SPORT AS A TOOL FOR SOCIAL INTEGRATION:

The design of a multi-purpose sporting precinct for Durban, eThekwini.

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The design of a sporting precinct for Durban, eThekwini.

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A Dissertation Submitted in partial fulfilment of the

requirements for the degree of Master of Architecture to

the School of Built Environment and Development Studies.

University of KwaZulu-Natal

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DECLARATION

I hereby declare that this dissertation is my own unaided work except where it has been otherwise acknowledged. It is being submitted to the School of Built Environment and Development Studies, University of KwaZulu-Natal, Howard College campus, in partial fulfilment of the requirements towards the degree of Masters of Architecture. This dissertation has not been submitted before for any degree or examination at any other university.

Signed 06 March 2014

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Craig Kirkpatrick

ABSTRACT

The purpose of this dissertation was to determine the significance of sport in society and its influence on the built form. The project investigated the social powers of sport, as well as the social benefits of a well-designed built environment. More specifically the project had three aims. The first being to explore the social aspects of sport; by understanding how it breaks down social barriers and becomes a tool for social integration. The second aim was to explore how the built environment can aid in a similar capacity, through the design of good public space and an architecture which encourages integration. Lastly this dissertation focused on creating a relevant meaningful architectural response, which is responsive to both its uses and its surrounding context.

Through the investigation of literature, theories, precedent studies, case studies, and personally conducted questionnaires and interviews the desired outcome was met. It was found that sport does have an extremely positive role in social integration. The research showed that not only does sport united people and break down social barriers, but the built environment in which sport takes place can greatly affect how successful the integration is.

DEDICATION

I dedicate this dissertation to my amazing mother and father. Thank you instilling in me the value of education and for the sacrifices you have made for my future. Every day I am grateful for the opportunities you have provided me.

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FOREWORD

Selecting a dissertation topic is by no means an easy task as there are a wide variety of topics architectural students are exposed to in their education. The key was selecting a topic which I am passionate about, the subject had to be interesting to me and provide rewarding experiences both academically and personally.

Sport has always been a big part of my life and the combination of architecture and sports seemed hugely appealing. Having grown up in the period of transition and seeing how much of a positive role sport has played in a post-Apartheid South Africa I felt that sporting facilities have a huge role to play in the future of our country and therefore felt it was a fitting topic not only personally but within the local context as well.

CHAPTER 1: RESEARCH BACKGROUND

1.1 INTRODUCTION

1.1.1 Background

The need for social integration amongst South African residents has been, and continues to be a topic that is at the forefront of social development in the country. South Africa has been a democracy for the best part of two decades yet segregation is still an issue. The bitter taste of the Apartheid era still lingers in society today with the population still adjusting to the idea of a united country. Other elements such as socio-economic differences and diverse cultural beliefs have also create barriers. Different economic groups do not wish to mix with others as they see themselves as superior, also the varying cultural beliefs of the people creates conflict and misunderstandings resulting in segregation. There is a need for social nodes within the urban fabric where this interaction and unification of the nation can happen on a daily basis.

Gehl (1987) believes integration will not happen unless people are influenced or forced to interact with one another. This is an opportunity for the built environments disciplines to intervene, by harnessing the social aspect of sport and creating an environment which is designed to encourage social connectivity, through interaction and engagement. A successful city promotes integration among its people yet in South Africa this has not always been the case, the famous quote by Robert Half "*birds of a feather flock together"* still rings true. South Africa has a wide variety of cultures all of which naturally interact within their own circles because of their common beliefs and backgrounds. However, socializing with other members of the population is an extremely important part of a functioning society, and there needs to be opportunities for such a phenomenon to happen. Communal public spaces encourage this integration but they are only a starting point, there needs to be a common interest to bring people together and spark conversation.

Durban is one of South Africa's most diverse urban centres due to its historical background and heritage. This dissertation aims to explore the notion of cross-cultural integration through the common medium, sport. Sport plays a vital role in modern contemporary society, its prominence in the media which devotes considerably more coverage to sport than politics or economics demonstrates how popular it has become in the last century. This phenomenon has had different impacts on the development of nations, cultures and communities. For the

majority of people, sport forms an integral part of life whether as an active participant or a spectator. Due to the segregated past of the country, tools such as sport and the built environment need to be harnessed to aid in the goal of building a united nation.

There are no 'quick fix' solutions for South Africa's problems. There are however means which can facilitate the process, thus contribute to community development and peace-building. This dissertation intends to use the information gathered to explain the importance of social integration in a nation, and explore how sport and the built environment together can be used as a tool to encourage it.

1.1.2 Motivation/Justification of the study

South Africa as a country has not yet reached complete integration with its people. The country is still dealing with not only the physical idea of separation within the urban fabric but the emotional separation between its people as well.

Sport is not only a physical activity but an area where people interact on a social level as well. Jarvie and Maguire (1994) write that sport and leisure activities form an integral part of social life in all communities and are intricately linked to society and politics. It is seen as a more cost-effective approach for dealing with social problems than correcting the consequences of aggression, crime, violence, and abuse through police, correctional or social services. The 'new South Africa' is in need of a new national identity, and sport is the perfect cross-cultural activity to create this (Nauright, 1997).

The purpose of this dissertation is to look at tools that can be used to help eradicate these problems. It will look at how to encourage interaction, more specifically how sporting facilities in a society can encourage interaction amongst its people, and how this will influence the urban fabric and built form. By exploring the social powers of sport together with a built environment which encourages integration, this research will hopefully show ways to uplift and develop society in a positive way.

1.2 DEFINITION OF THE PROBLEM, AIMS AND OBJECTIVES

1.2.1 Definition of the problem

Segregation within society is still a problem that needs to be addressed. South African societies have no doubt developed from the past but unfortunately the scars of the past are still very much present and continue to be expressed and experienced to this day (Witz, 2003). Legislation passed during the transitional phase of 1994 has greatly improved the legal and political framework within which most South Africans lead their lives, however on a whole the social divisions that were drilled into South Africans both black and white unfortunately still exist. Much of it has to do with the perceptions of people and their clinging to preconceived ideas guided by the past rather than any physical aspect. Therefore part of the problem has to do with the way people think and their resulting actions. Racial differences in South Africa continue to hold the country back from social progression.

Socio-economic barriers also need to be addressed, people who are more 'well-off' than others feel they are superior. Although this sounds very similar to apartheid where the whites were viewed as superior, this problem has no racial influences.

The problem of segregation is one which needs to be proactively addressed. The country is still in a stage of transition where integration is being encouraged, however it appears that the current built environment could still do a lot more as it is not having the positive impact that it could.

1.2.2 Aims of the study

The aim of this study is to create unity within an extremely diverse society. Through sport and the built environment this study hopes to encourage social integration. By creating a space where no matter one's personal beliefs or background, a feeling of comfort and homeliness is achieved, it becomes a space where integration can occur.

1.2.3 Objectives of the study

This study seeks to decipher the reasons behind the success of sport as in integrator, such as its ability to bring people together and promote social integration. More specifically it looks

to understand the social energy of sport and how it can be used to bring people together within a built environment.

It also looks at how the built environment can be designed in such a way that it too encourages integration. Through the research on these two aspects the objective of this dissertation is to provide a design framework for a sporting facility which promotes social integration within society.

1.3 SETTING OUT THE SCOPE

1.3.1 Delimitation of the research problem

The immediate problem that this document intends to research is the lingering social and cultural barriers forged by the apartheid era, as well as the socio-economic barriers that South Africa deals with on a daily basis. Racial discrimination, a lack of inter-cultural relations and the preconceived perceptions of people are typical traits defining the social agenda being addressed.

This dissertation looks to engage with the deep and long standing issues of inequality in society. This project is envisaged to have a meaningful contribution to the broader society of Durban as it attempts to provide a positive impact on the social aspects of its citizens. It does not attempt to redefine or eradicate cultural diversity, but rather to bring people of different race, culture, and backgrounds together.

The research will focus on the social powers of sport, and its ability to break down social barriers and unite a nation. Although this dissertation is architecturally based it will explore social theories because the built environment interacts with people. Furthermore the research will investigate the benefits of design tools for a more appropriate approach to the built environment, which enhances social interaction through good architectural design.

1.3.2 Definition of terms

Integration:	The coming together and socialising of people from different races, cultures, genders and ages.
Ordinary man:	This refers to male/female who does not play sport at a professional level. He/she is a ordinary member of society who if they take part in sport does so on a social level.
Public space:	A public space is a social space such as a town square that is open and accessible to all. It is a place which attracts people and creates opportunity for interaction amongst people who would never usually meet.
Segregation:	This is the separation of people within a community. There are many reasons for this such as racial group, religion, socio-economic or culture. In a modern world where communities are made up of a diverse array of people social integration is the key to a successful environment, yet still to this day segregation occurs.
Social:	Seeking or enjoying the companionship of others, the act of social interaction.
Social interaction:	When people encounter one another and engage in conversations or activities.

1.3.3 Stating the assumptions

This document will be written with the following assumptions:

- All can partake in sport, whether it be physically (for pleasure or in a competitive nature) or as a spectator and supporter.
- Sport/physical exercise is an important part of life and people must be educated about its benefits.
- Durban is home to a diverse group of people all originating from all around the world yet South Africa and specifically Durban is seen as their home.
- Since 1994 South Africa has made big steps forward in creating a united country.

1.3.4 Key questions

Primary question:

- How can sport and the built environment (a sporting facility) integrate people and aid in the goal of uniting a nation?

Secondary question:

- What makes sport such a powerful social tool?
- How can the built environment encourage integration in a multi-cultural nation?
- What makes a successful public space?

1.3.5 Hypothesis

Sport has extremely strong social powers and can be used as a tool to encourage integration amongst societies. By harnessing these powers coupled with a built environment which is designed to encourage interaction, social integration within a diverse nation becomes a possibility.

1.4 CONCEPTS AND THEORIES

1.4.1 Introduction

This dissertation explores the means of social integration through a sporting facility. These concepts and theories create a theoretical framework on which the literature review is based, they also provide a framework through which further extensive research is judged.

1.4.2 Theories

Social order: The issue of Social order, how and why it is that social orders exists at all, is historically central to sociology. According to Haralambos and Holborn (1991), Thomas Hobbes was the first to formally recognise social order and he believed it was created through the notion of a social contract. Other social theorists such as Karl Marx, Émile Durkheim, Talcott Parsons and Jürgen Habermas have all proposed different explanations for what they felt social order consists of. For Marx, it is the relations of production or economic structure which is the basis of a social order. For Durkheim, it is a set of shared social norms. For

Parsons, it is a set of social institutions regulating pattern of action-orientations, which again are based on a frame of cultural values. Lastly Habermas believed in all of these, as well as communicative action (Haralambos and Holborn, 1991).

Social integration: Emile Durkheim, is credited with introducing the theory of social integration in the late nineteenth century (Pillemer, 2000). Social integration is the means through which people interact, connect and validate each other within a community. Pillemer (200) writes how the theory proposes that people experience mental, emotional and physical benefits when they believe they are a contributing, accepted part of a collective. Without that sense of connection, they can experience depression, isolation and physical illness that could limit them from experiencing productive, happy lives.

Genius Loci: Norberg-Schulz (1980) writes that Genius Loci refers to a location's distinctive atmosphere or 'spirit of place'. Furthermore he states that it comes from the philosophy or method of inquiry of Phenomenology, based on the premise that reality consists of objects and events as they are perceived or understood in human consciousness. This idea was first developed by Edmund Husserl who was a mathematician (Fleming, 2007).

In the 1960's the theorist Alfred Schutz was the first person to use Phenomenology in the field of sociology, and it was later used in architecture by Christian Norberg-Schulz (Fleming, 2007).

Critical regionalism: The term 'Critical Regionalism' was first used by the architectural theorists Alexander Tzonis and Liane Lefaivre and then later by the theorist Kenneth Frampton (Patterson, 1995). Critical Regionalism is an approach to architecture that strives to counter placelessness and lack of identity in modern architecture by using the building's geographical context (Frampton, 1983).

1.4.3 Concepts

Sport as a tool for social integration: This is a concept explored by authors such as Marion Keim and John Nauright. Sport is a means of exchange and understanding among people of various backgrounds, nationalities or beliefs, and promotes expression beyond traditional barriers. Nauright (1997) writes that sport is part of every culture and can be used to bring people together, even entire nations. It is a unique vehicle in transgressing social differences and can be described as a medium which transcends class divisions (Keim, 2003).

Successful public space: The founders of this concept or at least the two authors most notably recognised to be the first to speak about it were William Whyte and Jan Gehl. Whyte (1988) writes that a good public space enriches the people's lives who interact with it. Public spaces are places where people can interact with one another, they are the stage for public lives (Gehl, 1987).

1.5 RESEARCH METHODS AND MATERIALS

1.5.1 Introduction

This section provides an outline of how relevant data was gathered for this dissertation. The method of qualitative research was used as it investigates the 'why' and 'how', not just the 'what', 'where', and 'when'.

1.5.2 Research methods

This study utilises two forms of research; secondary and primary. Secondary research, included library research and desk top research (internet) where findings of previous research on the subject was explored through literature. This research is shown in the literature review and precedent studies section of this dissertation, and is the background and foundation upon which general information and an understanding on the topic was gained. Primary research included original data obtained by the author through case studies, interviews (both formal and informal), questionnaires, photographs and sketches. This enabled the testing of the hypothesis against physical sources. The research questions mentioned above guided the research.

1.5.2.1 Secondary research

Literature review: The literature review examines relevant literature pertaining to the issues being investigated. This research follows the framework set up by the research questions and covers topics including social theories, segregation, sport as an integrator, and ways in which the built environment can encourage integration. The information generated from the literature helped inform: relevant people to interview, key questions to ask, and helped direct the research to particular precedent studies and primary research.

Precedent studies: International precedents were examined to help get a global understanding on how relevant issues to this topic are handled. Information gathered for the precedent studies was taken from books, architectural journals and articles. The precedents include two sporting facilities and a cultural centre, these were chosen because of their relevance with the chosen concepts and theories.

The first precedent study 'Four Sports Halls' is located in Colombia. It successfully combines the social characteristics of sport, well designed public space, and a 'sense of place' in one building and is the key precedent study.

The second precedent study is 'Kaohsiung Stadium', which is a 'green' sports venue in Taiwan. Lastly the 'Jean-Marie Tjbaou Centre' which is the cultural centre of New Caledonia was chosen because of its design concept which relates strongly to the theory of Critical Regionalism.

1.5.2.2 Primary research

The primary research was carried out in the form of fieldwork on a selection of case studies within South Africa. The fieldwork was conducted as follows:

Case studies: The analysis of relevant local facilities was undertaken by the author. The case studies were selected because they are real life examples of what the concepts and theories spoken about in the document are capable of producing. This was done to determine dimensions, spatial relationships, processes, and function requirements of the buildings. While observing people and seeing how they engage with the building a greater understanding of the challenges involved in creating a social environment was obtained.

The first case study chosen is the 'Nike Football Training Centre ' in Soweto. It was chosen because of its success at using sport to uplift a community, its creation of space for social interaction, and how well the building fits into its context.

The next case study is the 'Moses Mabhida Stadium' in Durban. It was chosen specifically for its ability to draw people to the space even if there is no match on. This is done through a very successfully designed public space.

The last case study is the 'Royal Bafokeng Nation'. This nation was chosen because of their belief that they can use sport to build and uplift their community. They see sport not only as a

tool for uniting their community but something which can bring money in to support the area as well. The first building visited was the 'Sports Palace' which is the main sports stadium, the second was the 'Sports Campus' which is for elite sportsman and is home to the local academy.

Questionnaires: Users of the facilities were asked/handed questionnaires to help gain an understanding of the public's views on the issues relevant to the topic. The questions were also structured in such a way to help get an understanding of the success of the buildings relevant to the above mentioned concepts and theories.

Interviews: Tshepo Malatsi, facility co-ordinator and head of sport development in the Royal Bafokeng nation was informally interviewed as he took me around the 'Sports Palace', 'Sports Campus', and the school development projects in the area. His insight into the running's of the sporting facilities, their positives and short comings, and the Royal Bafokeng nations beliefs in sport was invaluable.

Photography: This was used to capture the building while it is in use, capturing events that support or disapprove the above mentioned concept and theories.

Observation: To critically analyse the selected case studies at their respective sites.

1.5.3 Research materials

- Questionnaire
- Camera
- Sketch book
- Electronic facilities (Internet, cell phone, email)

1.5.4 Sampling

The samples all relate to the topic of this dissertation and have provided meaningful in-tell on the subject through architectural interventions and the public.

The samples were chosen because of their location in South Africa, as this provides data relevant to the local context. All three case studies needed to be sporting facilities as sport is an integral element of this dissertation. Questionnaires were handed out randomly to the users of the facilities with the only necessity being that they could understand English.

1.6 OUTLINE OF CHAPTERS

The first part of this document provides an outline on the background research which forms an introduction to the dissertation. It introduces the reader to the chosen topic and forms a working hypothesis.

The second part of the document is a review of literature, which focuses firstly on social theories in order gain an understanding of society and people. It then looks at how people are influenced by sport and if it is indeed a tool for social integration. Literature relating to the built environment and its influence on people is also explored. This is done in order to determine how it can also aid in the goal of social integration. This section is made of three chapters namely chapter two, three, and four.

After the literature review is a chapter on precedent studies. This part of the dissertation still focuses on secondary research but looks at literature related to specific buildings. This research helps in the understanding of how the relevant concepts and theories were explored in an international context. Case studies follow on from precedent studies, and although they too show how the relevant concepts and theories were applied in architecture, it is original research of a building in a South African context.

The next part of the document is the analysis and discussions of the findings. Here the information gathered in the review of literature, the observations at the case studies, and questionnaires and interviews is reviewed as one. Furthermore this chapter recommends a criteria for a schedule of accommodation and site selection for the sporting facility. Through this analysis the outcome of the research becomes clearer and this leads onto the final chapter of conclusions and recommendations where the document concludes the research and gives a solution to the problem raised in chapter one.



Figure 1: South Africans uniting together to support their team (www.thefreebeermovement.com).

CHAPTER 2: SOCIAL NORMS AND THE ROLE OF SPORT IN SOCIETY

2.1 INTRODUCTION

This chapter deals with social issues as it is imperative to understand the social history and norms of society before an intervention can be introduced. A sociological theory is a set of ideas which provides and explanation for human society. The theory of social order is referred to, as it gives valuable insight into the makeup of social constructs within society. By the gaining of knowledge on the integration of people, as well as the reasons for segregation in society. It becomes easier to approach the primary research question of this dissertation and the goal of uniting a nation.

Following on directly from the exploration of social behaviour and norms the concept of 'sport as a tool for integration' is reviewed in detail. This dissertations hypothesis that sport is an extremely powerful social tool is researched through literature in this chapter. The reasons for sports ability to break down social barriers and adjust what is viewed as 'social norms', becomes paramount to the resolution to the research problem visited in chapter one.

2.2 SOCIAL NORMS

2.2.1 Social structure

All social theories fall into two main categories: functionalism and Marxism; which attempt to analyse how society fits together (Haralambos and Holborn, 1991: 765). Haralambos and Holborn (1991) explain that a functionalists view of society is one of meeting peoples basic needs, and how different parts of society help to meet those needs. Furthermore they mention that Marxists believe society relies upon an economic structure, where it is segregated into classes, which are most often in conflict with each other.

Marx writes that *"society does not consist of individuals, but expresses the sum of inter-relations, the relations within which these individuals stand" (*Haralambos and Holborn, 1991).

The theory of social order touches on both the above mentioned categories. It is a set of linked social structures, social institutions and social practices which create and maintain the ways in which people relate to one another and behave. It refers to elements within a society which remain relatively constant such as: property, exchange, power relations, cultural forms, communication and values (Hechter and Home, 2009). Human beings are both individual and social, each inhabiting a separate physical body and having their own experiences, information, feelings, and ambitions yet everyone still has to co-exist. Hechter and Home (2009) believes that for social order to exist at all people have to be able to co-ordinate their actions with others, and must co-operate to attain common goals.

Social order was first recognized by Thomas Hobbes and he believed it was because of the notion of social contract (Hampton, 1999). Since then social theorists such as Karl Marx, Emile Durkheim, Talcott Parsons, and Jurgen Habermas have all proposed different explanations for social order and what it is made up of.

Hobbes theory of social contract is of the view that peoples morals or political obligations are dependent on a contract or agreement among them to form the society in which they live (Hampton, 1999). The social contract is essentially a morally justified agreement made amongst individuals. It is used as a means of demonstrating the value of a government, it obliges citizens to respect and obey the state in exchange for security and stability. Hampton (1999) states that Hobbes felt that people come together and agree that there needs to be a higher committee which has the best interests of the public at heart.

Karl Marx who was the founder of Marxism, felt that production or economic structure within society is the basis for social order. Marx believed that people connect only because they have to. He speaks about the 'relations of production' which refers to the relationship between bosses (capitalists) who own the means of production, and the workers (Haralambos and Holborn, 1991). According to Marx, history evolves through the interaction between the mode of production and the relations of production. He described capitalism as a system of relationships among different classes and believed the goal of capitalists which is profit, is produced by exploiting the working class (Anderson and Taylor, 2006: 16). Workers sell their labour for wages but capitalists have to make sure workers are paid less then what they deserve in order to make a profit. Anderson and Taylor (2006) write about how this system creates all sorts of conflicts and effects society’s social beliefs.

Anderson and Taylor (2006) mention how Marx thought that the economic organization of society was the most important influence on people's lives, both on how they behave and think. The working class starts to buy into the capitalist's way of life, and supports it rather than supporting the interests of the working class themselves. This is because the capitalist's class controls the production of goods and the production of ideas in the form of publishing companies, universities and the media. This all creates a segregated society, there becomes a segregation due to class and because this is seen as 'normal' it is accepted by the working class and social integration becomes a struggle (Anderson and Taylor, 2006).

Durkheim's theory focuses on what holds people together, and how different social classes actually work together in harmony. According to Durkheim, people in society are held together by belief systems (Anderson and Taylor, 2006: 15). The rituals of religion and other institutions are public-ceremonies that symbolize and reinforce a sense of belonging. He focused his work on two types of social integration: mechanic and organic.

Durkeim (1893) writes that mechanic integration is when integration occurs because of common beliefs and cultures. This is often evident in small communities where there is a similar up-bringing. This is quite evident in present day South Africa where culture still plays a large role in who people associate themselves with.

Organic integration occurs as a result of mutual independence. As a society grows and people specialise in their chosen field, they cannot produce all the things they need so they must interact (Durkheim, 1893). Integration is a result of the recognition that each needs the other and the cultural barrier of the past becomes null in void.

Sport serves a similar function as the organic integration Durkheim speaks of. Instead of a person's upbringing or culture being the defining factor for integration it becomes the common need of each persons. Similarly two people with totally different beliefs that both support the same sports team will interact and chat about their team, the emotional passion for their team far outweighs their differences (Keim, 2003). Sporting events do not only bring people together in one space but because it is a common interest, it encourages interaction between different cultures and social classes, it breaks down social barriers.

For Habermas, it is all of these, as well as communicative action. He feels Government and common morals, the economic capitalist framework we live in, and shared sets of social norms which stem from common beliefs all form our social order, yet it also comes down to the individuals communicative action (Hechter and Home, 2009).

Social order or social structure has been heavily influenced by history. Hechter and Home (2009) state there seems to be a demand from humans to form some sort of order in which to live their lives. They say that people cannot cope with complete freedom and require rules and common norms in order to feel a sense of comfort. Everything in our past has set up barriers against integration, in this quest for order, complete integration has been lost and instead we are left with many groups of likeminded thinkers whether it be through elected government, capitalism, religion or culture. Durkheim (1893) speaks of common beliefs, there needs to be one element which bridges the gap between all of these institutions/guidelines in order for total integration to occur. Sport seems to fill this role, no matter your class, religion, or culture, sport seems to have the power to 'level the playing fields'.

Through the understanding human's needs for social order and the makeup of it through different theorist's beliefs a greater understanding of society is gained. By finding out why people interact, whether it is for a common interest or conflicting interests, it becomes easier to understand how to approach the subject of integration.

2.2.2 Social interaction/integration

"The concept of integration is characterized primarily as a process of combination: two or more elements are merged with sufficient interaction so that unity of the newly formed entity is achieved. The attributes of the concept of integration, therefore, include process, combination, interaction, and unity. The concept of integration is useful in evaluation of reconciliation of past and present identities and altered role relationships within the environment" (Westra and Rodgers, 1991).

For decades South Africa was subjected to the very opposite of integration. Apartheid meant that most of the population lived under conditions of exclusion (Keim, 2003). South Africa is a 'rainbow nation' with many different races and cultures all with different beliefs. Keim (2003) says that with a country like South Africa, embarking on the road to integration must base this underlying concept of integration on respect for the cultural identity of all people of society. Due to the many different beliefs of the public it must be accepted that the cultural convergence of different population groups can only be achieved up to a certain degree.

"If we wish to celebrate our diversity, to have many 'cultures' making up one 'rainbow' nation, we have to ensure that our society offers all its members the opportunity to

participate in, and draw benefit from, mainstream political and economic activity, as well as the opportunity to proclaim their difference" (Sharp, 1995).

"The following factors may be regarded as prerequisites for successful integration within a multicultural South African society:

- *Freedom of choice.*
- *The preparedness of all groups to mutually accept one another.*
- *A holistic understanding of the cultural background of people and their acts.*
- *The permeability of social borders.*
- *The ability to understand integration as an ongoing process, and not to equate it with assimilation."*

(Keim, 2003).

