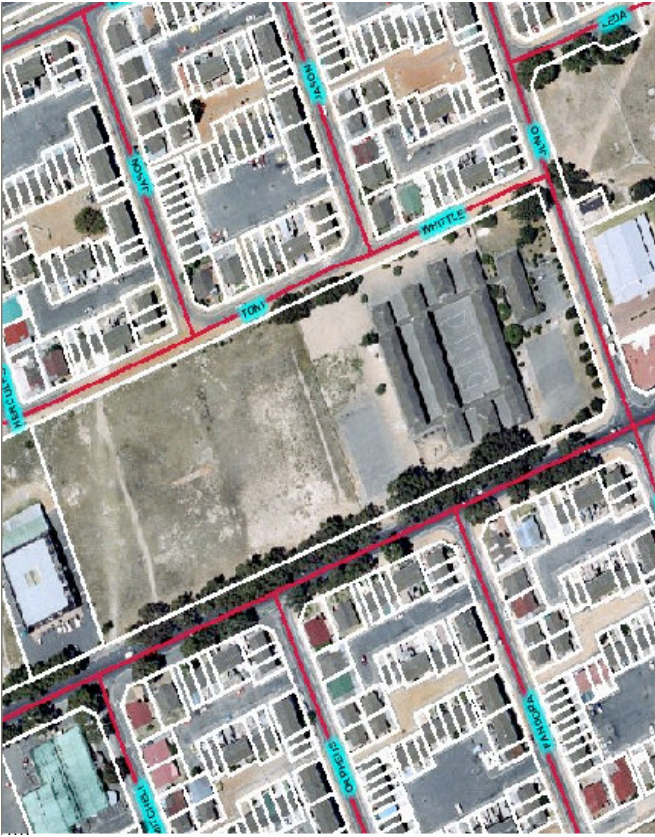
School Name: Westville Primary
Address: 2 Boschof Way
Phone Number: 021-3925510
Property ID: 147385
ERF Number: 16656
Estate: Westridge
Owner: Republiek Van Suid-Afrika
Enrollment: 874
Size: 2.71
Suburb: Mitchells Plain



School Name: Woodlands Secondary
Address: 1 Flora Road
Phone Number: (021) 3710610
Property ID: 131517
ERF Number: 294
Estate: Woodlands
Owner: Republiek Van Suid-Afrika
Enrollment: 1068
Size: 6.17
Suburb: Mitchells Plain



School Name: Yellowwood Primary
 Owner: Republiek Van Suid-Afrika
 Address: 2 Skeletone Street
 Enrollment: 738
 Phone Number: 021-3922194
 Size: 2.73
 Property ID: 158618
 Suburb: Mitchells Plain
 ERF Number: 28621
 Estate: Tafelsig



School Name: Woodville Primary
 Owner: Republiek Van Suid-Afrika
 Address: Juno Road
 Enrollment: 1001
 Phone Number: 021-3716510
 Size: 2.61
 Property ID: 131525
 Suburb: Mitchells Plain
 ERF Number: 309
 Estate: Woodlands



School Name:

Address:

Phone Number:

Property ID:

ERF Number:

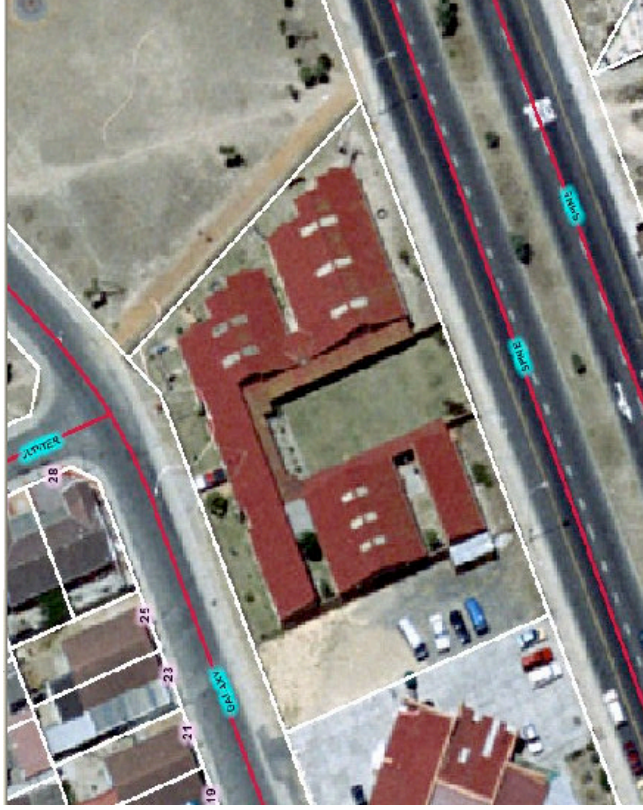
Estate:

Owner:

Enrollment:

Size:

Suburb:



School Name:

Address:

Phone Number:

Property ID:

ERF Number:

Estate:

Owner:

Enrollment:

Size:

Suburb:

Secondary School Database



Violence Prevention through Urban Upgrading

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
School Name	Size	Maintained	Pollution	Level	Lighting	Soil	Grass	Train Tracks	Facilities Now	Note:					
Alice High	7.04 Well	None	None	Flat field area	light post but no light	dirt & sand	Yes	Yes	N/A						
Basconhill Secondary School	6.27 Poor	Trash	Trash	Large Area is flat, side of school is hills	N/A	Clay	Some	N/A	Gardens	Clay becomes water logger in winter, and hard in summer, have piles of topsoil ready					
Cedar Secondary	6.63 Well	None	None	Flat field area	N/A	dirt & sand	Yes	N/A	N/A						
Glendale Senior Secondary	6.8 Poor	Trash	Trash	No flat areas, all sand dunes area	N/A	dirt & sand	Some	N/A	Near Rooklands Sports Centre	Piles of Sand: may be for Construction					
Lantagaur High	7.8 Poor	Trash	Trash	Flat field area, sand dunes	light posts but no lights	Sand	Yes	Yes	N/A						
Mitchells Plain Islamic High	4.48 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Mondale Senior Secondary	6.68 Poor	None	None	Hilly area, scenic but not suitable for sports	N/A	dirt & sand	Yes	N/A	Indoor Recreational Facility						
Oval North Secondary (Oval North)	6.78 Well	None	None	Flat field area	N/A	dirt & sand	Yes	N/A	Nearby, Volleyball Court						
Portland Secondary	6.22 Poor	None	None	Flat field area	N/A	dirt & sand	Yes	Yes	Basketball nearby	Piles of Sand: may be for Construction					
Princeton High	6.33 Poor	Trash	Trash	Flat field area	Small Side Lights	dirt & sand	Yes	N/A	N/A						
Rooklands Secondary	6.94 Poor	Trash	Trash	Flat field area	N/A	dirt & sand	Yes	N/A	Basketball Courts, Rugby Pitches, Possible Indoor Gym						
Spine Road Senior Secondary	5.68 Well	Trash	Trash	Flat field area	N/A	dirt & sand	Yes	Yes	Basketball Court, Cricket Facilities, Rugby Pitches, Small Garden						
Strandfontein Secondary	7.06 Well	None	None	Not flat	N/A	Sand	Some	N/A	N/A						
Tafelsig Secondary School	5.83 Poor	None	None	Flat field area	Several Light posts	dirt & sand	Yes	N/A	N/A						
Westridge Senior Secondary	6.54 Well	None	None	Flat	Several Lights up	dirt & sand	Yes	N/A	Paved courts (2)						
Woodlands Secondary	6.17 Poor	Trash	Trash	Flat field area	N/A	dirt & sand	Yes	N/A	Basketball Court						



School Name: Alois High
 Lighting: light post but no light
 Facilities Now: N/A
 Pollution: None
 Maintained: Well
 Level: Flat field area
 Note:

Size: 7.04
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: Yes



School Name: Beaconhill Secondary School
 Lighting: N/A
 Facilities Now: Gardens
 Pollution: Trash
 Maintained: Poor
 Level: Large Area is flat, side of school is hills
 Note: Clay becomes water logger in winter, and hard in summer, have piles of topsoil ready

Size: 5.27
 Grass: Some
 Soil: Clay
 Train Tracks: N/A



School Name: Cedar Secondary
 Lighting: N/A
 Facilities Now: N/A
 Pollution: None
 Maintained: Well
 Level: Flat field area
 Note:

Size: 6.63
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: N/A



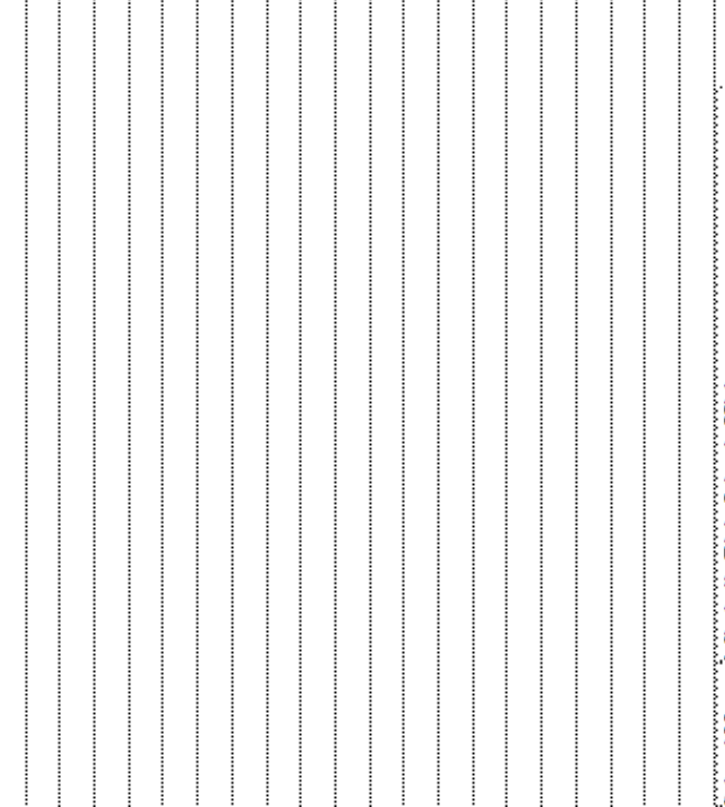
School Name: Glendale Senior Secondary
 Lighting: N/A
 Facilities Now: Near Rocklands Spc
 Pollution: Trash
 Maintained: Poor
 Level: No flat areas, all sand dune area
 Note: Piles of Sand, may be for Construction

Size: 6.8
 Grass: Some
 Soil: dirt & sand
 Train Tracks: N/A



School Name: Lentegeur High
 Lighting: light posts but no lights
 Facilities Now: N/A
 Pollution: Trash
 Maintained: Poor
 Level: Flat field area, sand dunes
 Note:

Size: 7.8
 Grass: Yes
 Soil: Sand
 Train Tracks: Yes



School Name: Mitchells Plain Islamic High
 Lighting: N/A
 Facilities Now:
 Pollution:
 Maintained:
 Level:
 Note:

Size: 4.48
 Grass:
 Soil: dirt & sand
 Train Tracks: N/A



School Name: **Mondale Senior Secondary**
 Lighting: N/A
 Facilities Now: **Indoor Recreational**
 Pollution: None
 Maintained: **Poor**
 Level: **Hilly area, scenic but not suitable for sports**
 Note:

Size: 6.68
 Grass: **Yes**
 Soil: **dirt & sand**
 Train Tracks: **N/A**



School Name: **Oval Noord Secondary (Oval North)**
 Lighting: N/A
 Facilities Now: **Basketball nearby**
 Pollution: None
 Maintained: **Well**
 Level: **Flat field area**
 Note: **Piles of Sand: may be for Construction**