Wiener and Diez (2009) state that the European integration theory is slightly different as the tendency in Europe is to strive for conformity and to level out differences and cultural group identity or sub-identity, is not always tolerated. In South Africa, observing and maintaining delimitations while respecting one another may be the most important conditions for the success of integration.

Mutual respect and tolerance of one another is vital for an integrated nation (Keim, 2003). This is a necessity especially in a multi-cultural country such as South Africa, and unless this respect is shown South Africa will not be a united nation. Everyone does not need to have the same beliefs but a basic understanding and acceptance of others beliefs is required (Sharp, 1995). Sport can help generate the atmosphere under which population groups can begin to move in this direction.

2.2.3 Segregation

2.2.3.1 Background

Segregation has been around since the dawn of society. Kies (1943) writes how in the interest of world domination segregation began, East was separated from the West, furthermore within that there was segregation into races and nations.

"It is truism that all societies are divided. There are divisions between racial and ethnic groupings, between the rich and the poor, the young and the old, between men and women, adults and children, healthy and the sick and so on" (Sugen and Bairner, 2000).

2.2.3.2 Socio-economic

Social scientists describe class as 'social stratification', which means that society is made up of many groups of people (George and Smart, 2003). In Western countries these are known as the working class, middle class, and upper class. These different groups are made up of people who have the same social, economic, or educational status (Haralambos and Holborn, 1991).

It is usually the 'upper class' which provides jobs for the 'working class', however although they may interact everyday they are still segregated. Haralambos and Holborn (1991) state that often the upper class see themselves in a 'higher light' than people who belong to other classes, and this causes conflict, jealously, and hatred amongst these different groups.

2.2.3.3 Apartheid

Racial segregation is generally outlawed but does still exist, as suggested by Thomas Schelling's models of segregation (Schelling, 1969). Racial segregation in South Africa began in colonial times when parts of the country were under Dutch and British rule. Witz (2003) writes that the actual term 'Apartheid' which in English translation is 'apartness' referred to a legislation which was introduced by the national ruling party which was in office from 1948 to 1994. This legislation took away the rights of the black majority population and white supremacy and Afrikaner minority rule was obtained (Witz, 2003).

The effects of Apartheid have left a mark on South African societies which are currently in a process of social reconstruction. Under the apartheid regime South African people of colour were seen as an inferior part of society. This resulted in the segregation of people, cultures and societies of not just black and white people but Indian and coloureds too. Non-whites were forced to live on the outskirts of cities under unsuitable conditions (Haymes, 1995).

"…The white supremacist thinking and attitudes that undergird urban mythologies about blacks have resulted in their spatial regulation and control in cities…" (Haymes, 1995: p5).

Haymes (1995) makes reference to non-whites being physically segregated from where whites lived. This forced non-whites to live on the outskirts of the city, away from amenities and other essential services and having to deal with poor quality of education, jobs and general lifestyle. As a result non-white people found themselves in a cycle of constant oppression without the opportunity of leading a decent life. The integration of different groups of people was non-existent. South African societies have no doubt developed from the past but unfortunately the scars of the past are still very much present and continue to be expressed and experienced to this day (Witz, 2003).



Figure 2: This image shows how the white population wanted nothing to do with other races (www.wordpress.com).

2.3 SPORT AS A TOOL FOR SOCIAL INTEGRATION

2.3.1 Background of sport

Evidence that suggest sprinting and wrestling was practiced over 17, 000 years ago has been found on paintings in the Lascaux caves, France. People have always enjoyed competing against each other. In prehistoric times, a hunter who could run fast and throw a stone or spear accurately was a valued member of the tribe, as he would be more likely to catch food and be able to support and protect his family (Baker, 1982).

Sport was so important to the Ancient Greeks that they included athletics in many of their religious festivals. In 776 BC they held a festival of sports to honour Zeus, the greatest of all Greek gods. Athletes from all over the country gathered in the stadium in the valley of

Olympia to test their speed ,strength and skill in the first Olympic games (Baker, 1982) (Fig 3). The Ancient Olympic Games were religious and athletic festivals held every four years at the sanctuary of Zeus in Olympia, Greece. Competition was among representatives of several cities and kingdoms of Ancient Greece. It has been widely written that during the Games, all conflicts among the participating city-states were postponed until the Games were finished. This grace period of the hostilities was known as the Olympic peace or truce (Swadding, 2000).



Figure 3: The Stadium of Olympia, Greece (www.olympia-greece.org).

In the nineteenth century and the first half of the twentieth century mixed sport was taboo, the idea of sport being and integrator, was the furthest thing from the truth (Baker, 1982). Instead it could have been viewed as an element of segregation as only those within the same economic class, social status and race participated together. Today sport promotes an idea of equality amongst people as everyone plays by the same rules. Nauright (1997) states that socially anyone can participate in sport and professionally the only segregator is the individual's talent. Race, culture, or religious beliefs do not better your chance of making a team, today on the sports field rules apply equally to all. Thanks to the benefit of a prescribed set of norms and rules governing all sporting codes, sport displays the greatest number of common features, which go above specific cultures. This set of rules, common for all, relates

back to what Durkheim (1893) stated about common beliefs which create a social order. Harms (1982) states *"this commonality qualifies sport as a pre-eminent area for intercultural exchange and communication."*

The popularity of sport has grown immensely over the years. This is due to the competitive nature of people coupled with the competitive nature of sport (Sugden and Bairner, 2000). Both amateur and professional sports attract spectators both in person at the sport venue and through broadcast mediums including radio, television and internet broadcast. Modern sport is not only a lucrative business but it still incorporates the 'togetherness' that was evident in the Ancient Greek times (Swadding, 2000).

2.3.2 Relevance of sport in society

"Sport is one of the most significant practices of the late 19th century. Its significance was even more marked in the late 20th century and will continue to grow in importance as the world develops into a 'global village' sharing the English language, technology and sport" (Bale, 2004).

Sport forms a part of society as both an educational element and entertainment. It forms part of human and social development, it can contribute to social cohesion, tolerance, integration, and is an effective channel for physical and socio-economic change. It can be used to bridge cultural gaps, resolve conflict and educate people in ways that very few activities can (Houlihan, 2008).

Carey (2004) writes that sport is a means of exchange and understanding among people of various backgrounds, nationalities or beliefs and promotes expression beyond traditional barriers. It is part of every culture and can be used to bring people together, even entire nations as it is a unique vehicle in transgressing social differences, "*Such a vehicle is universal in its appeal, a common denominator, opening doors to all levels of society. It is international in scope without cultural or social hang-ups. It moves swiftly through all differences - race, religion, age, and sex*" (Carey, 2004: 1).

"It is time that the integral role which sport plays in the process of nation-building is fully recognized. Sport is an investment. It is firstly an investment in the health, vitality and productivity of one's people. It is secondly an investment in their future. The social benefits include an overall improvement in the quality of life and physical, mental and moral well-

being of a population. Furthermore, successful athletes serve as role models for the youth of the country, as achievers, as unofficial ambassadors, and as individuals committed to equality and fairness in competition" (Department of Sport and Recreation South Africa, 2002).

Modern sport receives more media attention than politics, it is constantly in the eye of people and its influence on them, especially on the youth is great. The youth look up to professional sportsman and strive to be like them (Fig 4).



Figure 4: Sportsman as role models (www.roadsafety.co.za).

Clark (2010) establishes that partaking in group activities such as sporting events or practices helps in the development of leadership skills and team building. This activities help to teach the youth important life skills of how to be tolerant of their peers. Some of the benefits of sport in daily life include: fitness, stress buster, learning skills, teamwork, socializing, builds character, constructive use of time, health, decision-making, and self-confidence, the positives are endless.

2.3.3 Importance of sport in South African history

Nauright (1997) writes that it was the British settlers who brought the culture of sport to the shores of South Africa. Although sport was practised mainly by the whites at first, the black population did engage with the concept rather quickly. By the turn of the twentieth century black soccer, rugby, and cricket teams already existed (Archer and Bouillon, 1982). Sport was still at this time rather segregated and only after the 1950s and 1960s when most nations

abandoned race polices, did the world start to view sport as a social unifier that transcended race and politics. South Africa on the other hand seemed to go against the grain at an alarming pace, racial segregation was applied to sport in South Africa by means of legislation in 1948 (Keim, 2003: 27).

Booth (1998) mentions how sport development was made extremely hard for non-white communities as national policies denied them access to the best sporting facilities. It was also impossible to identify a national South African team because the greater population of the country were not allowed to be selected. The non-white community found it hard to support a 'South African' team which had no representation from their racial group (Nauright, 1997). South Africa was also not allowed to compete against foreign countries because of Apartheid policies. The country was banned from the 1964 Olympic Games and this ban officially lasted until 1992 (Keim, 2003). Nauright (1997) states that due to non-whites not being allowed to be chosen for the 'South African' team, and South Africa as a nation not competing on any international stage it was very difficult for the country to have its own identity.



Figure 5: Poster showing how the world wanted to alienate South Africa due to Apartheid (www.kora.matrix.msu).

After the 1994 elections sport became the hot topic of debate. With the country now being able to compete on the national stage and with the national teams being chosen on merit and not race, President Nelson Mandela spotted an opportunity (Nauright, 1997). Sport was already hugely popular in both the black and white communities, Van Zyl Slabbert (1985) stated that *"for white South Africans generally, sport is much more than mere escapism or an opportunity to demonstrate individual or team excellence. It is more than a religion, it is a total strategy against o total onslaught; it is the guardian of our national; the barometer of our despair or hope"*.

Nauright (1997) speaks about how President Nelson Mandela was to use sport as a tool of promoting reconciliation and racial integration. The government believed that sport was the best cultural activity through which to promote socio-political uplift, breaking down barriers, creating a new national identity in which all South Africans were drawn together (Booth, 1998). President Nelson Mandela used the 1995 Rugby World Cup as the first step on a grand scale to unite the nation. He stated that *"the Springboks are our boys. I ask every one of you to stand behind them because they are our pride, they are my pride, they are your pride"* (Nauright, 1997). The national team although mostly white did contain a player of colour with the great Chester Williams on the wing (Fig 6). Keim (2003) writes how the team was also doing remarkably well against all the odds and by the time they had reached the final the whole country had rallied behind them in support. The president was to shake the player's hands on the field before the national anthems were sung and when he appeared wearing a springbok jersey which had initially represented the 'Afrikaner driven oppression', he was met with a welcoming response of his name being chanted around the stadium. Booth (1998) speaks about how South Africa then went on to lift the trophy, and it is still to this day probably the greatest leap forward in the goal of uniting the nation (Fig 7).



Figure 6: Chester Williams (www.supersport.com).

Figure 7: President Nelson Mandela congratulating Francois Pienaar (www.rugbyworldcup.com).

Archbishop Tutu:

"It (i.e. sport) is probably breaking down barriers, but more importantly perhaps, just the image which you can get through a soccer match. Watching black and white players as a team makes integration normal...when Chester Williams excelled on the rugby field many prejudices whites had against blacks were broken down" (Keim, 2003).

2.3.4 Sport as a non-verbal means of communication

There is a widespread notion that cultural barriers are more easily overcome in sport than in other areas of social life. For this reason sport is referred to as the *"conveyor of culture of the most accessible symbolism"* (Keim, 2003).

Stüwe shares this view, stating that, *"sport is marked by a simple and easily comprehensible form of symbolism, which makes it possible to eliminate linguistic barriers and other obstacles to interaction... Sport, with its primarily nonverbal and immediately comprehensible interactions, is therefore particularly suited as a medium for overcoming feelings of socio-cultural unfamiliarity and 'otherness'"* (Keim, 2003).

Nauright (1997) writes that through the playing or supporting of sport, individuals can interact and benefit from this social interaction without having a conversation. Similarly during World Cup events, two people from different parts of the world can sit next to each other during a game, and without being able to speak to one another because of language issues they can still connect (Keim, 2003). By supporting their team and getting lost in the great atmosphere of the game there seems to be a mutual understanding that occurs.



Figure 8: Supporters enjoying the soccer at the Royal Bafokeng Stadium in Pokeng (www.bleacherreport.com).

2.3.5 Sport as a medium which transcends divisions of class

Sport is viewed as a means of promoting nation-building and a tool which breaks down social barriers created by a capitalist world of class.

Neville Alexander:

*"I think sport, music and art are inherently capable of playing the integrative role where they can teach one another about their cultural background. Through sport we bring together people" (*Keim, 2003).

Keim (2003) writes how sport can be described as a medium which transcends class divisions. He believes the idea of class is lost in the moment as players participate or support sport. It creates a common base which everyone belongs and no matter the class there is one common goal.

Durkheim's (1893) social theory which speaks about a common belief creating a integrated society because everyone has common goals. Sport becomes this common ground Durkheim (1893) writes about, sport unites the people (Kieim, 2003). People's passion for sport has the ability to overcome their differences, divisions of class which are brought about through various social constructs become irrelevant (Jarvie and Maguire, 1994).

2.4 CONCLUSION

Through the review of literature it can be concluded that people are highly complicated social creatures. There is literature which suggests that people crave social contact however in the same light it is written that people throughout history have put structures in place to segregate different groups (Haralambos and Holborn, 1991). It can however be concluded that a united society will benefit all (Haymes, 1995). In a world that is made up of an array of different people there will always be elements that do not promote social integration but instead segregation. A successful city promotes integration between its people yet in South Africa this is not always the case (Haralambos and Holborn, 1991). Socializing with others is an extremely important part of a functioning society and there needs to be opportunities for such things to happen.

It is not as simple as getting people together in the same space, this is important but does not necessarily mean people will socialise. There needs to be a common interest (Durkheim,

1893). Sport is a perfect opportunity which needs to be taken advantage of as former president Nelson Mandela did in 1995 (Nauright, 1997). Sport is not only a physical activity but an area where people interact socially. Jarvie and Maguire (1994) state that sport and leisure activities form an integral part of social life in all communities and are intricately linked to society and politics. It is shown through literature that sport is seen as a more cost-effective approach for dealing with social problems than correcting the consequences of aggression, crime, violence, and abuse through police, correctional or social services. Sport is a very big part of people's lives globally, by using sport one can reach and have a positive impact on the majority of the world's population. It can be concluded that sport plays a positive role in society and it can be used as a tool for integration (Keim, 2003).



Figure 9: Sport as a tool for integration (www.capetownmagazine.com).

CHAPTER 3: AN ENVIRONMENT WHICH ENCOURAGES INTEGRATION

3.1 INTRODUCTION

This chapter deals with elements which attract and encourage integration both mentally and physically. It looks at literature that covers the theory of Genius Loci which refers to the atmosphere of a place (Norberg-Schulz, 1980), as well as how this theoretical element can attract people. Similarly the concept behind successful public space is explored to give in-tell on what forms an environment which encourages integration.

There is a belief that social interaction has a positive influence on people's lives as stated by Gehl (1987) and Pillemer (2000), spaces which encourage this integration need to be encouraged. Due to everyday activities and stresses, social activities cannot always fit into ones busy schedule therefore spaces need to be designed to enrich people and bring people together. Jan Gehl (1987: 19) speaks about people's desire to interact and be around others and a well-designed public space promotes and encourages this interaction to happen. Durban is one of South Africa's most diverse urban centres due to its heritage and historical background and this should be celebrated by the public, together, in public spaces.

3.2 MEANINGFUL PLACES

"When we are travelling in a foreign country, space is 'neutral' that is, not yet connected with joys and sorrows. Only when space becomes a system of meaningful places, does it become alive to us" (Norberg-Schulz, 1971: 224).

Nirupa (2011) writes that a building should not only be a functional space, instead there is an opportunity to create something which has meaning, something with a soul. She speaks about the importance of meaningful architecture to explore higher values. A place should encompass the physical setting, as well as the human experience and interpretation (Brandenburg and Carroll, 1995), and should create a sense of 'place attachment' where the user develops an emotional bond to the environment.

By creating architecture which is relevant to man in terms of social, ideological, scientific, philosophical, and religion it has more depth and because of this greater connection to its user, is more successful (Brandenburg and Carroll, 1995).

3.2.1 Genius loci

Originating from within the philosophical branch of Phenomenology, Genius Loci deals with the notion of place-making in the context of architecture. Husserl (2002) writes that Phenomenology is a research method on the basis of objects and events and how they are perceived by the human consciousness. The philosophy was first developed by Edmund Husserl a German mathematician (Lewis and Staehler, 2010). According to Haralambos and Holborn (1991) the theorists Alfred Schutz was the first person to use Phenomenology in the field of sociology. Genius Loci which was derived through Phenomenology was most notably studied by the theorist Christian Norberg-Schulz. He was the first to relate use Phenomenology in architecture (Zumthor, 2006).

Genius Loci, Latin for 'the genius of the place,' this phrase refers to classical Roman concept of the protective spirit of a place. In today's terms, Genius Loci usually refers to a location's distinctive atmosphere (Norberg-Schulz, 1980). According to Zumthor (2006), atmosphere is something we perceive through our spontaneous emotional sensibility which is a form of perception that works instantaneously and essentially gives meaning to places and buildings.

"Architecture is a thing of art, a phenomenon of the emotions, lying outside questions of construction and beyond them. The purpose of construction is to make things hold together; of architecture to move us. Architectural emotion exists when the work rings within us in tune with a universe whose laws we obey, recognize and respect. When certain harmonies have been attained, the work captures us. Architecture is a matter of 'harmonies', it is a 'pure creation of the spirit'"(Le Corbusier, 1986).

The idea of place-making is more complex than a physical setting. Fleming (2007) speaks about how ones interaction with a space over a period of time, and that emotional attachment, transforms that 'space' into a 'place'. Norberg-Schulz (1980) defines a place as the concrete environment comprised of a series of phenomena. He speaks about an environmental character created by elements such as form, texture, colour, and physical objects. Similarly to Fleming (2007), it is argued that activities which happen within in a space such as cultural

meetings add to its identity as a place. Knowledge, history, memory, and the emotion related define a space.

Norberg-Schulz (1980) writes that although the physical is important the emotional attachment to the space is just as important. By connecting to a space on an emotional level the space forms a 'spirit' or an 'atmosphere'. Genius Loci translated is said to be the 'spirit of a place', and it is only formed because of a combination of the physical and the emotional elements (Norberg-Schulz, 1980).

Thus the concern for architects, planners and man in general should be to actively combat placelessness by assuming a phenomenological approach to design. Phenomenology is best described as a 'return to things' (Norberg- Schulz, 1980), the act in which people must first take the time to understand the surrounds and environment before acting upon it. It is this understanding and appreciation of the character of a place, that contributes to the creation of the 'Genius Loci' or the 'spirit of place' (Fleming, 2007).

3.2.1.1 Sport creating an atmosphere

Husserl (2002) writes that Phenomenology argues that something does not live independently but instead only exists in people's perception of it. Furthermore he argues that the mind can comprehend non-existent things. For example, one should not discuss that a tree is an object but should rather speak about the experience of the tree. Similarly one should not discuss a building as a physical object but what one feels within the space (Norberg- Schulz, 1980). A sporting event is not just people running around a field, it is a passionate, lively, positive experience (Keim, 2003).

Sport is an extremely popular spectator show, but it does not only draw sporting people instead it seems to attract a wider audience (Nauright, 1997). The atmosphere of a sporting event which is made up of the non-physical is the main draw card. The emotional element Husserl (2002) refers to is the passion, excitement, social powers, energy, and the feeling of an 'occasion' of sport (Fig 10). It is not just the physical but the emotional attachment to a space which makes it meaningful. By harnessing this 'spirit of a place' in a formalised space which captures the social powers of sport, a space is created which helps strive towards the goal of social integration.



Figure 10: A passionate positive atmosphere (www.egyptindependent.com).

3.3 SOCIAL ENVIRONMENTS

3.3.1 The loss of public space

Modernist town planning segregated people immensely. Jacobs (1961) argues that there is no interaction at a street level, people travel far by car to go to work and then travel home again. Jacobs (1961) writes that modernist urban planning rejects the city, because it rejects human beings living in a community. The modernist planners used deductive reasoning to find principles by which to plan cities, one policy was the separation of uses (residential, industrial, commercial). These policies she claimed destroy communities and innovative economies by creating isolated, unnatural urban spaces where no integration could take place.

Modernist planning was and still is a goal to transform an unwanted present to a utopian future (Sandercock, 1998). Sandercock (1998) believes the capitalist approach of greed and wealth, which does not account for all of society is the backbone of modernist planning, and loss of public space. Modernist cities were designed as a machine which rejects the social conditions of a 'place' (Jacobs, 1961). This concept has a great influence on integration, it purposely discourages integration in the belief that it will increase productivity.

Public space is an integral part of a functioning society, there is a need for recreational spaces where people can integrate and relax (Whyte, 1988). Humans are not machines much to the despair of the capitalist society. People function better if they have a balanced life and public space allows for this and is an integral part of the social need of the city.

3.3.2 Successful public space

According to Whyte (1998), a good public space enriches the people's lives who interact with it. He says public spaces are places where people can integrate with one another, they are the stage for public lives. As in a play production the stage or venue is highly important but the show is the actors. A stage or the props will only heighten what the actors are doing, similarly people will have meetings or socialise anywhere but the better the space is the better the level of integration will be. Jan Gehl's (1987: 19) speaks about how public spaces need to attract people to them, which will in turn attract more people.

A good public space will have many different functions, not only should it operate formally but should also promote social activities. Public spaces bring communities together and encourage social integration by forcing people to bump into one another (Gehl, 1987: 103).

Below are examples of outdoor public defined by Beng-Huat and Edwards (1992):

Plazas add to the vibrancy of the streets within the city itself and create formal open spaces available for civic purposes and commercial activity. In modern usage, a plaza can be any gathering place on a street or between buildings.

Pocket Plazas include small-scaled open spaces that function in a similar manner to the larger plaza. These are more intimate places for seating or dining and provide an area for commercial and neighbourhood activities to spill out.

Urban Parks provide a central open space within a City and are useful for unstructured recreation and smaller structured recreation facilities. The design, operation and maintenance is usually done by government, typically on the local level, but may occasionally be contracted out to a private sector company. They are spatially defined by building frontages or landscaping, and typically consist of formal and naturalistic landscape, combing paths, lawn, and trees.

Neighbourhood Pocket Parks provide smaller open spaces in close proximity to neighbourhood residence. These parks accommodate a wide range of activities and vary in character in response to specific needs and surroundings. The landscape is formal or informal with arrangements of trees and shrubs, utilizing the natural landscape.

Community Gardens provide groupings of garden plots in a publicly accessible area that are available to nearby residents for small scale cultivation.

Playgrounds provide an enclosed open space designed and equipped for children's recreation. They are usually within residential areas and may be freestanding or located within larger parks.

3.3.2.1 Natural elements used to enhance public space

Natural elements soften the harshness of the built structures and help create enjoyable spaces (Gehl, 1987).

Sun

Whyte (1988) writes that the Sun is an extremely important element in making a public space work. He states that it is by no means a necessity but it does make a space more inviting and pleasant. In William Whyte's first time-lapse recording of the Seagram Buildings square in New York he noted that in the late morning when the plaza was in shadow, not too many people utilized it. Then just before midday a strip of sunlight began to move across the plaza and where the sun was people sat (Whyte, 1980: 40). People enjoy taking in the sun's rays (Fig 12).





Figure 11: Public space making use of trees and water features (www.gothamist.com).

Figure 12: People enjoying the sun (Author, 2013).

Wind

According to Whyte (1988), people enjoy a light breeze but it must not turn into a strong wind, as this will mess with women's hair, blow the pages over in books and become a nuisance. He mentions how on a cold day a wind will make an outdoor space unbearable, but on a hot day a breeze may be welcomed.

Trees

There are many benefits of having trees in a public space, however they must be provided in proportion to the size of the space (Whyte, 1988). Too many and a park will feel claustrophobic and more than likely become a crime hotspot (Newman, 1972). There is also a sense of pleasure when sitting under a tree, "*this provides a satisfying enclosure, people feel cuddled, protected- very much as they do under the awning of a street cafe. As always they will be cooler, too*" (Whyte, 1980: 46).

Water

Water radiates a sense of relaxation. People have a natural affiliation to water, seeing it and especially hearing it has a calming effect. Whyte (1980: 48) writes that the problem with most water features is that there is restricted access, people are attracted to water and want to touch it (Fig 11).

3.3.2.2 Physical elements which improve public space

"*The most important physical quality of such spaces is enclosure*" (Moughtin, 2003: 123). Moughtin (2003) writes that people do not feel comfortable in large open spaces, and if a square or park is surrounded by buildings or trees it creates a sense of place and gives the user a sense of belonging.

Whyte (1988) looks at how people travel the streets-not in isolation but how they interact with each other and the infrastructure around the street itself. He speaks about taking notice of even the smallest of details which make a public space successful. One of these 'small' details turned out to be a massive necessity, he noticed that people liked to sit. It did not need to be a bench, it could be a ledge or even stairs but it was a necessity (Whyte, 1988).

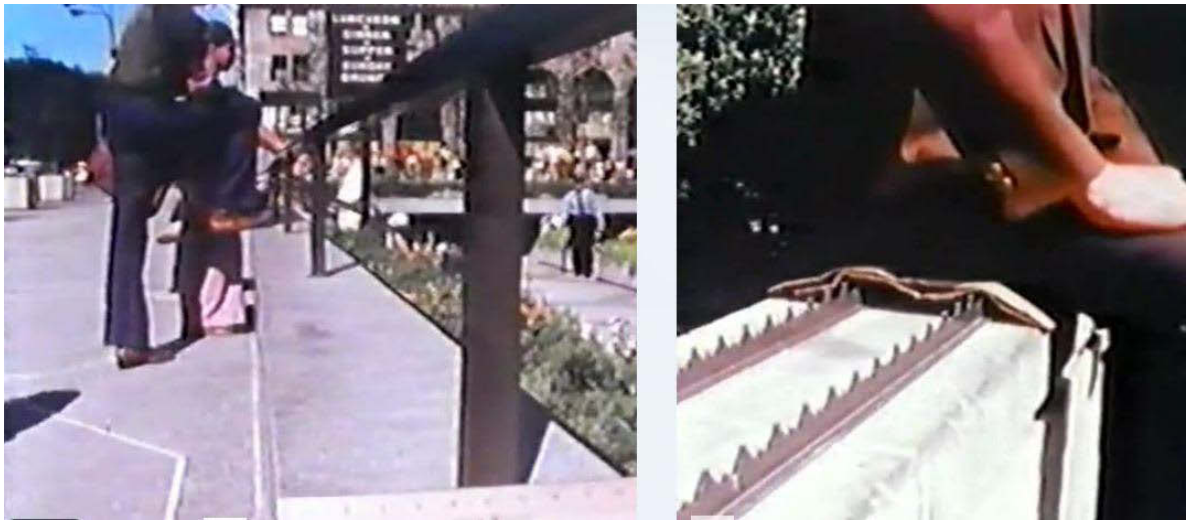


Figure 13 and 14: Un-designed seating opportunities (Whyte, 1988: 113).

Whyte (1988) looks at how spaces are not designed for this critical detail. In the first image (Fig 13) above the ledge is the perfect height to be used as a seat, and it is even facing the prime viewing of the street, but instead it cannot be used as one because of the steel railing. According to Whyte (1988), this railing will poke users straight in the back if it is attempted to be used as a seat. Whyte (1988) states that the second image (Fig 14) above shows how owners of buildings are unaware of the benefits of having people congregating around and interacting with their buildings, by putting spikes down to chase people away (Whyte, 1988: 113). People do not want to stand in a public space for hours, they want to be comfortable and sit down. In his research he found that people gravitated towards objects such as fountains, sculptures, ledges and so on. People do not want to stand in the middle of open space because they feel vulnerable and lost (Whyte, 1988).

The two public spaces below are no less than a block apart from each other, are completely different but are each as successful as the other. The plaza has mosaics, lots of seating, planter beds and trees, where the turf is an empty field covered in artificial grass.

The users have stated that it is the restaurants, shops and theatres which surround these spaces which make them so popular because there is a buzz of people. This is interesting because it shows that the actual space does not need to be an attraction but can instead highlight the attractions which surround it or the people who use it. (Jost, 2008).



Figure 15: The turf (Jost, 2008: 83).



Figure 16: Silver Plaza (Jost, 2008: 80).

Public spaces bring communities together by forcing people to bump into one another increasing the social experience of the space (Gehl, 1987: 103). Gehl (1987) writes that a well-designed outdoor public space creates opportunities for interactions to happen, and he looks at how the physical design of the space can promote this (Fig 17). Gehl (1987: 64) found that 'contact' is the greatest through no walls, short distances, low speeds, one level and being orientated in other peoples directions.

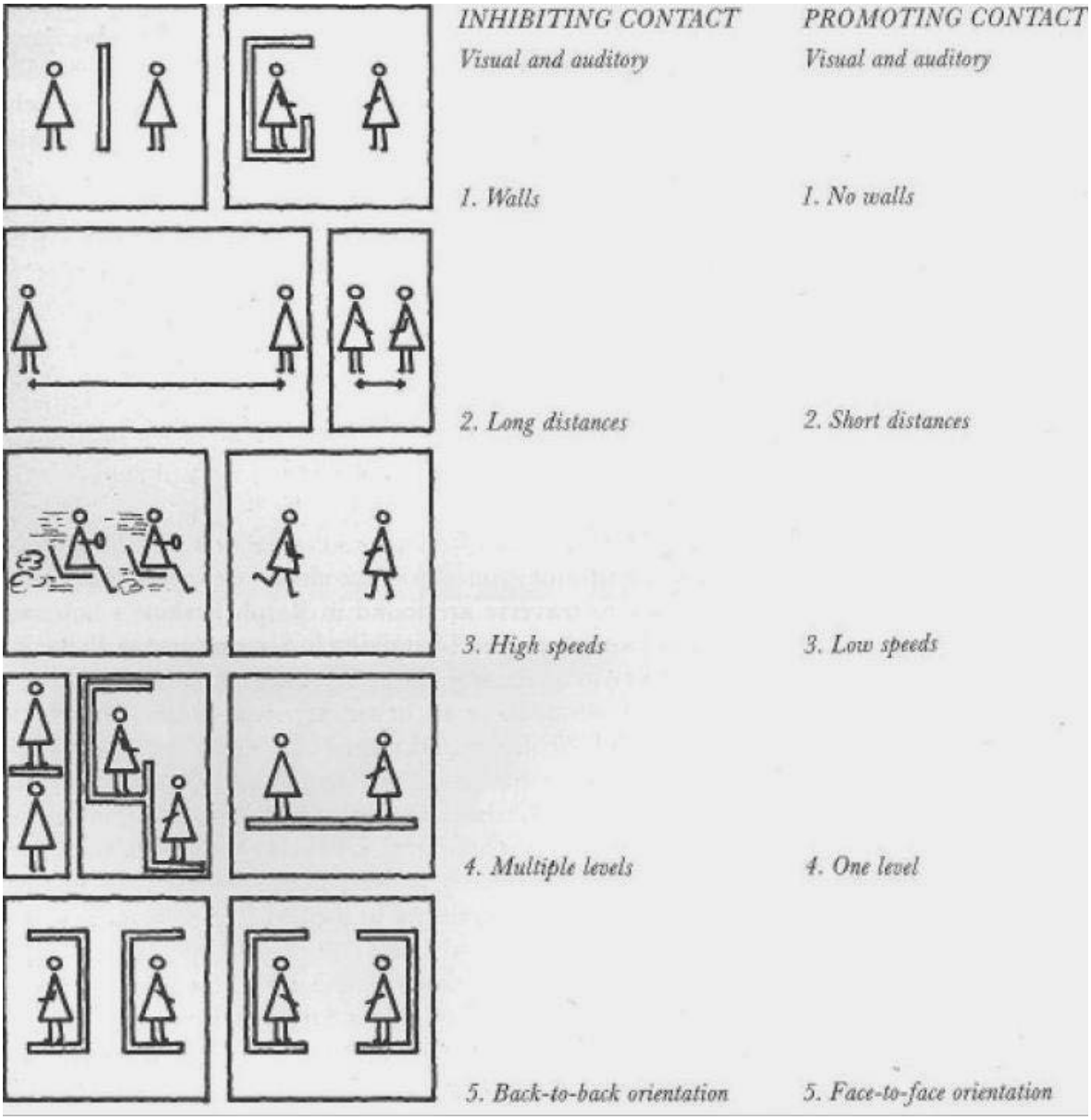


Figure 17: How to promote contact (Gehl, 1987: 64).

3.3.2.3 Attracting people to a space

According to Whyte (1988), the first step to creating activity in a space is to make food available. In New York every plaza has a vendor, which not only meets the demands of food but also draws people into the public space. He states that these vendors also serve a bigger cause, one of surveillance and management, their eyes watch over spaces deterring criminals. Public spaces need management and the users of a space appreciate a familiar face, familiarity gives a homely feeling to a place which people enjoy. It helps create an emotional connection to a space, the space becomes an experience and has more meaning for the user (Husserl, 2002).

Gehl (1987) writes that the best public spaces become 'living rooms' of the city, places where the community can come together and celebrate together. He believes these spaces are more important than the buildings that surround them, because they link everything together and become transition zones between buildings. The fast pace nature of the world means no matter how good a public space is, some people will not purposely go there to relax or socialise it needs to be spontaneous as well (Gehl, 1987). People have many things to run around and do during the day and a good public space should distract them and encourage them to slow down and enjoy the space. Gehl (1987) writes about simplifying life into different categories (Fig 18), he believes that there are three main outdoor activities (Gehl J, 1987:11).

The first is the *necessary activities*- these are things people have no choice over, activities which have to be done such as shopping, going to work. The second is *optional activities*- these are things people are not forced to do but like doing, such as sitting, talking, sunbathing. Lastly there are *social activities*- these depend on the presence of others in a space and include conversations, children at play, listening to people. The level in which people partake in these activities is greatly affected by the quality of the physical environment.

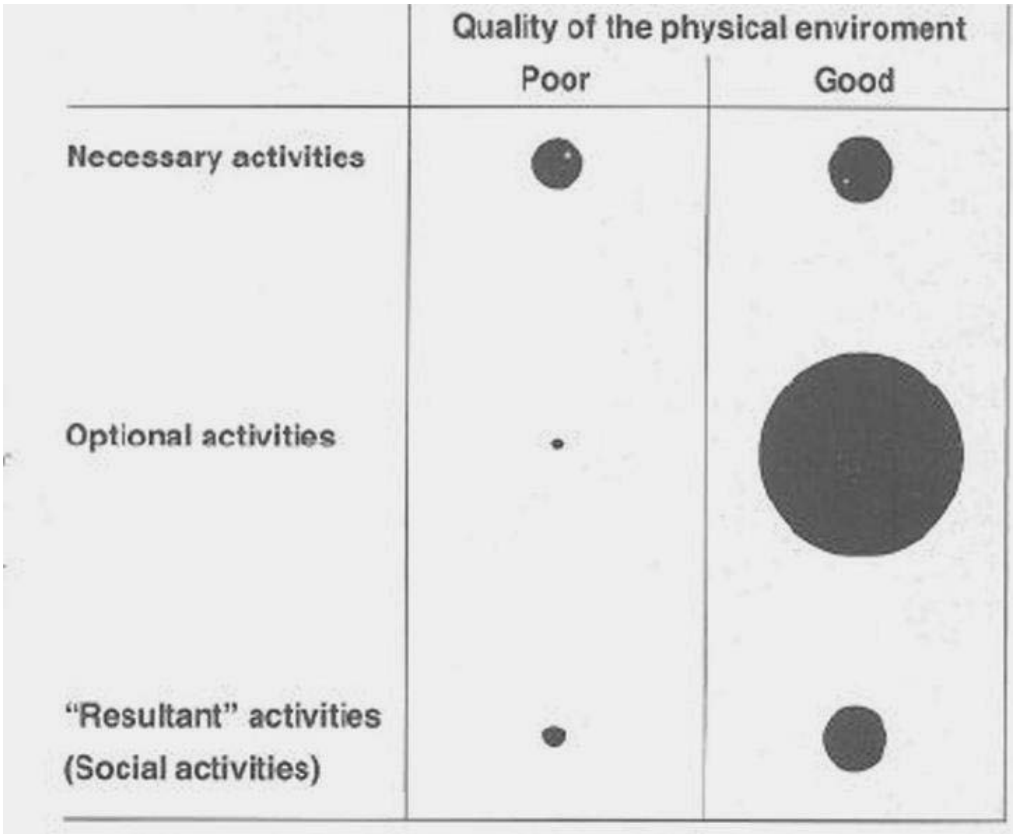


Figure 18: Quality of the physical environment (Gehl, 1987: 13).

Gehl (1987) speaks of the need to create invitations to people to enter the public realm and that it is important for them to remain in that space as well. He views the three categories as the forming of a chain of events (Fig 18). People have to do the necessary activities, people have to go to the shops and that becomes an opportunity to invite and lure them to partake in optional and social activities they may pass. People walking home from the shop should be drawn to a public space to relax or chat to a friend they happen to meet on the street, he believes this is where social integration must occur.

3.3.2.4 The community and sense of ownership

Whyte (1988) claims that a big part of the success of a public space is not only the neighbouring community, but also how the community is involved with the running of the space. He believes public space provides a service to the community, and if it meets the demands of its community and is successful they will lay claim to it and be proud of it.

"Improved surveillance operates most effectively when linked with the territorial subdivision of residential areas, allowing the resident to observe those public areas which he considered to be part of his realm of ownership and hence responsibility" (Newman, 1972: 79).

People want places to be meaningful and they want to create connections with the places they use. The more a civic space can encourage people to take ownership of it the more successful it will become because people look after what belongs to them (Brandenburg and Carroll, 1995).

3.4 CONCLUSION

Integration is something which needs to be encouraged, and through literature this chapter set out to discover the means of doing just that. It can be concluded that although the physical elements in space and design are important, the emotional side is as critical when encouraging integration (Norberg-Schulz, 1980).

People will interact no matter what, but by creating positive places which people can form an attachment, and by designing spaces which promote people bumping into one another, it will enhance social integration dramatically (Gehl, 1987).

CHAPTER 4: CREATING A COMFORTING ENVIRONMENT

4.1 INTRODUCTION

This chapter focuses on the theory of Critical Regionalism and through literature a greater understanding of this theory is gained. In order to create a built environment which encourages social integration, the user needs to be comfortable in their environment. The issue of social diversity means the environment cannot be designed for a specific culture. Culturally specific architecture will only encourage segregation as oppose to this dissertations goal of integration. Instead it must be neutral, not representing any one group of people but all its users.

4.2 CRITICAL REGIONALISM

"Globalization has made everything so accessible and is increasingly entering every part of our lives. It has resulted in many things- including architecture- being homogenized. The identity of the region has suffered as a result and now new theories have been put forward to address this problem. Critical regionalism is a thought provoking take on architecture: it strives to oppose the placelessness and lack of meaning in modern architecture by connecting and drawing the surrounding and contextual forces to impart a 'sense of place' or meaning." (Paterson: 1995)

Lefaivre and Tzonis (2003) write how modernism and post modernism were movements which took the meaning out of architecture, buildings looked great but had a sense of placelessness. They felt that architecture had become a brand which could be seen all over the globe. This meant that a building built in one country could be uprooted and placed in a totally different location around the world and it would not look out of place. Frampton (1983) states that there is a drive for modern buildings to have more meaning, and to relate directly to their context. He believes modernism, post-modernism and regionalism can be combined to create an evolutionary architecture of today, architecture with sustenance and style, directly relating to and interacting its environment.

According to Lefaivre and Tzonis (2003) modernism is the simplification of form and the creation of ornament through structure. They write that modern architecture was driven mostly by technological and engineering developments of the post second world war era.

Iron, steel and glass became the dominant building materials used (Lefaivre and Tzonis, 2003). Lefaivre and Tzonis (2003) write that traditional structural materials started being used aesthetically in buildings. For example, concrete began to be used as a means of architectural expression by Front Lloyd Wright, which can be seen in his 'Unity Temple' (Fig 19) which stands in Oak Park, Illinois.

Lefaivre and Tzonis (2003) mention that by the 1920's modernism had become the dominant style of architecture, Le Corbusier, Mies Van Der Rohe, and Walter Gropius became known as the big three who practiced this style. Furthermore they state how architects had grown bored of traditional architecture and welcomed this movement as they could now design simple buildings. Facade's commonly utilized glass, exterior supports utilized steel and floors and interior walls concrete. Floor plans became highly flexible and functional, steering away from the more segmented floor plans due to load bearing walls of earlier times. This became the key to high rise building design (Lefaivre and Tzonis, 2003). Mies Van Der Rohe and Phillip Johnson's 'Segram Building' (Fig 20) is a great example of the Modernists eras use of materials, non-ornamental and sleek simple facades.



Figure 19: Unity Temple (www.bluffton.edu).



Figure 20: Segram Building (www.wikipedia.org.)



Figure 21: AT & T Headquarters (www.studyblue.com).

According to Lefaivre and Tzonis (2003), post modernism proceeded modernism and was an attempt to bring back ornament and reference to architecture. The functional and formalized shapes and spaces of the modernist's movement are replaced by diverse aesthetics. Buildings incorporated symbols to create a statement or simply to delight the viewer. Phillip Johnson's 'AT & T headquarters' (Fig 21) is an example of this style, the skyscraper has a sleek classical façade with an oversized pediment at the top, in contrast to Johnson's 'Segram Building' here ornamentation is evident, as well as the strongly defined top, middle and bottom.

Both of the above mentioned movements where more worried about the aesthetics rather than the meaning beneath architecture. Frampton (1983) writes about regionalism which is almost unspoken of in the architectural field as it is commonly perceived to be the norm. He states that regionalist's architecture specific to an area is created when things such as culture, climate, and resources of the area are taken into account and appropriately incorporated. There is also a specific regionalism to each building, where it relates completely to its own sites context, climate, solar movement and so on (Lefaivre and Tzonis, 2003).

Frampton (1983) questions how to move along with a modern and advancing world, whilst still retaining the core source that makes a region unique and special. He believes that modernism should not be forgotten, instead he proposes that there should be an acceptance of the advances it has brought, but at the same time architects should regard, the response and impacts that the structure will have on the context, and the human social aspects. Frampton (1983) states that Critical Regionalism not only brings back the beauty of meaning in architecture, but also draws its influences from the modernists movement by incorporating international trend. Furthermore he writes that architecture should respect and add to the Genius Loci of a place and not to disregard it.

Critical Regionalism works both on the macro and micro scale which can be better described using Frampton's (1983) six points, in which he breaks down the beliefs on which it is based:

1. Culture and civilization

Frampton (1983) discusses the nature, or the state of the building that is controlled by the building industry to the point where it becomes restrictive. If buildings are stripped down to the bare minimum they will all be identical. The world has become so globalized that the possibility of creating a unique forms is limited. Architects try to hide this with concealing detail and over designed facades. Frampton (1983) argues that the two causes to the degradation of the city fabric is free standing high rises and the numerous highways. Cities are designed around roads, because of the notion that places need immediate access (Jacobs, 1960). Roads that allow for easy transportation and access have taken up so much space that the natural growth of the city is limited by not being able to develop close to the ground but instead having to rise into the sky. Frampton (1983) writes about cities such as New York which boast powerful skylines, are mimicked by developing countries to try to attain the image of that foreign culture, an image that doesn't fit into their own context.

2. The rise and fall of the avant-garde

According to Frampton (1983) the modernization of society and architecture goes hand in hand with the emergence of avant-garde. It has played many roles over the centuries starting as a progressive liberating force which eventuality lead to the alienation of the middle and lower classes. Patterson (1995) writes that this separation has contributed to people wanting to attain something different, striving for something foreign and appealing. In terms of architecture the new movement began the trend of copying the technology and appearance of a building and planting it in a new country, no matter the differences in climate, content and culture (Frampton, 1983).

3. Critical regionalism and world culture

Frampton (1983) suggests that Critical Regionalism is defined as the balance between advancing with the world, and needing to have a connection to local culture and history. Patterson (1995) discusses world culture and the universal civilization. He writes that world culture is the 'now' while the universal civilization is 'what has come before'. He feels that society should strive for a balance between the two opposites. Critical Regionalism can act as a mediator of this relationship between universal civilization and the nature's particular to the region or place (Frampton, 1983).

4. The resistance of the place and form

Frampton's (1983) last theoretical point speaks about boundaries as a definition or reference point. He claims that without clear boundaries there is no clear reference to where one belongs giving one a sense of placelessness and not belonging.

"...the condition of 'dwelling' and hence ultimately of 'being' can only take place in a domain that is clearly bounded" (Patterson, 1995).

Frampton (1985) mentions that development is being ruled and driven by a set of rules. Meaning that the city is growing in a predetermined manner which disregards context or culture.

5. Culture versus nature: topography, context, climate, light and tectonic form

"The difference between modernism and the critical regionalism begins from the very decision concerning earth works. While modernist's movement views a flat datum as the most economic and rational start point, a tabula rasa tendency, which bulldozes the regularities of the topography into a flat site; the critical regionalists see this as a technocratic gesture, and

the creation of placelessness. They see the opportunity of engaging with the site, historically, geologically and agriculturally. Embodying its past, engaging its present and transforming its future; an expression of place above the rouge of sentimentality. This idea not only applies to topography, but is carried through in the management of existing urban fabric, contingencies of climate, and incorporation of local light" (Frampton: 1983).

Frampton (1983) writes that besides the topography of the site, the physical aspects of a buildings performance are very important. He believes the climate and the challenges it brings is something that should not be over looked when designing a building, by focusing on these elements the building will be true to its context. Furthermore he suggests that buildings that are honest will connect better with the occupants.

6. The visual versus the tactile

Frampton (1983) suggests a way of resisting the domination of universal technology. When the material and technology is not specific, it becomes impersonal. He feels that people should experience their surroundings, not only visually but touch as well. The building must be about the experience of the surroundings through the senses. If done correctly the building will have a much more personal effect on the people that use it. "*In this way, Critical Regionalism seeks to complement our normative visual experience by readdressing the tactile range of human perceptions"* (Frampton: 1983). Lefaivre and Tzonis (2003) write that architecture should be truthful and mean something to the occupants or people that use the building.

4.3 CONCLUSION

Critical Regionalism is an approach to architecture that strives to counter placelessness and lack of identity in modern architecture by using the building's geographical context. By creating a building which relates to its context a meaningful architecture is born. The users of the building feel a connection to it as it represents the area they are from, because of this the user will feel more comfortable and emotionally relaxed. People in this mind-set will be more welcoming to others, and hence there will be more opportunities for social integration to occur. By responding to its context the architecture 'belongs', and the users of the facility similarly feel like they 'belong'. This creates sense of 'place', and this 'homely' environment will be felt by all as it is not culturally specific. This positive social environment will aid in the encouragement of people to interact with one another.

CHAPTER 5: PRECEDENT STUDIES

5.1 INTRODUCTION

This chapter focuses on secondary research gathered largely through architectural journals. The precedent studies were selected for their relevance to the nature of this study namely, 'Four Sports Halls', 'Kaohsiung Stadium', and 'Jean-Marie Tjibaou Centre'. These precedents have been critically analysed against the theoretical framework of this dissertation. Some excel in certain aspects and are weak in others, but if the positives are combined it proves that a building which responds to the topic of this dissertation is possible. The focal aspects of this chapter are the social qualities of the building, how it engages with the public, its atmosphere or sense of place, and its relevance to its context.

5.2 FOUR SPORTS HALLS

Architects: Giancarlo Mazzanti and Felipe Mesa, **City:** Medellin, **Country:** Colombia.

5.2.1 Background

Located in Medellin, Colombia, the 'Four sports halls' sports complex which was completed in 2010 (Fig 22) sits next to the Ivan de Bedout football stadium across the street from the aquatic centre. It filled the last gap of the diamond shaped site of the Atanasio Giradot sports complex (Webb, 2011).



Figure 22: Site of 'Four Sports Halls' (Google Earth).

The 'Four Sports Halls' project was commissioned because the city was to hold the 2010 South American Games. It is still in constant use today especially by local schools and leagues, and is open to the general public as well (Webb, 2011). It appears that the concept was to create an architecture which would fit seamlessly into its environment and is welcoming to all (Webb, 2011).

It is because of this concept that this precedent was chosen. By fitting into its surroundings a contextually sensitive architecture is born. Together with it being a public sporting facility with large public space on both the interior and exterior, and its responsive architecture, it responds well to the theoretical framework of this dissertation.



Figure 23: 'Four Sports Halls' (Webb, 2011).

5.2.2 Design and layout

The brief called for four independent sports units very close to one another. The architects decided to view the idea of four separate buildings as a single one, by creating a semi-covered public space with sports areas and gardens (Fig 24 and 25).

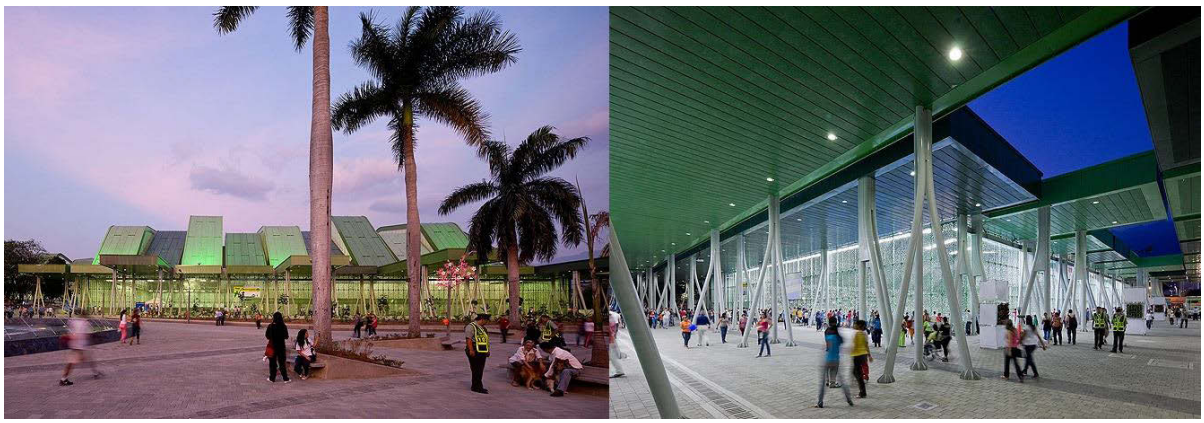


Figure 24 and 25: Semi-covered public space (www.archdaily.com).

The building responds well to its environment. The locations of the buildings are defined by the sun and the Aburra Valley winds. The North and South facades of the buildings are open to catch the major winds, and the East and West facades have turbines and large over hangs which control the morning and afternoon sun (Webb, 2011) (Fig 27, 28). It appears that the undulating green roof bands which resemble the canopy of a rain forest take their heritage from the mountains surrounding the Aburra Valley. These roofs which extend outwards and over walkways are supported by slender branching steel columns which also owe their existence to the concept of a canopy (Fig 25).

According to Webb (2011) visual and physical permeability was a key element the architects wanted to bring through in their design. The perforated steel sides allow everyone in passing to have a glimpse of the game for free, blurring the boundary between spectacle and circulation (Webb, 2011). This transparency allows people to see the activities inside the building and merge the public exterior life with the recreational and sporting activities inside (Fig 26). It appears that this transparency helps to create a honest welcoming environment.