Size: 6.78
 Grass: **Yes**
 Soil: **dirt & sand**
 Train Tracks: **N/A**



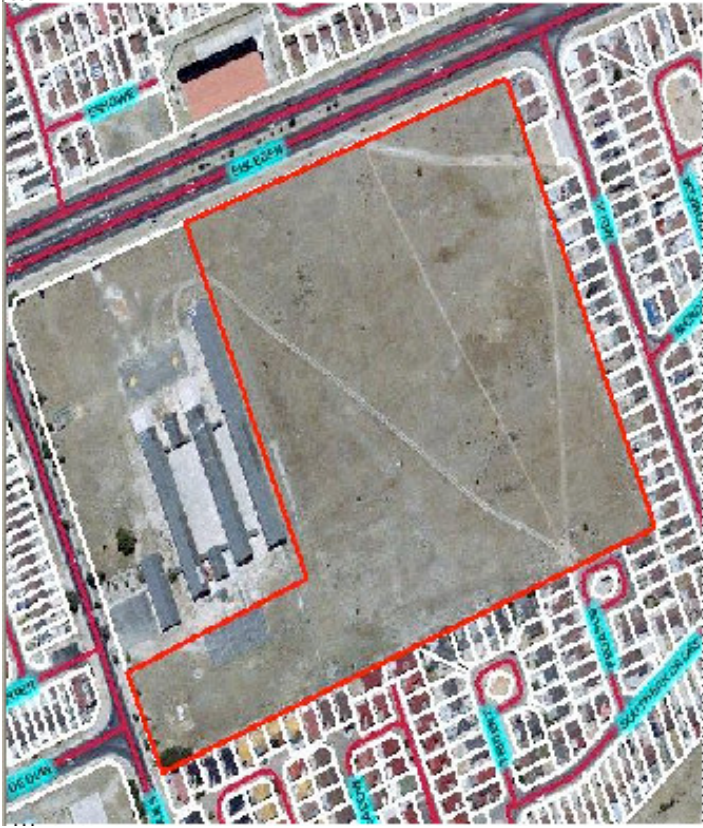
School Name: Portland Secondary
 Lighting: N/A
 Facilities Now: N/A
 Pollution: None
 Maintained: Poor
 Level: Flat field area
 Note:

Size: 6.22
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: Yes



School Name: Princeton High
 Lighting: Small Side Lights
 Facilities Now: N/A
 Pollution: Trash
 Maintained: Poor
 Level: Flat field area
 Note:

Size: 6.33
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: N/A



School Name: Rocklands Secondary
 Lighting: N/A
 Size: 6.94
 Grass: Yes
 Facilities Now: Basketball Courts, J
 Pollution: Trash
 Soil: dirt & sand
 Maintained: Poor
 Train Tracks: N/A
 Level: Flat field area
 Note:



School Name: Spine Road Senior Secondary
 Lighting: N/A
 Size: 5.68
 Grass: Yes
 Facilities Now: Basketball Court, C
 Pollution: Trash
 Soil: dirt & sand
 Maintained: Well
 Train Tracks: Yes
 Level: Flat field area
 Note:



School Name: Tafelsg Secondary School
 Lighting: Several Light posts
 Facilities Now: N/A
 Pollution: None
 Maintained: Poor
 Level: Flat field area
 Note:

Size: 5.83
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: N/A



School Name: Strandfontein Secondary
 Lighting: N/A
 Facilities Now:
 Pollution: None
 Maintained: Well
 Level: Not flat
 Note:

Size: 7.06
 Grass: Some
 Soil: Sand
 Train Tracks: N/A



School Name: Westridge Senior Secondary
 Lighting: Several Lights up
 Facilities Now: Paved courts (2)
 Pollution: None
 Maintained: Well
 Level: Flat
 Note:

Size: 6.34
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: N/A



School Name: Woodlands Secondary
 Lighting: N/A
 Facilities Now: Basketball Court
 Pollution: Trash
 Maintained: Poor
 Level: Flat field area
 Note:

Size: 6.17
 Grass: Yes
 Soil: dirt & sand
 Train Tracks: N/A