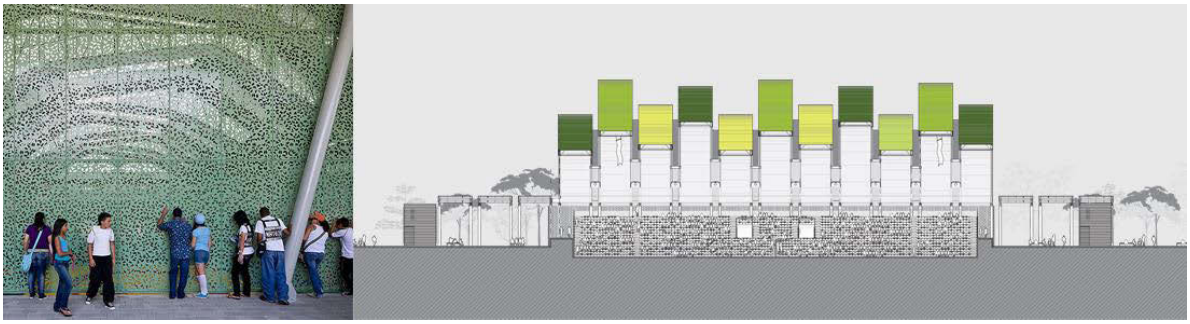


Figure 26: Perforated steel sides (www.archdaily.com).

Figure 27: Cross-section (Webb, 2011).

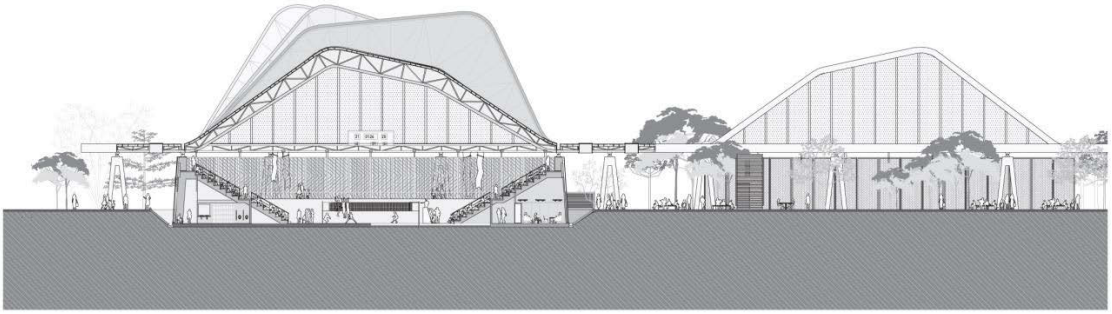


Figure 28: Longitudinal-section (Webb, 2011).

5.2.3 Mode of integration

It appears that the building creates integration by attracting people to the space not only through sporting activities but its transparency as well (Webb, 2011). Gehl (1987) writes how people are attracted to people. This facility is not closed off from the public instead it is designed as one big public space, and because of this people are constantly using and move through the site (Fig 23).

Keim (2003) writes how sport has a positive role to play in society, it becomes a common interest that can spark a conversation. This facility allows this to happen not only within the halls but outside as well. The perforated side walls allow passers-by to see in and experience the game provides an opportunity for interaction to occur (Fig 26).

5.2.4 Sense of place

It is suggested by Webb (2011) that the 'Four Sports Halls' has a positive energy about it. The constant movement of people, sporting events, noise of the spectators and school children, all combine to create an atmosphere (Fig 29). This atmosphere gives meaning to the facility, one that people remember and connect with on an emotional level (Norberg-Schulz, 1980).

The contextually sensitive architectural response to the brief helps to create a comfortable environment which the users can relate to (Frampton, 1983). Design cues such as the green undulating roof which resembles the rolling mountains and rain forest surrounding the site make the building significant to the area in which it belongs (Lefaivre and Tzonis, 2003) (Fig 30). Webb's (2001) writing suggests that the public feels like they 'belong' when they use the building, this spirit of the place is one of a homely, welcoming environment, one which encourages integration.



Figure 29: Wide variety of people which creates a great atmosphere (www.archdaily.com).

Figure 30: 'Four Sports Halls' resembles the surrounding mountains (Webb, 2011).

5.2.5 Public space

According to Webb (2011) the architects wanted to create a welcoming public facility that would attract people to the space even if they weren't visiting for sporting reasons. From the outset the architects set out to design this large public area, they stated that instead of building four separate buildings they wanted to create a site that was made up of covered walkways, sporting activities, and open space (Webb, 2011). Whyte (1988) writes how large open spaces with water features, trees, and seating form successful public spaces (Fig 31, 32). Furthermore Gehl (1987) writes how a well-designed public space becomes a platform for social integration to occur.



Figure 31: Great public space (www.archdaily.com).

Figure 32: Open public space with water features and seating (Webb, 2011).

5.3 KAOHSIUNG STADIUM

Architect: Toyo Ito, **City:** Kaohsiung, **Country:** Taiwan.

5.3.1 Background

The 'Kaohsiug Stadium' is located in Kaohsiung, Taiwan on a site that was formerly the grounds of a navy base (Architectural Record, 2010) (Fig 33). It sits on a site 25, 553 sqm in size, 400 kilometers outside of the capital city of Taipei with construction being completed in 2009. It is located on the busy intersection of Jhonghai Road and Road Jyunsiao Zuoying district which is part of the cities bus route (www.wikiarquitectura.com).



Figure 33: Site of 'Kaohsiug Stadium' (Google Earth).

The stadium also known as 'World Game Main Stadium' seats up to 55,000 people and is the largest in the nation (Japan Architecture, 2010). It is used mostly for athletics, rugby events and for Taiwanese football matches.

The design differs from most stadiums as it is open on the one side where the main entrance is located. It also collects rain water and is powered by solar panels in order to meet the brief and qualify as a 'green building' (Architectural Record, 2010).

This precedent was chosen because of its fresh outlook on stadium design. There is a great emphasis on external social spaces, and the creation of a building which represents the cultural heritage of the area, making it context specific.

5.3.2 Design and layout

The idea was to open the arena to the landscape loosening up the form, *"usually stadiums are very static and symmetrical, but this time we wanted to make a more fluid and dynamic shape, explains Ito"* (Architectural Record, 2010). The shape of the stadium which resembles a question mark is often compared to the symbol of the dragon, wagging its tail, which is an animal which represents the Asian culture (Fig 34).

According to Architectural Record (2010) the stadium makes use of 8, 844 solar panels on the roof which can generate 1.14 gigawatt hours of electricity every year. This is enough to power itself and eighty percent of the surrounding neighbourhood.

The structure of the stadium was also designed to maximize the effect of natural cooling by wind. The sides of the stadium are not closed in a circle but rather create a tunnel through which air passes, that refreshes the viewer during the hot summers (Japan Architecture, 2010). The stadiums long axis is tilted at fifteen degrees North-Northwest, this keeps the sun out of the athlete's eyes for the most part of the game, while also allowing the grass field to receive its needed five hours of sun a day (Architectural Record, 2010).



Figure 34: Aerial photo of the 'Kaohsiung Stadium' showing surrounding parks and public spaces (www.sphotos-a.xx.fbcdn.net).

The architects wanted to create a stadium which utilised the traditional Chinese system of feng shui. The literal translation is 'wind and water' and both of these elements were designed for to harness the positive flow of universal energy. Parks, dams, and water features create a beautiful scenery and provide great public space (Fig 34). These spaces next to the main stadium, the surrounding public space, namely a park with tropical plants and palm trees, the integration of bicycle paths, the lush green vegetation of the pond and all the green area, all provide visitors with a natural and green space for recreational use (Architectural Record, 2010).

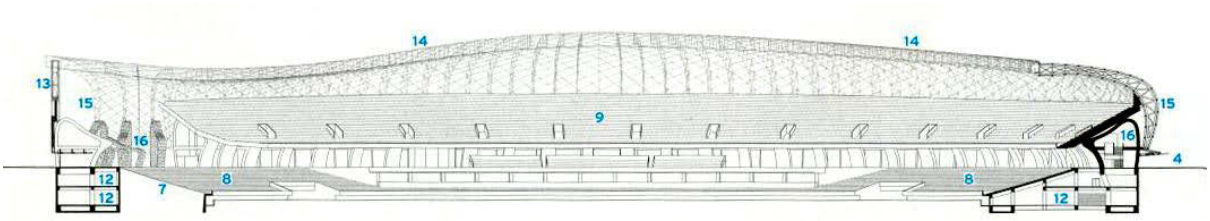


Figure 35: Cross-section (Architectural Record, 2010).

5.3.3 Mode of integration

The architect set out to design a stadium that people would linger at and visit on non-game days (Architectural Record, 2010). The main entrance is flanked by the 'dragon's tail' which is home to shops and food outlets. Whyte (1988) writes how food makes people linger, which creates more opportunities for integration to occur (Fig 31). The unusual open design of the stadium has a welcoming effect (Architectural Record, 2010). Most stadiums have an intimidating appearance, they are tall closed in monstrosities which push people away, however the main entrance to 'Kaohsiung Stadium' has an inviting feel to it and there is a public space which rises up to meet the open stadium (www.wikiarquitectura.com). The creation of spaces where people feel comfortable encourages social integration as people linger, bump into one another, and interact (Gehl, 1987).



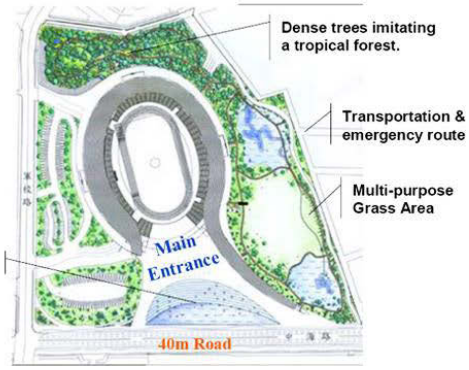


Figure 36: Artistic impression of large social spaces (www.wikiarquitectura.com).

Figure 37: Plan of stadium showing surrounding spaces (www.wikiarquitectura.com).

5.3.4 Sense of place

It is suggested in the Architectural Records (2010) writing that the stadium was designed to represent the people. As mentioned above the building is often compared to a dragon wagging its tail, an animal historically linked to the Asian culture. (Architectural Records, 2010). Feng shui is also a concept relevant to the surrounding people's culture, and this

traditional Chinese system of aesthetics is used to harness the positive flow of universal energy (www.wikiarquitectura.com).

According to Architectural Record (2010), the building hardly blends in with the residential neighbourhood, it also appears that the stadium has a modernist appearance suggesting it could be picked up and built anywhere in the world. However, although this is the case the building is very site specific. It represents the local culture through its form, the materials are locally recycled and local design concepts were used (Japan Architecture, 2010). This contributes to the Genius Loci, there is an emotional connection to the building as it represents the nation (Norberg-Schulz, 1980).

5.3.5 Public space

The stadium adheres to what Whyte (1988) believes is necessary for a successful public space. There is food, water features and trees, it does however lack in seating (Fig 38, 39). There are large spill out areas for spectators to gather at before and after the games, as well as green areas and ponds with tropical plants and palms, *"we wanted to attract the public with a new urban park typology"* explains Ito (Architectural Record, 2010). The park is however cut off from the main entrance, as the 'tail' of the dragon although permeable creates a physical barrier separating it from the main flow of people (www.wikiarquitectura.com). The beautiful public spaces surrounding the stadium should have been intentionally interwoven creating a flowing social precinct (Architectural Record, 2010).



Figure 38: The parks and dams next to the stadium (www.wikiarquitectura.com).

Figure 39: Water fountains at the public space by the main entrance (www.wikiarquitectura.com).

5.4 JEAN-MARIE TJIBAOU CENTRE

Architect: Renzo Piano, **City:** Nourea, **Country:** New Caledonia.

5.4.1 Background

Designed by the Italian architect Renzo Piano the centre celebrates the vernacular Kanak culture which is the indigenous culture of New Caledonia, and the independent status sought by the Kanaks from French colonial rule (Mcinstry, 1998). Jean-Marie Tjibaou was the leader of the New Caledonia independence movement and this centre was built in his honour. *"He wanted his people to fully take part in the modern world, he was keenly aware of the need for his people to come to terms with their past and make a balance between traditional and world culture"* (Mcinstry, 1998). It appears that this was directly translated into the architecture as well.

Piano was helped in the refinement of his design by local people and the leader's widow. The end product is seen as a means of supporting the Kanak's search for an identity (Detail, 1998).

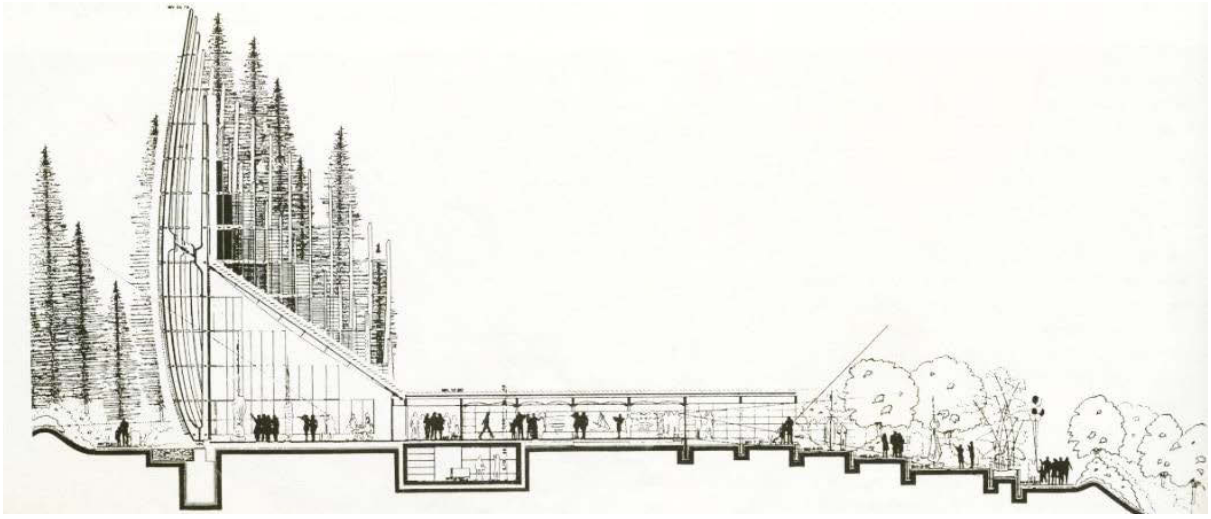


Figure 40: Section showing the structure (Mcinstry, 1998).

Located on a long narrow site in a thin peninsula near Nourea, New Caledonia lies the site of the cultural centre (Fig 41). It was here that Tjibaou had held the Melanesia 2000 festival in 1975, which was one of the key moments in the struggle for independence (Mcinstey, 1998). The centre is made up of pavilions or huts built in a gently curving line that follows the axis of the peninsula (Mcinstry, 1998) (Fig 36).



Figure 41: Site of 'Jean-Marie Tjibaou Centre' (Google Earth).

This precedent was chosen first and foremost because of its response to the theory of Critical Regionalism. The centre combines local traditional architecture with modern trends and construction techniques, creating a modern context specific architecture (Frampton, 1983) (Fig 34).

5.4.2 Design and layout

The design is inspired by tradition yet formed by modern technology (Mcinstry, 1998) (Fig 40). The materials used in the building of the conical domes consists of laminated wood and natural wood, concrete, coral, aluminium, glass panels, tree bark, and stainless steel. These materials all aid in the goal of uniting traditional cultural and modern day living (Detail, 1998).

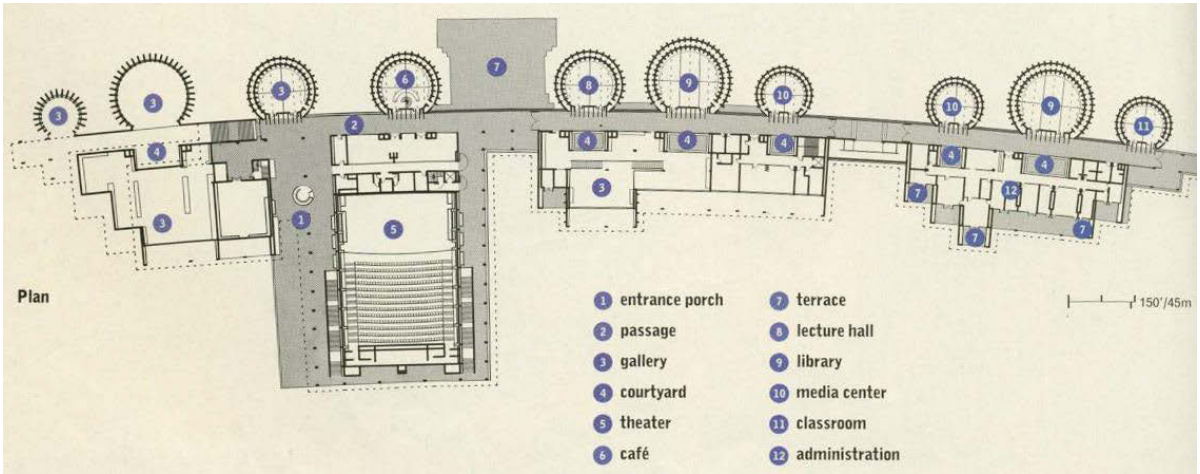


Figure 42: Plan of the centre (Findley, 1998).

The centre is comprised of ten units which are all of different sizes and functions, but with the constant form of vertically positioned shell-like structures which resemble the traditional huts of a Caledonian village (Findley, 1998) (Fig 44). They also have a similar appearance to the sails of windsurfers in the bay before them, and the rippling waves of the ocean (Fig 43).



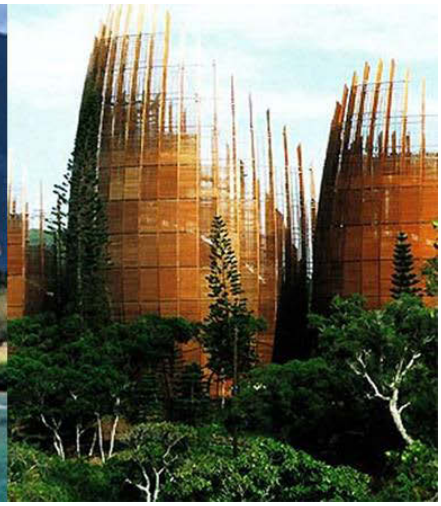


Figure 43: Image showing how the building fits into its context (www.inhabitat.com).

Figure 44: Shell-like structures (www.wikiarquitectura.com).

These structures are given a deliberate 'unfinished' appearance as a reminder that the Kanak culture is still in the process of evolving (Mcinstry, 1998). The layout of the centre has direct correlations to the social functioning's of the Kanak people. Everything has a hierarchy attached to it to distinguish the different functions and roles of the people. Most importantly as with the tribe's traditional layout, the huts are situated along a long central path (Findley, 1998).

5.4.3 Mode of integration

It appears through the writing of Findley (1998) that as this is a cultural centre it is a place where foreigners can learn about the Kanak people, and in this way it is a centre which integrates the local people with the world. This is very relevant because it was the late Jean-Marie Tjibaou's goal for this centre to remember its heritage while embracing the world (Mcinstry, 1998).

For the local people this centre represents them, it represents their culture and as Haralambos and Holborn (1991) write, it is culture which has a lot to do with how people live their lives.

This centre represents the common interests of the Kanak people, and it is these common interests which encourage integration (Durkheim, 1893).

5.4.4 Sense of place

According to the architect *"it was not feasible to offer a standard product of Western architecture, with a layer of camouflage over the top: It would have looked like an armoured car covered with palm fronds"* (Findley, 1998).

Tjibaou inspired Piano to design forms which were both, original and modern, and traditional (Findley, 1998) (Fig 45, 46). It is suggested that the finished building has catapulted the Kanak people into the modern era while still holding onto their routes (Mcinstry, 1998). It appears through the writing of Findley (1998) that the centre captures the spirit of the locals, and their heritage uniting the people. The architecture has meaning and the users of the building have an emotional connection to it, creating a relaxed environment which encourages social integration (Fleming, 2007).





Figure 45: Traditional architecture of the Kanak people (www.wikiarquitectura.com).

Figure 46: Modern methods of building the traditional forms (www.wikiarquitectura.com).

5.4.5 Public space

The public spaces such as the entrance, theatre, and exhibition spaces are next to the large open landward side of the site. This is where large amounts of people congregate and it forms a large spill out area (Findley, 1998) (Fig 42). The rest of the centre, although public, is not designed for large social gatherings because libraries, media centres and other educational spaces need a certain level of quietness (Mcinstry, 1998).

5.5 CONCLUSION

The 'Four Sports Halls' complex is very successful in creating a socially vibrant environment. The sporting activities are open for all to see, meaning the social powers of sport can influence everyone. By allowing people to move through the space easily with no obstacles and having sporting activities on the go, as well as successful public spaces where people will linger all aides in creating opportunities for interaction to occur (Gehl, 1987).

The 'Kaohsiung Stadium' does not seem to be as successful. Although there has been a large effort to create an environment which attracts people it still seems that it is mostly used on game days and not any other time (Architectural Record, 2010). The stadium opens up to the main road and train station suggesting that it wants people to arrive and leave as quickly as possible. It turns its back on the great public park and forest. There is also no integration between the stadium and its surrounds, and although the stadium does well to represent the people of the area in its form which resembles the dragon and the use of feng shui, it does not respond to the neighbouring residential area what so ever (Architectural Record, 2010). This building has many positive aspects all of which can be viewed as tools to promote integration, however the implementation of them as a whole has not been successful.

Although the 'Jean-Marie Tjibaou Centre' is not a sporting facility there are many aspects of this precedent study relevant to this dissertation. This centre is extremely successful in its representation of the people of the surrounding area and its relationship to its site (Mcinstey, 1998). By combining the local style of architecture specific to the area together with modern international trends, a modern architecture and identity is created. This centre captures the spirit of the Kanak people. Kanak people have an emotional connection to the building as it represents their culture, their fight for independence and their embracing of the future with

the modern world (Findley, 1998). This centre falls short in providing social spaces but this may be because of the difficult long and narrow site.

These precedent studies shows global methods of applying relevant theoretical frameworks in design. They all have positive and negative points, but show that by combining all their positive elements, it is possible to create a facility which promotes integration not only through sport and social spaces but a comforting built environment as well.

CHAPTER 6: CASE STUDIES

6.1 INTRODUCTION

This chapter focuses on fieldwork research and is the collection of original data. The case studies were selected for their relevance to the nature of this study, as public sporting facilities namely, 'Nike Football Training Centre', 'Moses Mabhida Stadium', and the 'Royal Bafokeng Nation'. All of which have been critically analysed against the theoretical framework of this dissertation. This covers the concepts and theories and concepts of social integration, Genius Loci, Critical Regionalism and public space. Some excel in certain aspects and are weak in others. The first two studies focus on specific buildings whereas the 'Rhoyal Bafokeng Nation' explores their local stadium, elite spot campus and academy, and school development projects.

The case studies seek to gain an understanding of the spatial needs of the building typology, contributing both to the formulation of a schedule of accommodation and a site selection criteria.

6.2 NIKE FOOTBALL TRAINING CENTRE

Architects: Sean Pearson of RUF Project, **City:** Johannesburg, **Country:** South Africa.

6.2.1 Background

The 'Nike Football Training Centre' is located on the corner of Chris Hani and Mokoena Streets in Soweto, a town in the City of Johannesburg, South Africa (Fig 47). The English translation for Soweto is 'South Western Townships'.

After the gold mines were established in 1886, workers were brought in and were housed outside the city. In 1904 British controlled city authorities removed the African and Indian workers to Klipspruit and later on Orlando. These areas to the South West of Johannesburg became known as Soweto (Tessendorf, 1989). The site is surrounded by a residential area and is located near a large shopping mall, a school and taxi rank.



Figure 47: Site of 'Nike Football Training Centre' (Google Earth).

The 'Nike Football Training Centre' was an upgrade to an existing football training ground which is now home to over a thousand youth clubs. The design objective was to refurbish the centre and transform it into a state of the art facility, intended to be a performance centre for the development of soccer in Soweto (Digest, 2010).

The project was funded by Nike Grassroots Projects, hence the name change to 'Nike Football Training Centre'. It was officially opened the day before the 2010 FIFA World Cup began in South Africa. Soweto being the powerhouse that it is of South African soccer, has a large amount of youth hoping to play professional soccer one day. This centre has already helped many footballers with their careers (www.archdaily.com). More than 20,000 young soccer players make use of this facility annually for both football training and life skills. The facility is always flooded with youngsters who dream of breaking into professional soccer, and adults who just play to keep fit (Digest, 2010).

This case study was chosen because not only does it fit into the theoretical framework of this study, but it is known to be successful in using sport to uplift a community, and encourage integration not only in the youth but adults of the surrounding area as well (Digest, 2010).

6.2.2 Design and layout

The facility is made up of two full sized artificial pitches, two junior natural grass pitches, field lighting, a clubhouse, player lounge, an education facility with Apple computers for the Grass Roots Soccer and Life Skills program, a training gym, first aid facility, catering facilities , administrative offices, viewing deck as well as new change rooms (Fig 49). The

clubhouse and player's lounge house regular and in-depth tips and insights from Nike athletes and coaches, this is a place for coaches and players to focus on the tactical and strategic aspects of the game.

The concept for the building was that it should be a unique, high-end design, but appropriate and well integrated into the Soweto environment (Digest, 2010). The new building has a clubhouse character to it as it overlooks all of the playing fields. According to Digest (2010), it was designed to create a flexible space for football events, community gatherings, and a place where the youth of the area could come together and use their free time constructively by using the internet facilities, to learning about soccer both on and off the field. Athletes can also engage in physical conditioning in the gym facilities (Fig 50, 51). Everything is focused towards the fields, as though that is the final goal. The gym which sits beneath the main building opens up directly to the field, so there is a constant reminder that being the best you can be out on the field is the end goal.



Figure 48: 'Nike Football Training Centre' (Author, 2013).

As seen in (Fig 47) the site is surrounded by a residential area and it is accessed mostly by foot. Although the centre is fenced around the whole perimeter there are open gates all the way round, making it easy to access the facility. On the Saturday when there was a youth tournament, the site resembled a living organism. Children, adults, men and women are constantly moving in and out of the site, coming to watch the soccer and soak up the atmosphere.

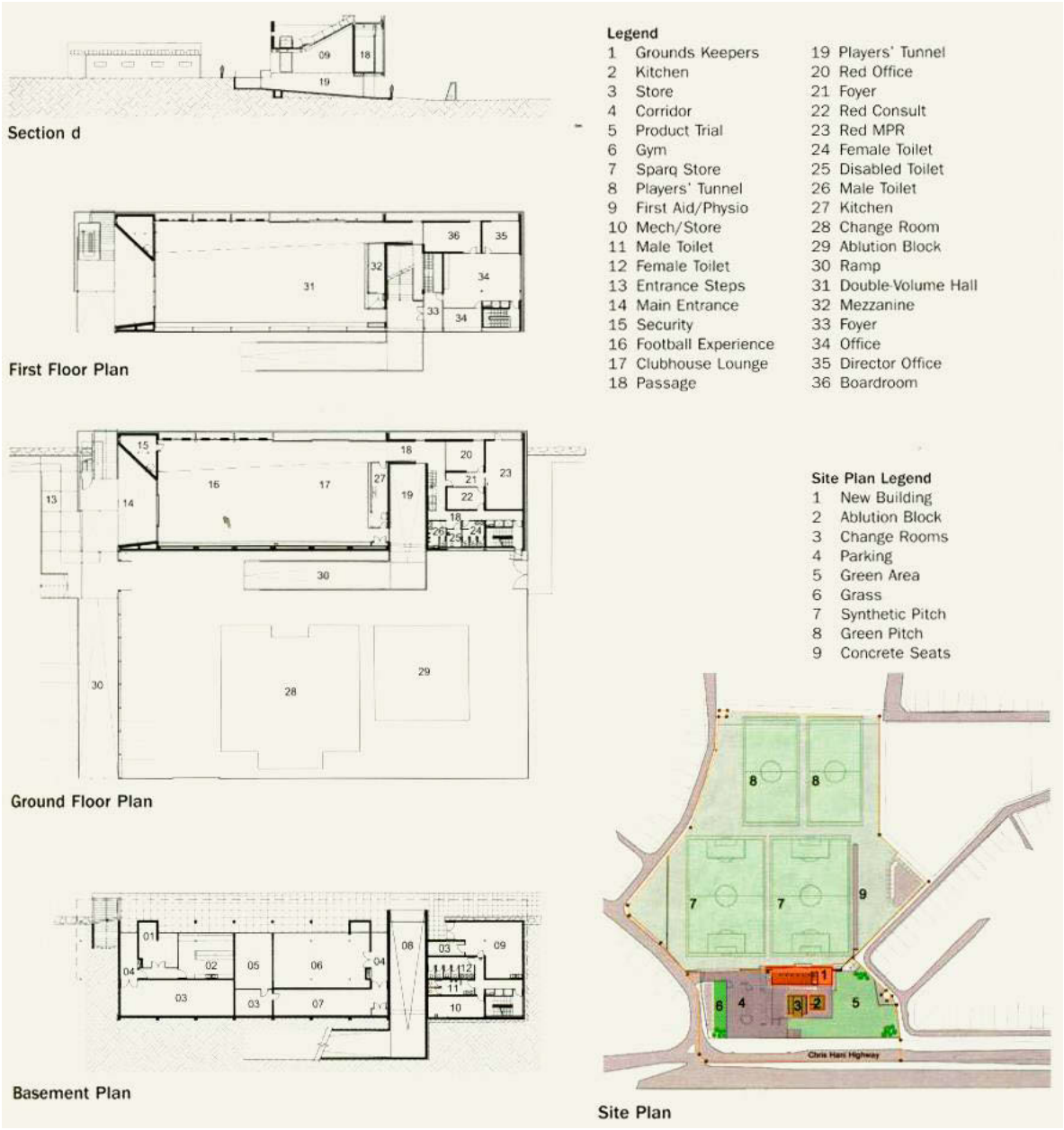


Figure 49: Site plan and building plans (Digest, 2010).



Figure 50: Educational area (www.archdaily.com).

Figure 51: Gym facilities (www.archdaily.com).

6.2.3 Mode of integration

The facility is aimed at up-lifting the youth of the community not only in sport but life skills as well. Although sport mainly attracts the youth to the centre, there are also life skills training workshops, and computer facilities with internet access, which are available for the public to use (Fig 50). The architecture has been designed with the player in mind, supporting them through the various aspects of their day. Everything has been considered to make the facility flow and remain open. At the same time managing to create a secure and safe place to play football.

Although there are computers, a gym, and so on, sport is the real integrator at this facility. During the week the grounds are used after school and on weekend's local youth teams play in competitions. Hundreds of kids play against each other and interact throughout the day. Adults and children who are not playing also flood the facility as they enjoy watching the games being played and soaking up the atmosphere. There are stands which surround the fields, which become social spaces (Fig 54, 55).

The community thrives on soccer. A coach of one of the teams was interviewed, he lives in a shack nearby, but his passion was uplifting the youth and giving them the chances in soccer that he never had, keeping them off the streets where smoking and drugs is the norm. He felt the facility was of utmost importance to Soweto believing it united the town, gave opportunities for the youth to interact with others and for the elders of the surrounding area a place to spend their weekends and pass on knowledge to the younger generation (Fig 52, 53).

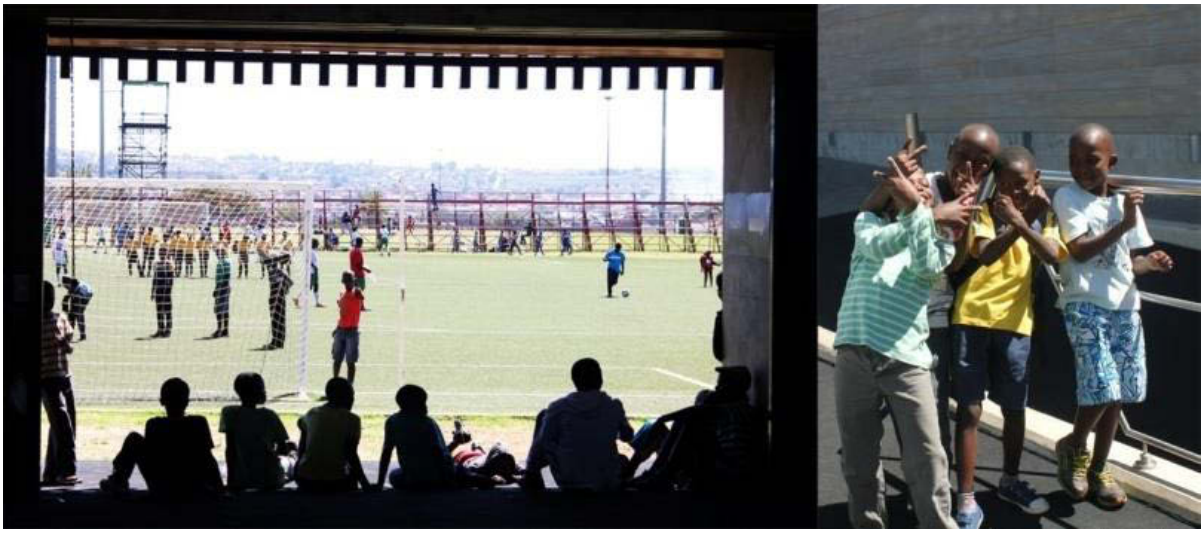


Figure 52 and 53: Friendships are made (Author, 2013).

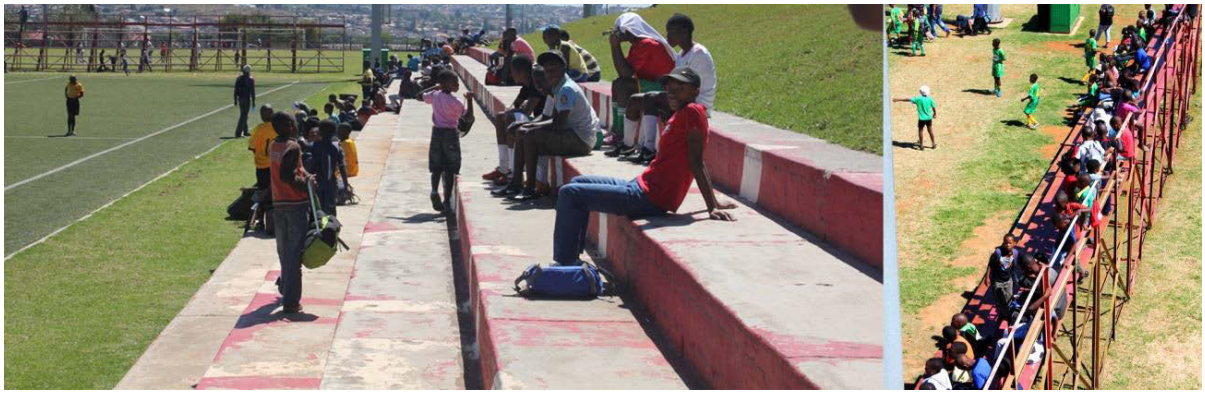


Figure 54 and 55: Spectators socialising and watching the games (Author, 2013).

6.2.4 Sense of place

The building really fits into its context. The slatted timber external skin not only provides solar shading but also matches the brown sand of its surroundings. The rectangular shape of the building is influenced by modern design yet it also resembles the shacks and simple houses of the area (Fig 48). Other materials such as the stone gable walls give a natural element to the design which relate to the mining of Johannesburg (Fig 57).

Research was done through observation, informal discussions and a questionnaire (see appendix A). It was found that the building is loved by the community, the users felt that it fitted into its context well and there was a definite sense of ownership about the space. The atmosphere of the space was special and the warm positive uplifting energy was inviting.

6.2.5 Materials and response to climate

The architects envisaged the building to be a living structure with different moods at different times of the day, it is because of this lots that lots of natural materials were used (Digest, 2010). These materials included sandstone cladding, gabion walls, and timber. The skin of the building is comprised of three layers, brick in-fill between a steel frame, sandstone cladding and timber screens. The result of this layering is solar protection which is needed in the hot climate. The timber screens which wrap the Northern facade of the building allowed for extensive use of glazing on this facade, because of its solar shading benefits.

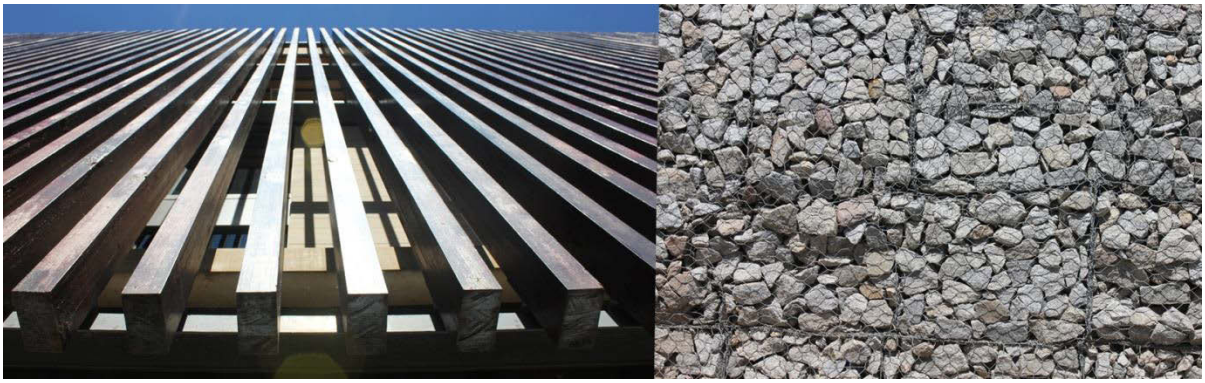


Figure 56: Timber screen (Author, 2013).

Figure 57: Gabion walls (Author, 2013).

6.2.6 Public spaces

If there is one area this facility is lacking it is in the public spaces surrounding the building. There are a lot of stands surrounding the fields but none are shaded and in a hot climate like Johannesburg, this is a necessity. As teams wait to play they huddle together under the overhang of the main building, however as it is not designed for this there is not enough space or any available seating (Fig 58).

There is also no available kiosk or food outlet, the children play there soccer matches over the whole morning but there is no place for them to buy a cool drink or a pack of chips. As Whyte (1988) mentions, food is a very important part of a public space. The spectators will stay at the facility longer and interact with others more if food was available.



Figure 58: There is not enough 'designed' public space, here kids are trying to retreat from the sun (Author, 2013).

6.2.7 Positives and shortcomings

Spectators, players and coaches who were spoken to unanimously said they were very passionate about sport and social integration in South Africa and they felt that sport was the key to this. This facility was their weekly event where they could interact with others from the community, and many had formed strong friendships because of their visits to the facility (Fig 52, 53, 54, 55). The facility is very successful in using the powers of sport to up lift the community and create opportunities for integration to happen.

It is a beautiful building which is still true to its environment. The materials, style and atmosphere all create a comfortable relaxing environment which is the ideal environment to encourage integration. The community relates well to the building and there is a wonderful sense of place.

It does however fall short in the public space aspect. Other than the occasional use of the computers of the facility, it was mostly on the sporting field where people interacted and then would leave. For it to be a revelation in social integration there needs to be some kind of restaurant where adults can come to enjoy a meal while watching some soccer, this will also give people a reason to visit the facility for reasons other than sport.



Figure 59: Players from two teams discussing their game (Author, 2013).

6.3 MOSES MABHIDA STADIUM

Architects: Theunissen Jankowitz, Ambro-Afrique Consultants, Osmond Lange Architects and Planners, NSM Designs, and Mthulisi Msimang, **City:** Durban, **Country:** South Africa.

6.3.1 Background

In May 2004 South Africa was awarded the right to host the 2010 FIFA World Cup. Durban was a host city, with both the existing soccer and rugby stadiums not being considered a viable option, the decision was made to demolish the soccer stadium, recycle the fabric and build a new stadium (Peters, 2010).

The 'Moses Mabhida Stadium' is located on the corner of Masabalala Yengwa Avenue and Stamford Hill, in the City of Durban, South Africa (Fig 60). The site is based on the former Kings Park Soccer Stadium which was demolished to make way for the new development (Peters, 2010), it sits adjacent to the Kings Park Rugby Stadium.



Figure 60: Site of 'Moses Mabhida Stadium' (Google Earth).

The stadium had to meet both the requirements for the 2010 FIFA World Cup, and also for a possible staging of the Commonwealth Games or Olympic Games in the future (Peters, 2010). It has a capacity of 56,000 which can be temporarily increased to 85,000 for major events (www.fifa.com).The 'Moses Mabhida Stadium' in Durban hosted pool games and one of the semi-finals of the 2010 FIFA World Cup. It was specifically designed as a multi-purpose venue and an amphitheatre. The new stadium with its surrounding green areas for

sports, leisure, cultural activities, and social uses has developed into the focus of an attractive urban area and has established itself as a high quality sporting venue for South Africa.

This case study was chosen because of its great success as a public facility. It attracts an array of people, there are sporting facilities, recreational facilities and it is children orientated, which all contributes to integrating the diverse population of Durban.



Figure 61: Moses Mabhida Stadium (Author, 2013).

6.3.2 Design and layout

The project brief called for the development of a stadium that would be an iconic beacon for the city of Durban (Digest, 2010). The design team had a number of goals to meet. According to Peters (2010) they had to create a stadium that would form a meaningful part of the city's urban fabric. It needed to be a mixed-use facility in order to ensure sustainability. Its scale needed to be pleasant to the users of the building and it needed to be a place that encourages a vibrant public systems.

The stadium takes its design inspiration from the South African flag, with its 104 meter high arch that curves high over the stadium as an emblem representing the unity of a sport loving nation (www.fifa.com) (Fig 62). The 'Y' formation of the arch which is visible from the air is taken from the South African flag, the two legs of the arch on the Southern side of the stadium come together to form a single footing on the Northern side, symbolizing the new unity of a once divided country (Beckett, 2002). The main entrance which is situated on the Southern side coincides with the open side of the arch, this is a gateway to the city in the

distance (Fig 61). The secondary entrance on the Northern side feeds off the newly built train station and faces the Kings Park Rugby Stadium.

The facility is made up of a world class stadium, parks and public squares, restaurants, a children's playground, external fields and a running track (Fig 62). The stadium also uses attractions such as the 'sky car' which is a specially designed 'car' which takes people up the arch to a viewing platform and the 'big swing' which is an adrenaline ride where people leap off the arch and swing over the playing field. These attractions not only bring in money but draw people to the precinct.

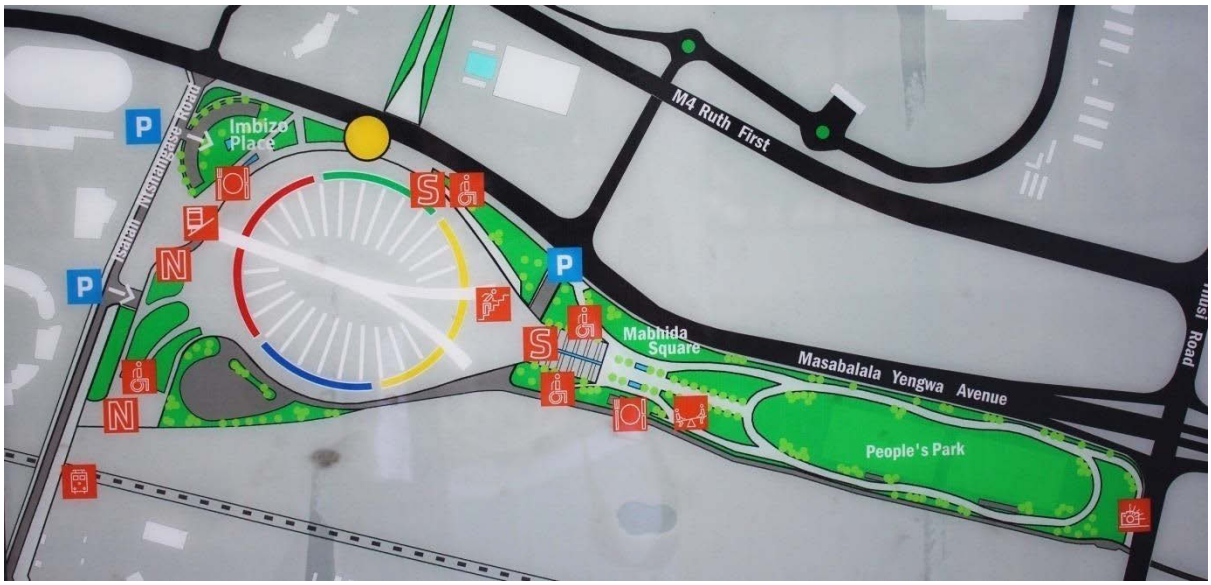


Figure 62: Basic plan of the stadium and surroundings (Author, 2013).

The stadium is the centrepiece to the large, integrated development which weaves itself tightly into the landscape of the city (Fig 56). Bounded by Imbizo Place, the People's Park on the South, the new train station on the North and the connection to the beach, the precinct anchors itself into the city's fabric.

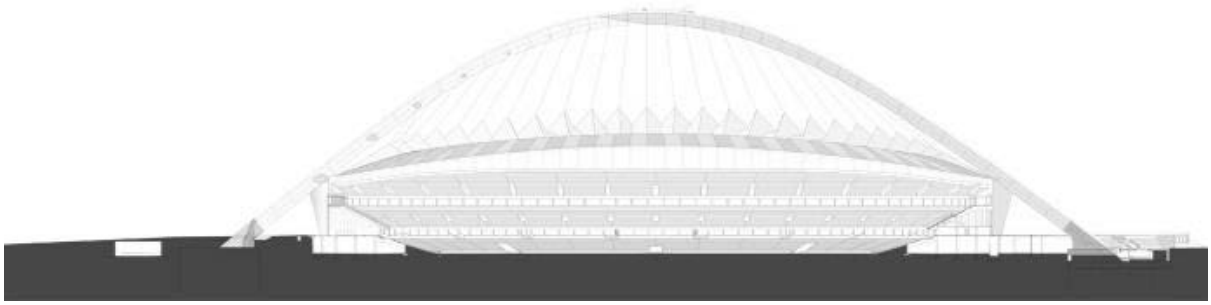


Figure 63: Longitudinal section showing the arch which supports the roof (Digest, 2010).

6.3.3 Mode of integration

This mixed use facility has so much to offer the public. There is an element for everyone, no matter ones interest. It is this diversity which makes this building a great integrator of people. Through informal discussions and a questionnaire (see appendix A) it was discovered that people of all race and cultural background visit the facility for various reasons, whether it be for a stadium tour, a meal, a cycle, a run, to bring the children to play or even just to be in the prescience of other people (Fig 67, 68). As Gehl (1987) writes; integration will not occur unless people are forced to 'bump' in to one another. 'Moses Mabhida Stadium' attracts people from all walks of life and by putting them together in the same vicinity as each other opportunities for interaction arise.

Sport is also used as a tool for integration. The main stadium is used for large sporting events, this becomes an opportunity for spectators to support, interact and discus the game. However on the outer fields a more social approach is taken. The People's Park is often used for league sports, there are weekly soccer and touch rugby leagues. There are also often small tournaments held on the fields, and it is in these social sporting events where the ordinary man can play and integration is achieved through sport (Fig 64). The social soccer tournament which was being played at People's Park caused many passers bye to stop and watch, they then interacted with other spectators (Fig 64).



Figure 64: Social soccer tournament at People's Park (Author, 2013).

6.3.4 Sense of place

Although the stadium was designed to be iconic and stand out, there are elements which are drawn from its context. For example, the seating is made up of different colours the different shades of blue represent the ocean, waves and the beautiful coastline the city has to offer. The

oranges represent the sandy beaches, sunsets and sunrises (Digest, 2010). It is elements such as this which give it a sense of place, or belonging. As the building stands out on the skyline it has become a symbol of Durban, a development the public is proud of (Fig 69).

The users also spoke very highly of the atmosphere of the space, as there is so much going on, on a permanent basis. It is this vibrant atmosphere which people will remember and encourage them to visit the facility again.

Critical Regionalism speaks about contributing to one's visual experience Frampton (1983). For example the curved edge and arrangement of columns offers a visual experience that suggest fluidity and movement around the stadium (Fig 65). This invites people to walk around the building as there is more to see and experience. Similarly when inside the stadium at the main entrance where the arch splits the eye is drawn to the city of Durban in the distance. There is a sense of purpose about it, like it is saying the facility belongs and represents the Durban people.

6.3.5 Materials and response to climate

For a structure such as this the materials generally used are very modern and practical not necessarily site specific. Three main materials are used, Steel makes up the arch, cables supporting the roof and the mesh surrounding the bowl, and these members have been specially painted to withstand the corrosive properties of salt from the sea. A Teflon-coated, glass- fibre membrane makes up the roof which covers eighty-eight percent of the seating and is self-cleaning (Digest, 2010). Finally concrete is used because of its structural strength and ability to be moulded to form any shape needed on site. The concrete and aggregate from the previous stadium which was demolished was recycled and makes up the walkways of the new facility.

The strong on shore winds meant that the walkways were not sufficiently sheltered from the driving rains and extra shelter had to be added in the means of tensile members which resemble the facilities main roof (Fig 65). The same figure shows the intertwined concrete and steel, which together with the arch resembles the iconic Zulu woven basket (Fig 65).



Figure 65: Detailed view of facade and newly added walkway covers (Author, 2013).

6.3.6 Public spaces

There are many facilities such as restaurants and bars which people can linger at after games, but this building is most successful at its ability to attract people to the space even when there is no game on. Jan Gehl (1987) speaks about people attracting other people, because 'Moses Mabhida Stadium' is so lively it sparks interest in others and attracts more people.

Since the brief focused on making the development sustainable, a lot of effort has gone into designing spaces around the building that can be used on a day to day basis (Fig 67). All the key elements such as trees, seating, food, water features and so on are evident (Whyte, 1988). Spaces are designed for all ages so it is family orientated. Hundreds of children were meeting new friends on the jungle gym while their parents chatted away over a cup of coffee near bye (Fig 68). The development has become a huge success not only as a sporting facility, but as a successful public space for the city.



Figure 66: Cycling/running track around People's Park (Author, 2013).





Figure 67: Restaurants in the distance and public space on northern side (Author, 2013).

Figure 68: Kids play area next to People's Park (Author, 2013).

6.3.7 Positives and shortcomings

The facility has well designed public spaces surrounding the facility attracting people on game days and non-game days and provide the perfect space to break down social barriers and encourage integration. There is also a great atmosphere around the building and this positive energy attracts people to the space. However the actual stadium does fall short in terms of its response to its surroundings. This is due to the nature of such a large facility which has to focus its attention on the sporting field. However the surrounding facilities around the stadium do appear to respect the local context.

The 'Moses Mabhida Stadium' is an asset to the city of Durban. It is a world class sporting facility which the community is proud of. There has been a lot of negative press in the media about its running costs and up keep, but it has become an icon of the city. It is a great public facility used on a regular basis by a large amount of people, it is developments such as this which provides spaces which can encourage integration.



Figure 69: Restaurants and public space on northern side (www.airserv.co.za).

6.4 ROYAL BAFOKENG SPORTS PALACE

Architects: ADO-Architects, Alvin Roon Architects, and Vicky Harris Architects, **City:** Phokeng, **Country:** South Africa.

6.4.1 Background

The Royal Bafokeng Nation's land is surrounded by mines, and they have fought for their rights to the minerals mined on their land. They now receive royalties of twenty percent, and have used this money to develop their community through sport and education (Roon, 2010).

The 'Royal Bafokeng Sports Palace' is a football, rugby and athletics stadium which also has tennis, netball and basketball courts located just outside the stadium. The stadium which was renovated for the 2010 FIFA World Cup has a capacity of 45,000, and is today the home of the local soccer team, Platinum Stars. It is also the only major stadium in South Africa owned by the community (PODI-YA-TSELA Grapevine, 2009).

The town of Phokeng is also home to the 'Bafokeng Sports Campus' which is a five star facility aimed at elite athletes. It was used as England's national soccer team during the World Cup as their home base. This facility also has its own academy with the aim of nurturing young talent from the area to eventually feed into the Platinum Stars.

The excitement of the World Cup may be over, but sport continues to play a vital role in the development of the Bafokeng Nation.

A message from King Kgosi Leruo Molotlegi:

"The 2010 FIFA World Cup was a global event, and the Royal Bafokeng Nation was proud of the role it played in hosting matches at our Royal Bafokeng Sports Palace. The excitement of the World Cup may be over, but sport continues to play a vital role in developing our Nation, by keeping us healthy, developing our teamwork and sense of fairness, and bringing us together in common aspiration and shared inspiration. We have an ambitious agenda of sport and recreation development, particularly in schools, which will touch the lives of all Bafokeng" (Stakeholder Report II).

The 'Royal Bafokeng Sports Palace' is located just off the main road running through Phokeng near Rustenburg, South Africa, and is positioned next to the main shopping centre

of the area, see site 1 (Fig 70). Site 2 on (Fig 70) shows the location of the 'Bafokeng Sports Campus' mentioned previously, it is roughly five kilometers outside the town of Phokeng.

This case study was chosen because of the mentality of the Bufokeng Nation. They have noticed the benefits of sport and look to harness it in uniting and developing their nation.



Figure 70: Sites of Royal Bafokeng sporting facilities (Google Earth).

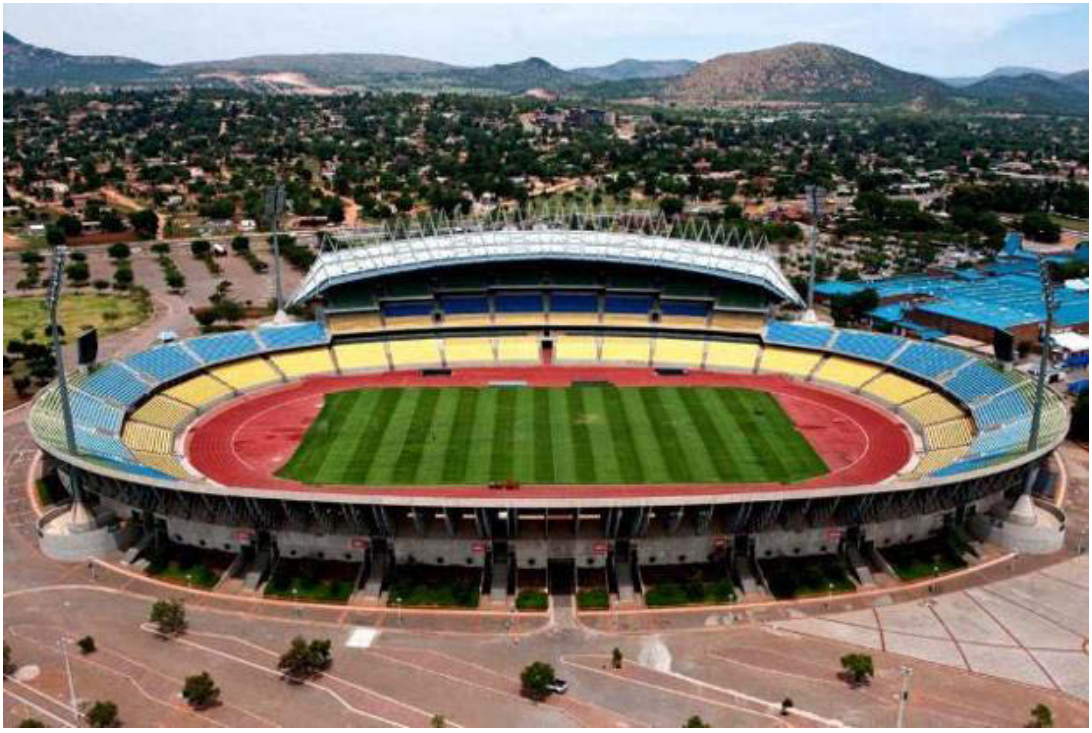


Figure 71: 'Royal Bafokeng Palace' (www.supersport.com).

6.4.2 Design and layout

Since the upgrade of the stadium its accommodation now includes open and covered seating for the 45, 000 spectators, executive suites, and a large hall with a kitchen and bar facilities. Additional facilities such as basketball, netball, and tennis courts are located south of the main stadium (Fig 72).

There are two turnstile buildings one on the North and the other on the South of the stadium. These buildings provide access to the fenced-off precinct of the stadium. The surrounds of the stadium is unique due to the park-like environment it is set in. Once the public have entered the larger precinct they have access to this park environment to relax before or after the game.

The stadium is not very user friendly, as the main entrance is on the far side of the town, meaning spectators who mostly arrive by foot have to walk around the whole precinct to enter. The access on the town side where the taxi rank is, is designated for VIP guests only which arrive by car. The whole stadium seems to have been designed with the VIP's in mind rather than the general public.



Figure 72: Basketball and netball facilities (Author, 2013).

Figure 73: Home game 'Platinum Stars vs Black Leopards' (Author, 2013).

The 'Sports Campus' is situated roughly five kilometers down the road. This is a five star facility which includes the Platinum Stars clubhouse, admin block, hotel, medical centre, a world class high performance centre and a soccer academy for up and coming stars and ten fields (Fig 74, 75). The facility is unbelievable but is limited to elite athletes who travel from far to use the campus.



Figure 74 and 75: 'Royal Bafokeng Sports Campus' (Author, 2013).

6.4.3 Mode of integration

Although the Bafokeng Nation has great aspirations for sport within the community, they have not harness the positives of sport correctly. For example, sports development is taken extremely seriously and is viewed as a tool to help motivate and up-lift the youth. They have implemented a program aimed at providing sports facilities to the outer communities. Artificial turf soccer fields lit by solar power, netball/basketball courts, and change rooms have been built in five schools with the aim of providing spaces for children to play and interact with one another (Fig 77). This was a great initiative yet it does not reach its full potential. It is meant to provide a space for children to play and interact, but as is shown in the below pictures the fields are fenced off and kids are forced to play on the road instead of making use of the facilities (Fig 76).

Similarly the community is very passionate about their team yet not many go to the stadium to support the games. The 'Royal Bafokeng Sports Palace' is a beautifully designed facility with parks surrounding the stadium but as there are no restaurants, bars, or entertainment before or after the game for the public to enjoy, they watch elsewhere.



Figure 76 and 77: School development projects are not accessible (Author, 2013).

6.4.4 Sense of place

The stadium itself is built on an old public space which was used for community gatherings and meeting and the public relates to the site because of this heritage. It is fitting that the sporting facility is now located upon this historical site because sport is a big part of the new identity of the Bafokeng community. The building although massive doesn't seem to over shadow or over power the surroundings but instead resembles one of the many rolling hills in the area. The seating colours represent certain elements of the nation much like 'Moses Mabhida Stadium' in Durban. The gold represents the minerals of the mining area, the green and blue represent the algae and water respectively. This gives the grounds the building, people can now identify with it as it represents its local context.

6.4.5 Materials and response to climate

External materials such as off-shutter concrete and steel are used as they are robust and tough materials with colours which represent the surrounding area. Along the spectator walkways there are strategically located slots in the structure which allow the public to view the landscape beyond.

6.4.6 Public spaces

Other than the park which sits immediately outside the stadium there is no real public space. This park would be a wonderful space for spectators if there was food and seating available (Whyte, 1988). The facility is empty unless there is a game on, however even if there is a game once it is complete people leave the site and head to the local village to socialise (Fig 78).

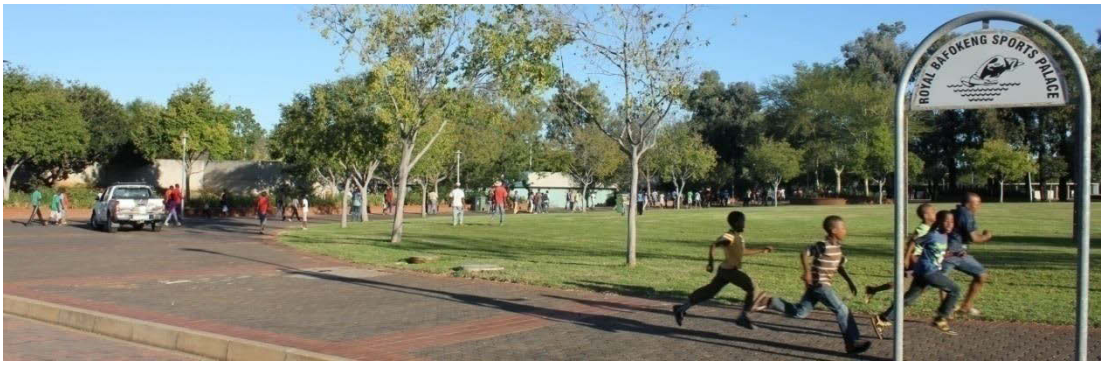


Figure 78: People leaving right after the game (Author, 2013).

6.4.7 Positives and shortcomings

The problem with both the stadium and the campus is that their physical locations are both very secluded and they are run as separate entities. These two facilities needed to be designed as one. On days when there is no match at the stadium people would still be visiting the site to go to the academy or high performance centre, however as it stands the stadium is deserted unless there is a match on. If the two facilities became one, incorporating a restaurant and bar it would attract a large audience on a permanent bases and would become a social space which the whole community could make use of.

Through the informal discussions and questionnaire (see appendix A) it became clear that the facility had great potential as a social integrator but is not successful at the moment. The community is very proud of their stadium and their team 'Platinum Stars' yet they felt the stadium should be more welcoming to the general public. The public arrive, watch the game and then head to the village to socialise because there was nothing happening at the stadium post-match. They also felt that the 'Sports Campus' was not built for the community but rather for wealthy outsiders, even though there were many facilities they would like to make use of at the campus.

The Royal Bafokeng Nation is a group of inspiring people with leaders with great intentions striving to up-lift the community and through sport and education they are building a bright future. However although there are great intentions that are not being implemented correctly, all the facilities need to be made more accessible to the public. Public gathering spaces with seating and restaurants need to be included to create spaces for people to interact and socialise.

6.5 CONCLUSION

The 'Nike Football Training Centre' is a very successful facility in terms of using sport to up-lift the community and create an opportunity for social integration to occur. The building also relates very well to its context, through its materials and response to the climate. The public can relate to the building as it represents them and their community. Although the facility is aimed at the youth it attracts the elder members of society as well. They too like to watch the games on display creating an interaction between the older and younger members of the community allowing the older generation to pass down their knowledge. The facility does not

however address the need for public space. If there were shaded areas, better seating in strategic spots and food available the facility would attract a much broader crowed. The users of the facility would also linger in the space for longer, meaning there would be more opportunities for interaction (Gehl, 1987).

The 'Moses Mabhida Stadium' has become a major public precinct of Durban. Not only is the stadium seen as a symbol of Durban but as a vibrant facility people want to visit. There is so much going on at the stadium that the atmosphere is vibrant and enticing. The successfully design public spaces become platforms for integration to occur (Gehl, 1987). The facility also harnesses the social aspect of sport not just on a professional level but on a social level as well. The outer fields are constantly in use by the general public for league matches, social tournaments and a space for families to play. It is at these sporting fixtures and public spaces where people have opportunities to meet others.

The 'Royal Bafokeng Stadium' is not very successful. The community is very passionate about sport and are very proud of their world class facility. However with no other element to the facility other than sport, it is not as successful in integrating people as it could be. People watch the game and leave immediately, there needs to be some other element which keeps them at the stadium for longer periods of time.

The 'Bafokeng Sports Campus' is a beautiful facility but however it is not designed for the local community. It is too far away from town, and is aimed at the extremely wealthy and the elite sportsman. As it stands it does nothing for the community on a social integration level. However if the elements of the campus were combined with the stadium on one site it could become a successful facility. There would be an atmosphere with the children from the academy playing, public using the gym facilities and fields, restaurants attracting and keeping people on the site. It would become a large vibrant community precinct where the concept of integration would thrive.

CHAPTER 7: ANALYSIS AND DISCUSSIONS OF FINDINGS

7.1 INTRODUCTION

Following on from the findings of the literature review, precedent studies, case studies which included questionnaires and an informal interview with Teshepo Malatsi who is the facility co-ordinator and head of sport development in the 'Royal Bafokeng Nation', this chapter analyses the content of the research in its entirety.

The literature created a theoretical framework that was used in the discussion of issues and relevant solutions shown in the precedents global strategies. The case studies investigated and examined current local buildings to explore how they dealt with the relevant issues brought up in this dissertation.

The discussions in this chapter are set out in a manner which explores the research questions mentioned in the introductory chapter of this study. By doing this the hypothesis which suggests that social integration can be encouraged through a sporting facility is tested.

7.2 PERSPECTIVE

The research set out to explore how a sporting facility can encourage social integration. In order to explore this concept society firstly needed to be understood, including social norms and reasons for segregation. A solution of integration cannot be found unless the problem of segregation is explored and the literature review touches on certain reasons for this separation in society.

As Anderson and Taylor (2006) have pointed out, socio-economic segregation is a global problem. Barriers are erected by people who are more 'well-off' than others as they feel they are superior to everyone else. Although this sounds very similar to apartheid where the whites were viewed as superior, this problem has no racial influences. People segregate themselves from others with different socio-economic backgrounds, yet what is not understood is that in order for a society to function properly a mixed population is necessary (Haralambos and Holborn, 1991). Marx wrote that the wealthy part of the population own businesses which rely on the employment of others from the lower-income bracket, furthermore this lower-income population is dependent on this employment to survive (Anderson and Taylor, 2006). It is believed that in a modern day society people of all classes need one another and in order

to control elements such as travel costs. These different groups of the population need to live in the same location and therefore need to interact with one another. This breaking down of barriers between populations of different social class will benefit all parties (Anderson and Taylor, 2006).

In a South African context this 'rainbow nation' with its many races and cultures, each with their own beliefs, historically has been forced into segregation due to the guidelines set up by the Apartheid regime (Witz, 2003). Not only was this regime humanely wrong in so many ways, but it failed to see the positives and richness of a greatly diverse nation. In 1994 South Africa become a democracy and Apartheid was demolished but still to this day a sour aftertaste lingers in society (Witz, 2003). Some interviewee's stated that although they know South Africa is a democracy they still felt like they were isolated and segregated from people from other races. Keim (2003) believes integration is something which needs to be encouraged especially in a South African context where the idea of segregation was drilled into its people and this is something the public from the case studies agreed with. When Nelson Mandela was voted into power in 1994 he knew he had to look at ways to unite the nation and he targeted the Rugby World Cup. He felt that this sporting event could bring the country together as they rallied behind their team, and it did (Keim. 2003).

The research pointed out that globally the issues of culture, diversity and its links to the built environment have become significantly important as it encompasses the way people live and how they are influenced to follow a certain path. Although there is no longer segregation within the built environment the public still have to deal with South Africa's social transformation which is lagging far behind. Legislation passed during the transitional phase has greatly improved the legal and political framework within which most South Africans lead their lives, but on a whole the social divisions that were drilled into South Africans both black and white unfortunately still exist (Witz, 2003). Through the review of literature it is understood that much of it has to do with the perceptions of people and their clinging to preconceived ideas guided by the past rather than any physical aspect. Therefore part of the problem has to do with the way people think and their resulting actions. Haymes (1995) writes that racial differences in South Africa continue to hold the country back from social progression.

7.3 SOCIAL INTEGRATION THROUGH SPORT

Pillemer (2000) writes about social integration and mentions how people crave contact with others, however it is also suggested by Haralambos and Holborn (1991) that society seems to contradict this as almost everything in life today whether it be culture, capitalism and so on, seems to drive us away from each other.

The research explored the social aspects of sport and its influence on social integration and nation building. Keim (2003) writes that mutual respect and tolerance of one another is vital for an integrated nation. He further suggests that unless there is respect show to people with different beliefs a multi-cultural country such as South Africa will not be a united nation. Pillemer (2000) writes that one does not need to agree with others beliefs but a basic understanding and acceptance is required. The research seems to show that sport can help create this acceptance while generating an atmosphere under which different population groups will interact. Norberg-Schulz (1980) writes about the importance of the 'spirit of a place', the creation of an atmosphere. A sporting facility is not just a place but an event, the passion and meaning which surrounds sport is something people are drawn to.

Literature suggests that sport serves a similar function as the organic integration Durkheim (1893) speaks of. Instead of a person's upbringing or culture being the defining factor for integration, sport becomes the 'common need' of each persons. Keim (2003) writes how two people with totally different beliefs who both support the same sporting team will interact and chat about their team, the emotion and passion they have for their side far outweighs their differences. It seems that because sporting fill the role of a common interest it encourages interaction between different cultures and social classes, it breaks down social barriers.

The research has shown that sport is an extremely important part of the South African society, and is something the public is very passionate about. There is a common belief that sport is something which can aid in nation building in South Africa as the 1995 Rugby World Cup and the 2010 Soccer World Cup proved (Nauright, 1997). Some of the questionnaires confirmed the hypothesis of this dissertation which says that sport is a social integrator, they also hoped that the positive experiences at events such as World Cup could be captured on a daily basis.

The research has also shown that sport also keeps children off the street, it gives them something to do and provides goals for them to achieve. This can be seen at the 'Nike

Football Training Centre' where the youth of Soweto has a passion for soccer and this keeps them busy. Nauright (1997) speaks about the ability of sport to create opportunities for people to meet, spectators and players alike have a common interest, the game, and this provides a platform to ignite communication. Furthermore it is suggested that sport is a means of non-verbal communication, that it has the ability to effortlessly create interaction between people.

The precedent study 'Four Sports Halls' clearly shows how sport not only attracts people to a space but provides opportunities for interaction to happen. Although a lot of the sport is played indoors the architecture is transparent allowing passers-by to still spectate, they pause and watch the game with others (Webb, 2011). Three case studies around South Africa were visited as part of the research of this document all of which showing the social powers of sport. The 'Nike Football Stadium' in Soweto highlighted the importance of social interaction at a young age. The soccer and life training workshops together with the Saturday soccer competitions provides opportunities for the youth to learn how to interact with others. It was evident that new friendships were constantly being made both on and off the field. The elder generation were also involved as they enjoyed helping the kids and watching the games, this meant that this small sporting facility united the entire community. The 'Royal Bafokeng Nation' has noted the social powers of sport and tried to implement it within their society yet it has not been as successful as it should have. The case study showed that by focusing more on the professional element of sport instead of social side, the public becomes merely spectators and as a home game is roughly every two weeks there is not much opportunities to harness sports positive energy. Furthermore the 'Sports Campus' is aimed at the wealthy elite sportsman and teams, and the public does not believe the community benefits from the facility in anyway.

The literature has shown that spectator sport is extremely important but to gain the full value of the social benefits, sport has to offer both the professional and social element. For example the research established that 'Moses Mabhida Stadium' is a very successful venue for large professional games to be held, but on non-game days there is still sport being played in the precinct. Social soccer tournaments, touch rugby leagues, and informal games are played constantly on the outer fields attracting people to the space and creating opportunities for integration to occur. Some people even stated that they were only there to “take in” the atmosphere and meet new people.

The research suggests that sport has historically played an important role in all societies, be it in the form of competitive sport, physical activity or play. Furthermore the literature has shown that it has a significant role as a promoter of social integration and economic development in different geographical, cultural and political contexts. It seems that sport is a powerful tool which helps to strengthen social ties and networks, and to promote ideals of peace, fraternity, solidarity, non-violence, tolerance and justice.

7.4 SOCIALLY ORIENTATED BUILT ENVIRONMENT

The research then looked at how an environment can encourage integration both emotionally and physically. Gehl (1987) believes the built environment has a large part to play in creation of an integration friendly environment. Spaces which create opportunities for people to mingle and are designed to keep people in the space are favoured by the public. Pillemer (2000) writes that people crave human contact, and interaction and it seems architecture which provides spaces for such things to happen is viewed as successful.

The literature suggests that an event such as sport can create an emotional connection to a space which will not only attract people to a space but encourage them to interact because of their positive attitude. The physical element needed to be researched as well, authors William Whyte (1988) and Jan Gehl (1987) have done extensive research into how public spaces can influence people and encourage people to linger in a space and spark conversations whether it be visual or verbal. The three case studies had great results in this area of the research. It was found that a successfully designed space does wonders for social integration. 'Moses Mabhida Stadium' with its restaurants, seating, parks and children's playground was packed with people all interacting with one another. The 'Royal Bafokeng Sports Palace' on the other hand had none of that, people arrived for the game and left straight afterwards leaving the facility deserted. Some interviewees felt that there was no reason to stay after the game as there were no facilities or spaces for them to social at besides the park, however this was not successful both as people would rather leave and head to the town where they could get a meal and listen to music.

It seems that the built environment has a big part to play in the integration of people as it formalises the concept of social integration in a physical space. Through the review of literature it was shown that the environment in which people find themselves has a huge influence on their mood and actions. Therefore it seems by creating a comforting

environment which is designed to encourage interaction, the idea of social integration has a greater opportunity of success.

The concept of 'successfully designed public space' and its positive impact on social integration was explored in the research. Gehl (1987) speaks about how the design of spaces and how they influence people to bump into one another is key to integration. Similarly Whyte (1988) writes how certain elements such as food and seating help keep people in these spaces which creates opportunities for interaction. The precedent study 'Kaohsiung Stadium' has well designed public spaces yet they are too separate from one another and are not well utilized unless the stadium is in use. 'Moses Mabhida Stadium' which was explored in the primary research is unlike 'Kaohsiung Stadium' in that it does not rely on a game day to be busy. The stadium precinct is constantly in use, there are outer fields where social sporting events take place, restaurants, open spaces, children's areas and a running track. The research established that this case study is very successful in attracting people to the facility and encouraging them to linger which creates opportunities for social interaction.

7.5 MEANINGFUL ARCHITECTURE

Nirupa (2011) writes that a building should not only be a functional space, instead there is an opportunity to create something which has meaning, something with a soul. The research looked at how one could create a built environment which every member of the public could relate to and feel comfortable in. The idea explored is that if one feels relaxed and happy in a space like they are in a homely environment they are more likely to interact and engage with one another. The problem with this in a South African context is that it is an extensive multi-cultural nation and each culture has its own recognisable architecture. Architecture which resembles specific cultures would make it unwelcoming for others, therefore the architecture needs also needs to be neutral. No one culture can feel the facility is representing their identity instead it needs to represent them all. The one thing that all the users of the facility will have in common other than their love for sport is that they live in a similar area, they are living in the same country and in the same province. The idea of Critical Regionalism was researched because it does not resemble a specific culture but is instead an architecture which is grown out of its context. Norberg-Schulz (1980) writes that it is a modern architecture which follows the international trends yet still pays tribute to its site by using local materials,

and responding to its climate. It appears that this creates an architecture that everyone can feel comfortable in and relate to creating an environment which encourages integration.

The literature shows that the theory of Critical Regionalism seeks to acknowledge local factors (culture, climate, topography and nature) with global forces (construction techniques, concepts and technologies). Such an approach allows the local character of place to manifest, while acknowledging global trends, construction techniques and the time in which we live. It is established that by doing this an architecture is formed which is responsive to local, natural and climatic conditions while also acknowledging international trends. This architecture does not need to represent specific cultures but by combining the use of materials of the area and site specific design, an architecture is created which represents the people of the surrounding area. This architecture has meaning to the community, it represents them, and because of that they can relate to it as it has a 'homely feeling'. The research established that by creating a built environment which relaxes and represents the people, they will feel confident and more open to interaction than if they were in an unhappy environment.

The 'Kanak Centre' is very successful in using Critical Regionalism to create an architecture which represents the people, while still showing that as a community they are moving with the times and global trends. Similarly the case study 'Nike Football Training Centre' is context specific as the earthy tones represent the dry Highveld while the timber screens provide solar shading. The users of the building felt that it belongs in the landscape where the surrounding community is made up of low budget houses and shacks. By being sensitive to its surroundings yet still being a modern contemporary masterpiece, it becomes an icon of the community which is not only accepted but up-lifts the people.

CHAPTER 8: CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTTION

This study set out to examine social integration and to test the hypothesis which states that, *"Sport has extremely strong social powers and can be used as a tool to encourage integration amongst societies. By harnessing these powers coupled with a built environment which is designed to encourage interaction, social integration within a diverse nation becomes a possibility."*

This chapter concludes the research undertaken in this study and forms recommendations relevant to the topic.

8.2 CONCLUSION

It can be concluded that integration within society is something which needs to be encouraged. South Africa is a rainbow nation, there are many different population groups and cultures, each with their own beliefs and backgrounds which need to be united as one. This great diversity within the nation is something which needs to be viewed and treated as a great privilege.

It has been observed that sport has already played a major role in South Africa in eliminating Apartheid's unethical policies. The phenomena of the 1995 Rugby World Cup and 2010 Soccer World Cup proved that sport has the ability to promote unity between people. It is a tool which can unite a nation, differences are put aside as people rally behind their team as social barriers are broken down. No matter ones background sport becomes the common ground between them. It is felt that sport still has a significant role to play as an agent and catalyst for significant social change in the world and more specifically South Africa.

It has been found that there is a unique aspect to sport which brings people together. Through all of the research undertaken it can be seen that the atmosphere and "feel good" nature of sport excites people and encourages them to take part in it. It is because of this that people engage with one another at sporting events, and because of their common interest in sport they interact far easier.

It is found that the built environment can also play a role in social integration but a conscious effort needs to be made to design the physical environment in such a way that it promotes this interaction. Public space needs to be designed to force people to bump into one another and spaces need to be created where people will linger creating more opportunities for interaction to happen. It is observed that to provide for the ordinary man's need of belonging, there needs to a sense of place, so as to root man in his context. Architectural responses which create a conversational relationship with the natural environment and compliment the natural climatic factors are found to have a greater sense of place. People are also attracted to places with an atmosphere and meaning. The built environment needs to be designed in such a way that it captures the 'Genius Loci' of a space. It is also noted that people warm-up to one another when in an environment they are comfortable in and this is achieved through architecture which has meaning and a sense of place.

It has been observed that there is still room for further research to be done, especially in terms of how to further link the positive energy of sport with the built environment, but it can be concluded that it is possible to create a sporting facility which aides in the goal of social integration and a united nation. Sport has a big role to play in society as a social integrator, and a well-designed built environment can help encourage and enhance this integration.

8.3 RECOMMENDATIONS

The research carried out within this document shows that in order to create a facility which encourages social integration there are some recommendations to follow.

Sport is something which is proven to encourage integration and should be included in whatever way possible. A sporting facility would gain the most rewards, but even the inclusion sporting memorabilia or a children's play area within a building can benefit the environment.

Secondly the architecture must physically promote integration by providing spaces for people to interact. These spaces need to have things such as food available and seating to keep people in the space for longer. The built environment should also provide the user with a sense of place creating a comforting environment where integration would be more likely to happen.

There is an opportunity for a sporting facility within the Durban precinct where this unity within society can be encouraged. It can be a facility that not only caters for spectators but one where the general public can get involved as well. It will not be aimed at professionals but more for the 'ordinary man' and up and coming youngsters. These social nodes will become places where the public can relax and interact with one another. It can become a space other than the work place where people of different race, culture and socio-economic background can interact and because there is no hierarchy as seen in the work place there is more opportunity for integration to occur.

8.3.1 Criteria for schedule of accommodation

As sport is seen as a positive social integrator which not only attracts people to a space but provides opportunities for interaction there needs to be a sporting element. The research shows that sport is not only an integrator for people partaking in sport but spectators as well. It is because of this there needs to be spaces for sport to happen as well as spaces for spectators to feel comfortable and watch the games. Grand stands, restaurants, and cafes which overlook the playing fields or halls are extremely important. Sporting facilities visited in the case studies showed that there are many elements needed specifically for the players such as change rooms, medical centre and gym. There also needs to be spaces assigned to coaches and admin staff.

Spectators require different elements than players as they will linger around the facility after games. These different elements will also cater for people not interested in sport but are attracted to the facility because of its atmosphere. According to Whyte (1988) there needs to be spaces designed to attract and keep people in the space such as bars, cafes and restaurants. There also needs to be large areas of public space surrounding the building and fields as this caters for spill-out of crowds after games and can become an attraction on their own. As this centre is aimed at the general public with the goal of integration in mind it will host a great diverse amount of people. The building needs to be designed to respect all religion and culture so that it is welcoming to all. By including a cultural centre element the public can learn about each other's cultures, try their local foods and educate themselves. Through this transparent 'learning' and understanding of cultures, barriers are relaxed and there is a greater acceptance as people warm to each other.

The facility needs to be a mixed-use development which not only caters for the needs of sportsman and spectators alike but to the general public as well. It needs to respond to the needs of all the diverse cultures intended to use the facility and public spaces need to be created to congregate this diversity so that social integration can occur.

8.3.2 Criteria for site selection

As the core of this dissertations topic is the goal of social integration there is a calling for the site to be located in an area as diversely populated as possible. If the site is surrounded by a community made up of people belonging to many different race groups, cultures or religions there is a greater opportunity for complete integration.

The site needs to be easily accessible and on a main route through the heart of a community as this will create more opportunities for people to visit the facility. This means easy, direct, and unhindered pedestrian access, as well as access for private vehicles, public transport and service/delivery vehicles.

The site should be orientated in such a way as to promote a healthy and vibrant site, not overly shaded by neighbouring buildings. Good cross ventilation is essential as indoor sporting halls need to stay as cool as possible for the benefit of the participants. Its orientation should allow views from the site to the surrounding context, preferably the Durban city or harbour as this gives a sense of grounding and belonging to the users of the facility. A North to North-East orientation will make it easier to achieve optimum building performance with regards to thermal comfort and lighting levels. If located within a public domain the building should address the existing public space while adding its own space to the urban fabric.

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REFERENCES

BOOKS

- Anderson, M.L. Taylor, H.F. (2006). *Sociology Understanding a Diverse Society.* USA: Thompson Wadsworth.
- Archer, R. Bouillon, A. (1982). *The South African Game: Sport and Racism.* London: Zed Press.
- Baker, W, J. (1982). *Sports in the Western World.* USA: Illinois Press.
- Bale, J. (2004). *Sites of Sport: Space, Place, Experience.* London: Routledge.
- Beckett, D. (2002). *Flying with Pride: The Story of the South African Flag.* South Africa: WildNet Africa.
- Beng-Huat, C. Edwards, N. (1992). *Public Space- Design, Use and Management.* Singapore: Singapore University Press.
- Booth, D. (1998). *The Race Game: Sport and Politics in South Africa.* London: Frank Cass.
- Brissette, I. Cohen, S. Seeman, T. E. (2000). *Measuring social integration and social networks.* Support measurements and interventions: A guide for social and health scientists. New York: Oxford Press.
- Clark, A. (2010). *Transforming Children's spaces- Children's and Adult's Participation in Designing Learning Environments.* New York: Routledge.
- Durkheim, E. (1893). *The Divisions of Labour in Society.* New York: Free Press.
- Fleming, R. (2007). *The Art of Place making.* London: Merell Publishers Limited.
- Frampton, K. (1983). *"Towards a Critical Regionalism: Six Points for an Architecture of Resistance", in the Anti-Aesthetic. Essays on Postmodern Culture*. Seattle: Bay Press.
- Gehl, J. (1987). *Life Between Buildings*. Denmark: Danish Architectural Press.
- Hampton, J. (1999). *Hobbes and the Social Contract Tradition.* United Kingdom: Cambridge University Press.
- Haralambos, M. Holborn, M. (1991). *Sociology: Themes and Perspective.* London: Harper Collins Publishers.
- Haymes, S. N. (1995). *Race, Culture and the City, a Pedagogy for Black Urban Struggle.* New York: State University of New York.
- Hechter, M. Home, C. (2009). *Theories of Social Order: A Reader.* California: Stanford University Press.

- Houlihan, B. (2008). *Sport and Society: a Student Introduction.* California: Sage Publications.
- Husserl, E. (2002). *Ideas: A General Introduction to Pure Phenomenology.* New York: Routledge.
- Jacobs, J. (1961). *The Death and Life of Great American Cities.* New York: Random House.
- Jarvie, G. Maguire, J. A. (1994). *Sport and Leisure in Social Thought*. London and New York: Routledge.
- Keim, M. (2003). *Nation Building at Play- Sport as a tool for Social Integration in Post-Apartheid South Africa.* Oxford: Meyer & Meyer Sport (UK) Ltd.
- Le Corbusier. (1986). *Towards a New Architecture*. New York: Dover Publications.
- Lefaivre, L. Tzonis, A. (2003). *Critical Regionalism- Architecture and Identity in a Globalized World.* London: Prestel.
- Lewis, M. Staehler, T. (2010). *Phenomenology: An Introduction.* London: Continuum International Publishing.
- Moughtin, C. (2003). *Urban Design: Street and Square.* London: Architectural Press.
- Newman, O. (1972). *Defensible Space: People and Design in the Violent City.* London: Architectural Press.
- Nauright, J. (1997). *Sport, Cultures and Identities in South Africa.* South Africa: David Philip Publishers.
- Norberg-Schulz, C. (1971). *Existence, Space and Architecture.* Praeger Publishing.
- Norberg-Schulz, C. (1980). *Towards a Phenomenology of Architecture.* London: Academy Editions.
- Pillemer, K. (2000). *Social Integration in the Second Half of Life.* Maryland: The John Hopkins University Press.
- Sandercock, L. (1998). *Towards Cosmopolis*. Chichester New York: Wiley Publishers.
- Sharp, J. (1995). *Magic of a Mix of Cultures- Democracy in Action.* Cape Town: Idasa.
- Sugen, J. Bairner, A. (2000). *Sport in Divided Societies.* United Kingdom: Meyer & Meyer Sport Ltd.
- Swadding, J. (2000). *The Ancient Olympic Games.* Austin: University of Texas.
- Tessendorf, K, C. (1989). *Along the Road to Sowet- A Racial History of South Africa.* New York: Atheneum Publishers.
- Whyte, W. (1980). *The Social Life of Small Urban Spaces.* Unknown.
- Whyte, W. (1988). *Rediscovering the Center.* New York: Doubleday.

- Wiener, A. Diez, T. (2009). *European Integration Theory.* United Kingdom: Oxford University Press.
- Witz, L. (2003). *Apartheid's Festival- Contesting South Africa's National Pasts.* Bloomington: Indiana University Press.
- Zumthor, P. (2006). *Atmospheres.* Basel: Birkhauser

JOURNALS

- Author Unknown. (2010). *Toyo Ito- National Stadium.* Architectural Record, no 1, pp. 64-70.
- Author Unknown. (2010). *Moses Mabhida Stadium.* Digest of South African Architecture, pp. 22-23.
- Author Unknown. (2010). *Nike Football Training Centre.* Digest of South African Architecture, pp. 50-51.
- Author Unknown. (2009). *Stadium Opening Attracts High-Profile Gathering.* PODI-YA-TSELA Grapevine, no 1, April, pp. 1-3.
- Brandenburg, A. M. Carroll, M. S. (1995). *Your Place or Mine?: The Effect of Place Creation on Environmental Values and Landscape Meanings.* Society and Natural Resources, no 8, pg. 381-398.
- Findley, L. R. (1998). *Piano Nobile,* Architecture, October, pp. 95-105.
- Japan Architecture. (2010). *The Main Stadium for the World Games in Kaohsiung.* Japan Architecture, no 76, pp. 108-109.
- Jost, D. (2008). *Beauty and the Turf,* Landscape Architecture*,* September, pp. 78-86.
- Mcinstry, S. (1998). *Sea and Sky,* Architecture Review, no 1222, December, pp. 30-35.
- Peters, W. (2010). *Moses Mabhida Soccer Stadium*. KZNIA Journal, no 1.
- Roon, A. (2010). *Royal Bafokeng Stadium, Rustenburg.* Architecture SA, July/August, pp. 48-53.
- Schelling, T, C. (1969). *Models of segregation,* American Economic Review, pp. 488-493.
- Webb, M. (2011). *Four Sports Halls,* Architectural Review.
- Westra, B, L. Rogers, B, L. (1991). *The Concept of Integration: a Foundation for Evaluating Outcomes of Nursing Care,* J Prof Nurs, September-October, pp. 277-282.

DISSERTATIONS

- Nirupa, N. (2011). *The Influence of Traditional Architecture on Contemporary Culture: A Proposed Hindu Centre for Durban.* University of KwaZulu-Natal, Durban.

WEB PAGE ARTICLES

- Carey, K. (2004). *What is the Purpose of Sports?* Available from: http://www.globalprayerdigest.org/monthdetails/2004/md-August-2004.asp (Accessed: 05/04/13).
- Kies, B, M. (1943). *The Background of Segregation.* Available from: http://www.sahistory.org.za/archive/background-segregation-bmkies-29-may-1943 (Accessed: 21/05/13).
- Stakeholder Report II. *Royal Bafokeng Nation- Building the Nation.* Available from: *http://www.bafokengholdings.com/a/files/rbn_stakeholder_report_2.pdf* (Accessed: 20/03/13).
- Patterson, S. (1995). *Critical analysis of 'Towards a Critical Regionalism.' By Kenneth Frampton.* Available from: http://home.earthlink.net/~aisgp/texts/regionalism/regionalism.html (Accessed: 21/04/13).

WEB PAGES

- http://www.archdaily.com/96408/football-training-centre-soweto-rufproject/ (Accessed: 27/04/13).
- http://www.fifa.com/worldcup/archive/southafrica2010/destination/stadiums/stadium=5018127/index.html (Accessed: 23/05/13).
- http:// en.wikiarquitectura.com/index.php/Kaohsiung_Stadium (Accessed: 22/05/13).

APPENDIX A- QUESTIONAIRE

Topic: <u>Social integration through sport and the built environment:</u> Designing of a sporting precinct for the greater Durban community.

I am a Masters of Architecture student from the University of Kwa-Zulu Natal. I am doing a study on how sport and the built environment can be used to create opportunities for social integration to occur. The questions answered and your participation shall aim to formalize a better understanding of how the social powers of sport are viewed and how a sporting facility can bring people together.

You are under no obligation to answer the questions and your personal details will remain strictly for the purpose of this research.

Name (Optional): Gender:

Occupation: Age:

Population group: (Indian, Coloured, White, Black)

Part One: Background information

1) What area do you live in?

.....

2) Have you lived in South Africa your whole life?

.....

Part two: Social integration

1) Why is it do you think, that nearly two decades post-apartheid segregation is still evident in South Africa?

.....

.....

2) Do you think there are enough facilities or events which try to encourage integration?

.....

.....

3) Do you feel integration amongst all South Africans socially is important?

.....

Part three: Sport as a social integrator

1) Do you enjoy sport?

.....

2) Do you play sport or are you only a spectator?

.....

3) What sports interest you?

.....

4) Do you feel sport helps to bring people together, please explain?

.....

.....

5) As a South African could you see yourself having as many social gatherings whether it be with friends, family or strangers if sport did not exist?

.....

6) Do you feel sport helps to spark conversations with strangers as it creates a common interest between people?

.....

7) The 1995 Rugby World Cup, 1996 AFCON, and the 2010 Soccer World Cup seemed to really unite our country, how do you think that positive energy of nation building can be continued after these large events?

.....

.....

Part four: Architecture

1) Do you visit this facility often, if yes for what purpose?

.....

2) What is your impression of the building? (Powerful, Scary, Welcoming, Uplifting etc)

.....

3) Do you feel like the building belongs in its surroundings and if yes what makes you feel this way? Is it the materials used, the way it looks etc, give reasons.

.....

4) If your answer was yes in the question above does this mean you feel more comfortable/relaxed when visiting the building?

.....

5) Do you visit the facility for reasons other than sport, if so what?

.....

6) Do you stay at the facility after sport has finished, and if so doing what?

.....

7) What other amenities would you like to have at the facility?

.....

8) General comment on the building?

.....



sport as a tool for social integration:

brief

To design a multi-purpose sporting facility aimed at becoming a social node for durban, eThekweni.

This sport and leisure facility should strive to nuture sporting talent at grass routes level, attract both social and professional athletes and become an environment which is welcoming and attractive to spectators.

It should look to harness the positive social powers of sport, towards the goal of integration, no matter ones race, age, gender or socio-economic background.

The facility should provide a platform for interaction: a space which aids in the goal of a united nation

the design of a multi- purpose sport and leisure precinct for Durban, eThekweni

problem

Segregation within society is a problem that needs to be addressed. Legislation passed during the transitional phase of 1994 has greatly improved the legal and political framework within which most South Africans lead their lives, however on a whole the social divisions that were drilled into South Africans both black and white unfortunately still exist. Much of it has to do with the perceptions of people and their clinging to preconceived ideas guided by the past rather than any physical aspect. Therefore part of the problem has to do with the way people think and their resulting actions. Racial differences in South Africa continue to hold the country back from social progression. Age, gender and socio-economic barriers, or social constructs also play a large part in the problem.

Thisproblem of segregation is one which needs to be proactively addressed. The country is still in a stage of transition where integration needs to be encouraged, however it appears that the current built environment could.

Sport is not only a physical activity but an area where people interact on a social level as well. Jarvie and Maguire (1994) write that sport and leisure activities form an integral part of social life in all communities and are intricately linked to society and politics. It is seen as a more cost-effective approach for dealing with social problems than correcting the consequences of aggression, crime, violence and abuse through police, correctional or social services. The 'new South Africa' is in need of a new national identity, and sport is the perfect cross-cultural activity to create this (Nauright, 1997).

“Sport has the power to change the world… it has the power to inspire. It has the power to unite people in a way that little else does. It speaks to youth in a language they understand. Sport can create hope where once there was only despair. and it is more powerful than government in breaking down racial barriers.”

“Nelson Mandela”

2 theoretical framework, accomodation and textures

theories/concepts

social integration

This project looks at how sport can be used as a tool for social integration. Emile Durkheim, is credited with introducing the theory of social integration in the late nineteenth century (Pillemer, 2000). Social integration is the means through which people interact, connect and validate each other within a community. Pillemer (2000) writes how this theory sugests that people experience mental, emotional and physical benefits when they believe they are a contributing, accepted part of a collective. Without that sense of connection, they can experience depression, isolation and physical illness that could limit them from experiencing productive, happy lives.

genius loci

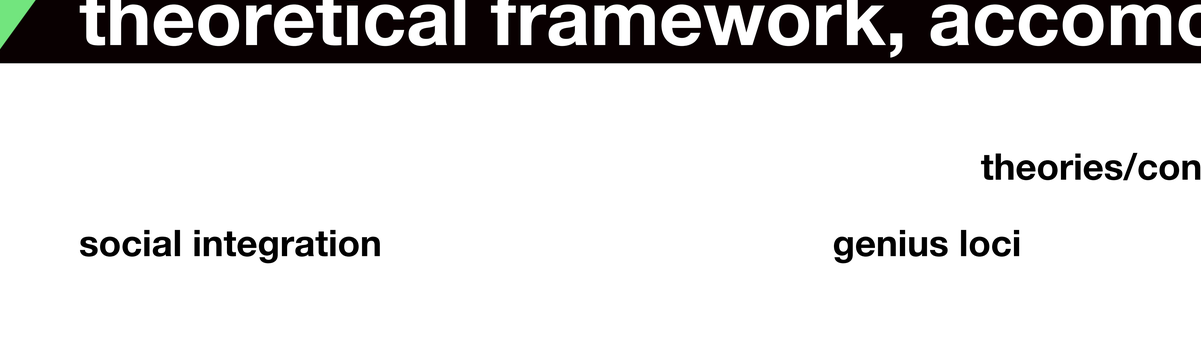
Norberg-Schulz (1980) writes that Genius Loci refers to a location's distinctive atmosphere or 'spirit of place'. Furthermore he states that it comes from the philosophy or method of inquiry of Phenomenology. This is based on the premise that reality consists of objects and events as they are perceived or understood in human consciousness. This idea was first developed by Edmund Husserl who was a mathematician (Fleming ,2007).In the 1960's the theorist Alfred Schutz was the first person to use Phenomenology in the field of sociology, and it was later used in architecture by Christian Norberg-Schulz (Fleming ,2007).

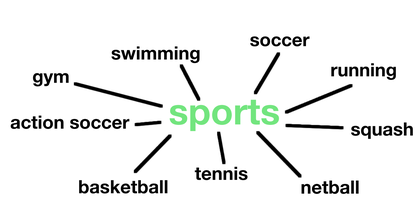
critical regionalism

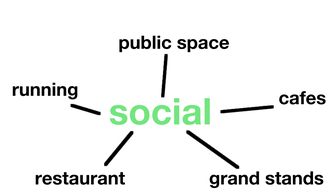
The term 'Critical Regionalism' was first used by the architectural theorists Alexander Tzonis and Liane Lefaivre and then later by the theorist Kenneth Frampton (Patterson, 1995). Critical Regionalism is an approach to architecture that strives to counter placelessness and lack of identity in modern architecture by using the building's geographical context (Frampton, 1983).

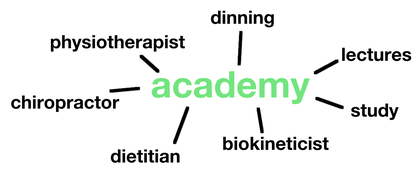
public space

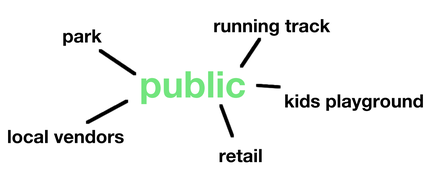
The founders of this concept or at least the two authors most notably recognised to be the first to speak about it were William Whyte and Jan Gehl. Whyte (1988) writes that a good public space enriches the people's lives who interact with it. Public spaces are places where people can interact with one another, they are the stage for public lives (Gehl, 1987).











driving concept

schedule of accommodation



textures

3 precedent studies

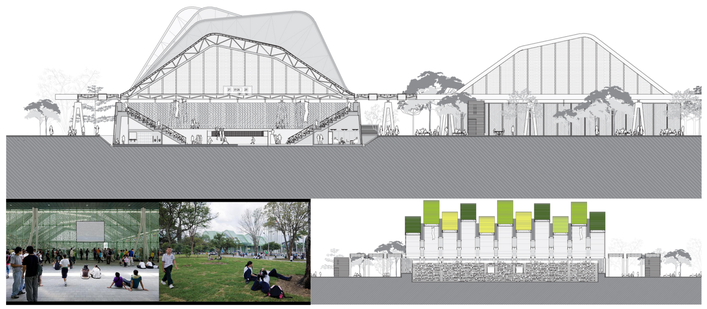
four sports halls

architects: giancarlo mazzanti and felipe mesa, city: medellin, country: colombia

The 'Four Sports Halls' project was commissioned because the city was to hold the 2010 South American Games. It is still in constant use today especially by local schools and leagues, and is open to the general public as well (Webb, 2011). It appears that the concept was to create an architecture which would fit seamlessly into its environment and is welcoming to all (Webb, 2011). It is because of this concept that this precedent was chosen. By fitting into its surroundings a contextually sensitive architecture is born. Together with it being a public sporting facility with large public space on both the interior and exterior, and its responsive architecture, it responds well to the theoretical framework of this project.



The brief called for four independent sports units very close to one another. The architects decided to view the idea of four separate buildings as a single one, by creating a semi-covered public space with sports areas and gardens.



The 'Four Sports Halls' complex is very successful in creating a socially vibrant environment. The sporting activities are open for all to see, meaning the social powers of sport can influence everyone. By allowing people to move through the space easily with no obstacles and having sporting activities on the go, as well as successful public spaces where people will linger all aides in creating opportunities for interaction to occur (Gehl, 1987).

kaohsiung stadium

architects: toyo ito, city: kaohsiug, country: taiwan

The idea was to open the arena to the landscape loosening up the form, "usually stadiums are very static and symmetrical, but this time we wanted to make a more fluid and dynamic shape, explains Ito" (Architectural Record, 2010). The shape of the stadium which resembles a question mark is often compared to the symbol of the dragon, wagging its tail, which is an animal which represents the Asian culture.



The idea was to open the arena to the landscape loosening up the form, "usually stadiums are very static and symmetrical, but this time we wanted to make a more fluid and dynamic shape, explains Ito" (Architectural Record, 2010). The shape of the stadium which resembles a question mark is often compared to the symbol of the dragon, wagging its tail, which is an animal which represents the Asian culture. The stadium adheres to what Whyte (1988) believes is necessary for a successful public space. There is food, water features and trees, it does however lack in seating. There are large spill out areas for spectators to gather at before and after the games, as well as green areas and ponds with tropical plants and palms, "we wanted to attract the public with a new urban park typology" explains Ito (Architectural Record, 2010). The park is however cut off from the main entrance, as the 'tail' of the dragon although permeable creates a physical barrier separating it from the main flow of people (www.wikiarquitectura.com). The beautiful public spaces surrounding the s tadium should have been intentionally interwoven creating a flowing social precinct (Architectural Record, 2010).

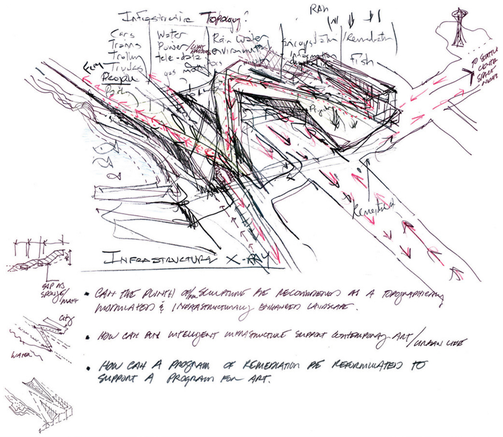


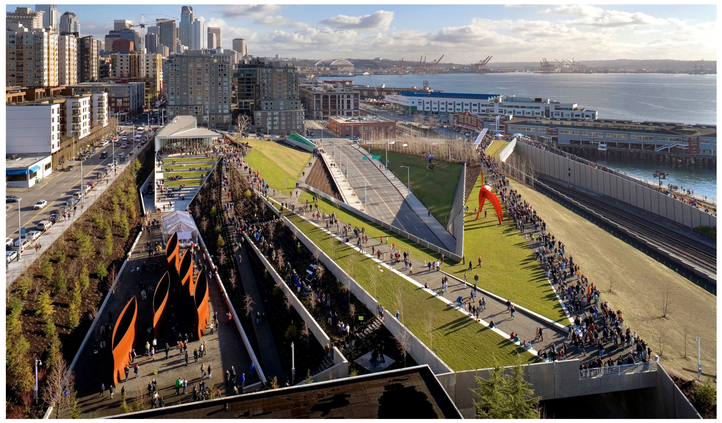
The 'Kaohsiung Stadium' does not seem to be as successful. Although there has been a large effort to create an environment which attracts people it still seems that it is mostly used on game days and not any other time (Architectural Record, 2010). The stadium opens up to the main road and train station suggesting that it wants people to arrive and leave as quickly as possible. It turns its back on the great public park and forest. There is also no integration between the stadium and its surrounds, and although the stadium does well to represent the people of the area in its form which resembles the dragon and the use of feng shui, it does not respond to the neighbouring residential area what so ever (Architectural Record, 2010). This building has many positive aspects all of which can be viewed as tools to promote integration, however the implementation of them as a whole has not been successful.

olympic sculpture park

architects: weiss and manfredi architecture, city: seattle, country: usa

Planned as a continuous landscape that wanders from the city to the shoreline, this Z-shaped hybrid landform provides a new pedestrian infrastructure. Layered over the existing site and infrastructure, the scheme creates a dynamic link that makes the waterfront accessible. The main pedestrian route is initiated at an exhibition pavilion and descends as each leg of the path opens to radically different views. The first stretch crosses a highway, offering views of the Olympic Mountains; the second crosses the train tracks, offering views of the city and port; and the last descends to the water, opening views of the newly created beach. This pedestrian landform now allows free movement between the city's urban center and the restored beaches at the waterfront.





As a “landscape for art”, the Olympic Sculpture Park defines a new experience for modern and contemporary art outside the museum walls. The topographically varied park provides diverse settings for sculpture of multiple scales. Deliberately open-ended, the design invites new i nterpretations of art and environmental engagement, reconnecting the fractured relationships of art, landscape, and urban life.

key precedents



visual precedent studies

4 case studies

nike football training centre

**architects: sean pearson of RUF project,
city: johannesburg, country: south africa**



The 'Nike Football Training Centre' is a very successful facility in terms of using sport to up-lift the community and create an opportunity for social integration to occur. The building also relates very well to its context, through its materials and response to the climate. The public can relate to the building as it represents them and their community. Although the facility is aimed at the youth it attracts the elder members of society as well. They too like to watch the games on display creating an interaction between the older and younger members of the community allowing the older generation to pass down their knowledge. The facility does not however address the need for public space. If there were shaded areas, better seating in strategic spots and food available the facility would attract a much broader crowed. The users of the facility would also linger in the space for longer, meaning there would be more opportunities for interaction (Gehl, 1987).



The facility is aimed at up-lifting the youth of the community not only in sport but life skills as well. Although sport mainly attracts the youth to the centre, there are also life skills training workshops, and computer facilities with internet access, which are available for the public to use . The architecture has been designed with the player in mind, supporting them through the various aspects of their day. Everything has been considered to make the facility flow and remain open. At the same time managing to create a secure and safe place to play football.

moses mabhida stadium

**architects: theunissen jankowitz, ambro-afrique consultants, osmond lange architects and planners, NSM designs, and mthulisi msimang.
city: durban, country: south africa**



The project brief called for the development of a stadium that would be an iconic beacon for the city of Durban (Digest, 2010). The design team had a number of goals to meet. According to Peters (2010) they had to create a stadium that would form a meaningful part of the city's urban fabric. It needed to be a mixed-use facility in order to ensure sustainability. Its scale needed to be pleasant to the users of the building and it needed to be a place that encourages a vibrant public systems.

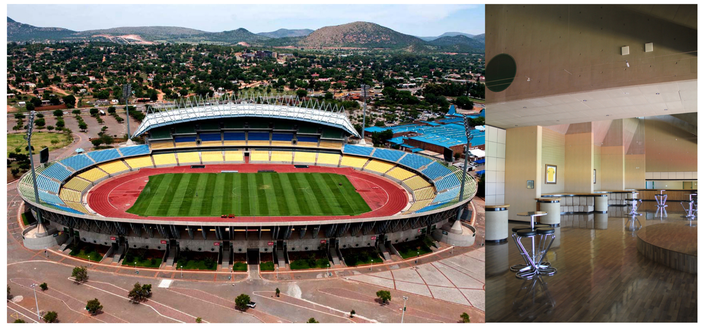
The stadium takes its design inspiration from the South African flag, with its 104 meter high arch that curves high over the stadium as an emblem representing the unity of a sport loving nation (www.fifa.com). The 'Y' formation of the arch which is visible from the air is taken from the South African flag, the two legs of the arch on the Southern side of the stadium come together to form a single footing on the Northern side, symbolizing the new unity of a once divided country (Beckett, 2002). The main entrance which is situated on the Southern side coincides with the open side of the arch, this is a gateway to the city in the distance (Fig 61). The secondary entrance on the Northern side feeds off the newly built train station and faces the Kings Park Rugby Stadium.

The 'Moses Mabhida Stadium' has become a major public precinct of Durban. Not only is the stadium seen as a symbol of Durban but as a vibrant facility people want to visit. There is so much going on at the stadium that the atmosphere is vibrant and enticing. The successfully design public spaces become platforms for integration to occur (Gehl, 1987). The facility also harnesses the social aspect of sport not just on a professional level but on a social level as well. The outer fields are constantly in use by the general public for league matches, social tournaments and a space for families to play. It is at these sporting fixtures and public spaces where people have opportunities to meet others.



royal bafokeng sports palace

**architects: ADO-architects, alvin roon architects, and vickey harris architects,
city: phokeng, country: south africa**



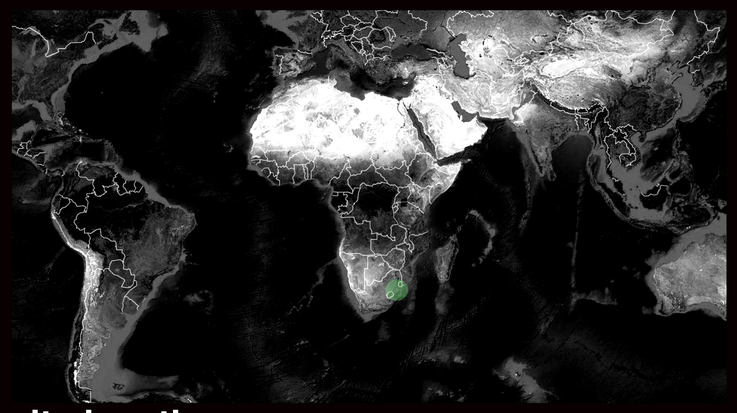
The Royal Bafokeng Nation's land is surrounded by mines, and they have fought for their rights to the minerals mined on their land. They now receive royalties of twenty percent, and have used this money to develop their community through sport and education (Roon, 2010). The 'Royal Bafokeng Sports Palace' is a football, rugby and athletics stadium which also has tennis, netball and basketball courts located just outside the stadium. The stadium which was renovated for the 2010 FIFA World Cup has a capacity of 45,000, and is today the home of the local soccer team, Platinum Stars. It is also the only major stadium in South Africa owned by the community (PODI-'YA-TSELA Grapevine, 2009). The town of Phokeng is also home to the 'Bafokeng Sports Campus' which is a five star facility aimed at elite athletes. It was used as England's national soccer team during the World Cup as their home base. This facility also has its own academy with the aim of nurturing young talent from the area to eventually feed into the Platinum Stars.

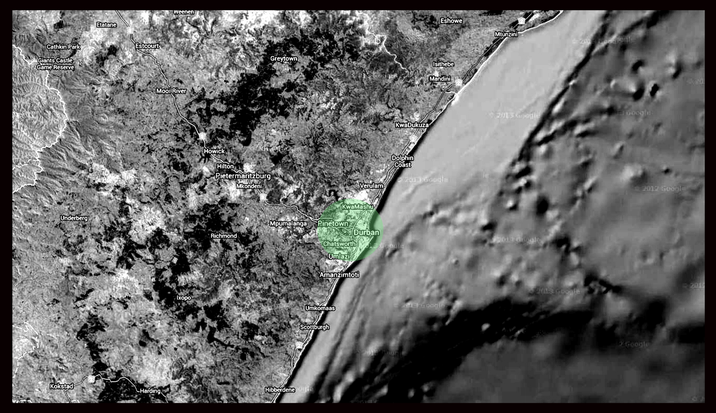


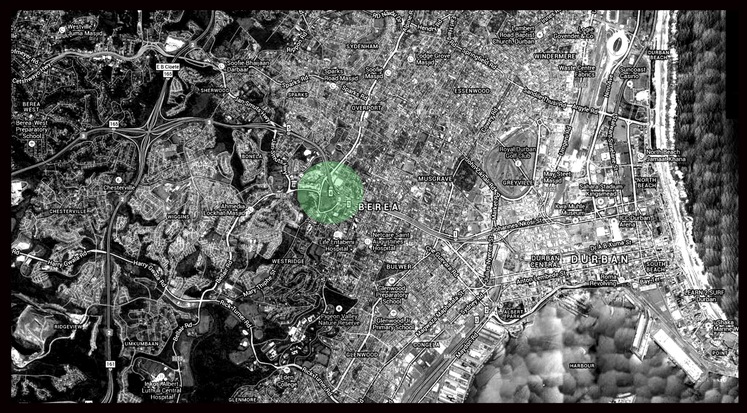
The problem with both the stadium and the campus is that their physical locations are both very secluded and they are run as separate entities. These two facilities needed to be designed as one. On days when there is no match at the stadium people would still be visiting the site to go to the academy or high performance centre, however as it stands the stadium is deserted unless there is a match on. If the two facilities became one, incorporating a restaurant and bar it would attract a large audience on a permanent bases and would become a social space which the whole community could make use of. Through the informal discussions and questionnaire (see appendix A) it became clear that the facility had great potential as a social integrator but is not successful at the moment. The community is very proud of their stadium and their team 'Platinum Stars' yet they felt the stadium should be more welcoming to the general public. The public arrive, watch the game and then head to the village to socialise because there was nothing happening at the stadium post-match. They also felt that the 'Sports Campus' was not built for the community but rather for wealthy outsiders, even though there were many facilities they would like to make use of at the campus.

The Royal Bafokeng Nation is a group of inspiring people with leaders with great intentions striving to up-lift the community and through sport and education they are building a bright future. However although there are great intentions that are not being implemented correctly, all the facilities need to be made more accessible to the public. Public gathering spaces with seating and restaurants need to be included to create spaces for people to interact and socialise.

case studies

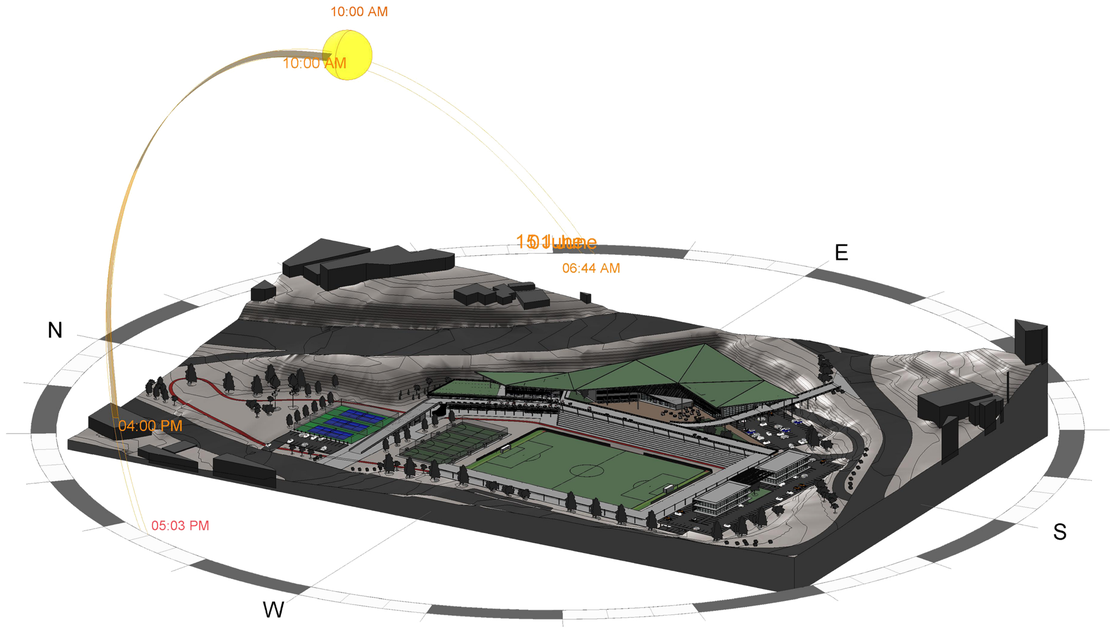






site location

site analysis and site photos



solar study



figure ground study showing heavy pedestrian and vehicle routes



south context



current vehicular entrance



current driveway into site



view south west over site



old grand stand



bank where two new buildings join



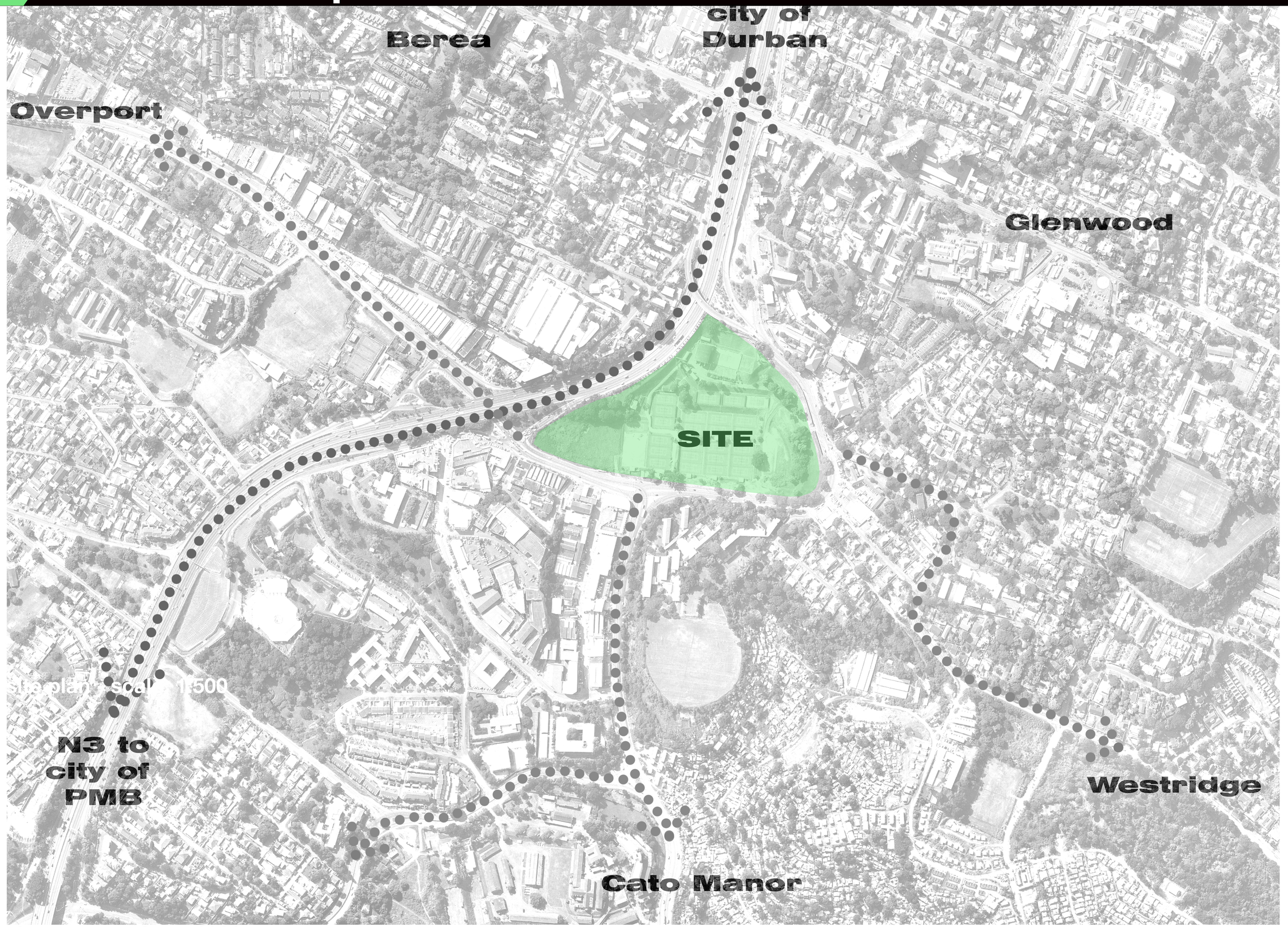
old jan smuts interchange on west side of site



N3 freeway alongside site

site photographs

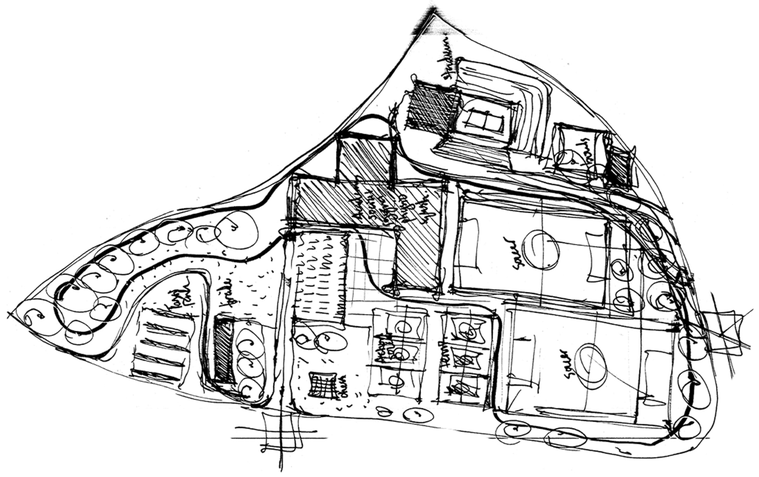
site context plan

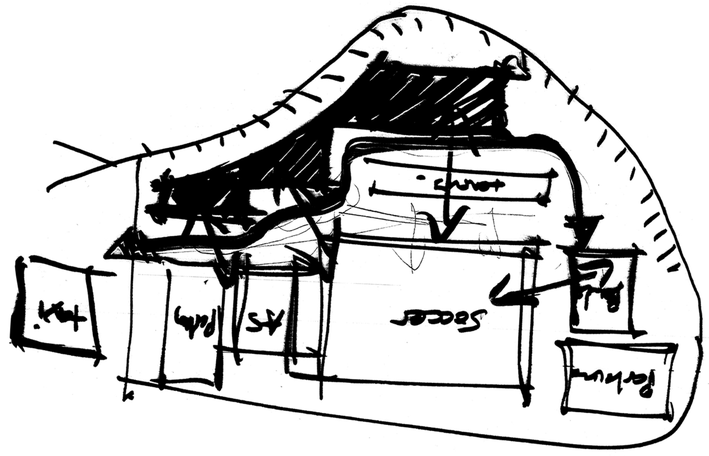


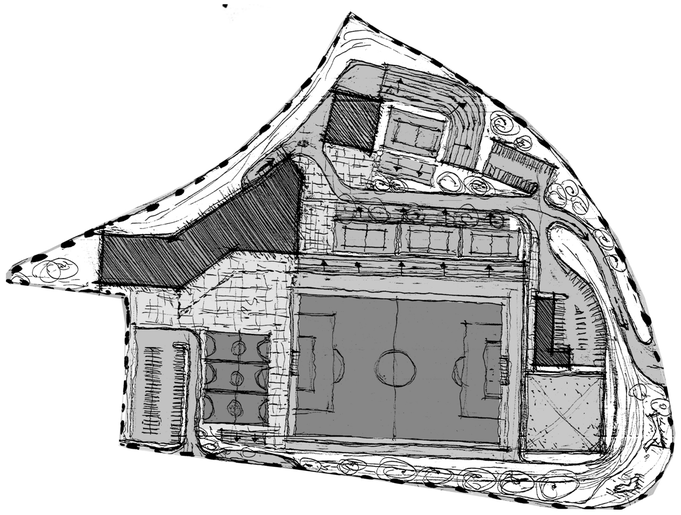
site context plan 1:2000

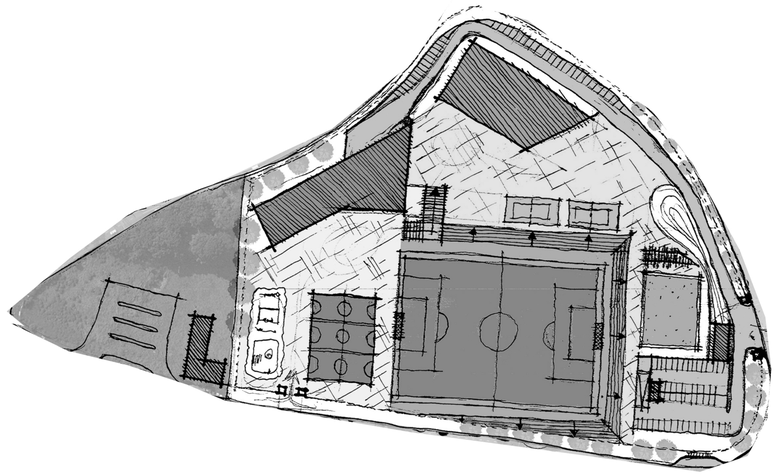
urban design development/footprint exploration

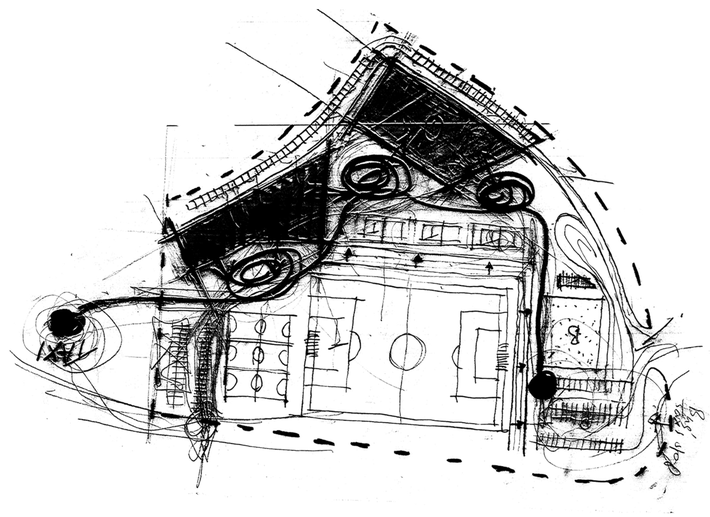


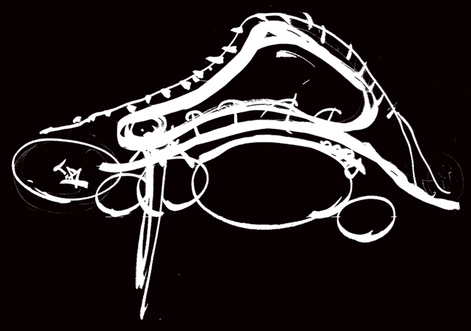


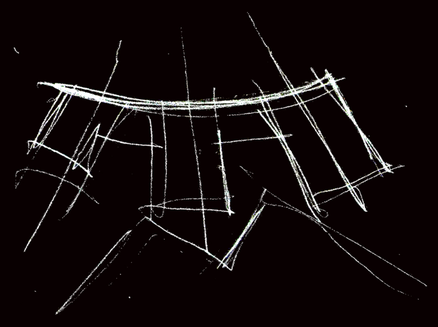


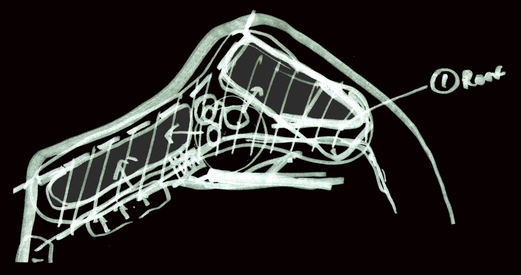


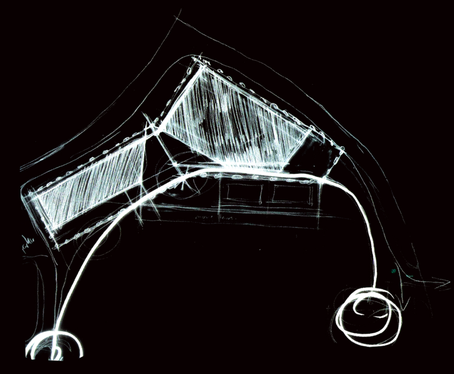


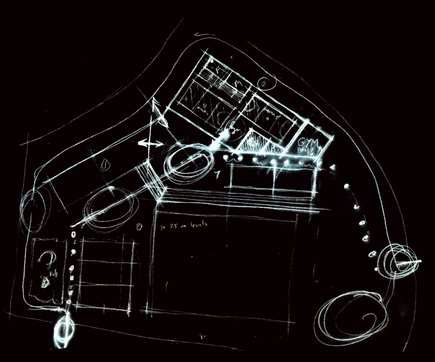




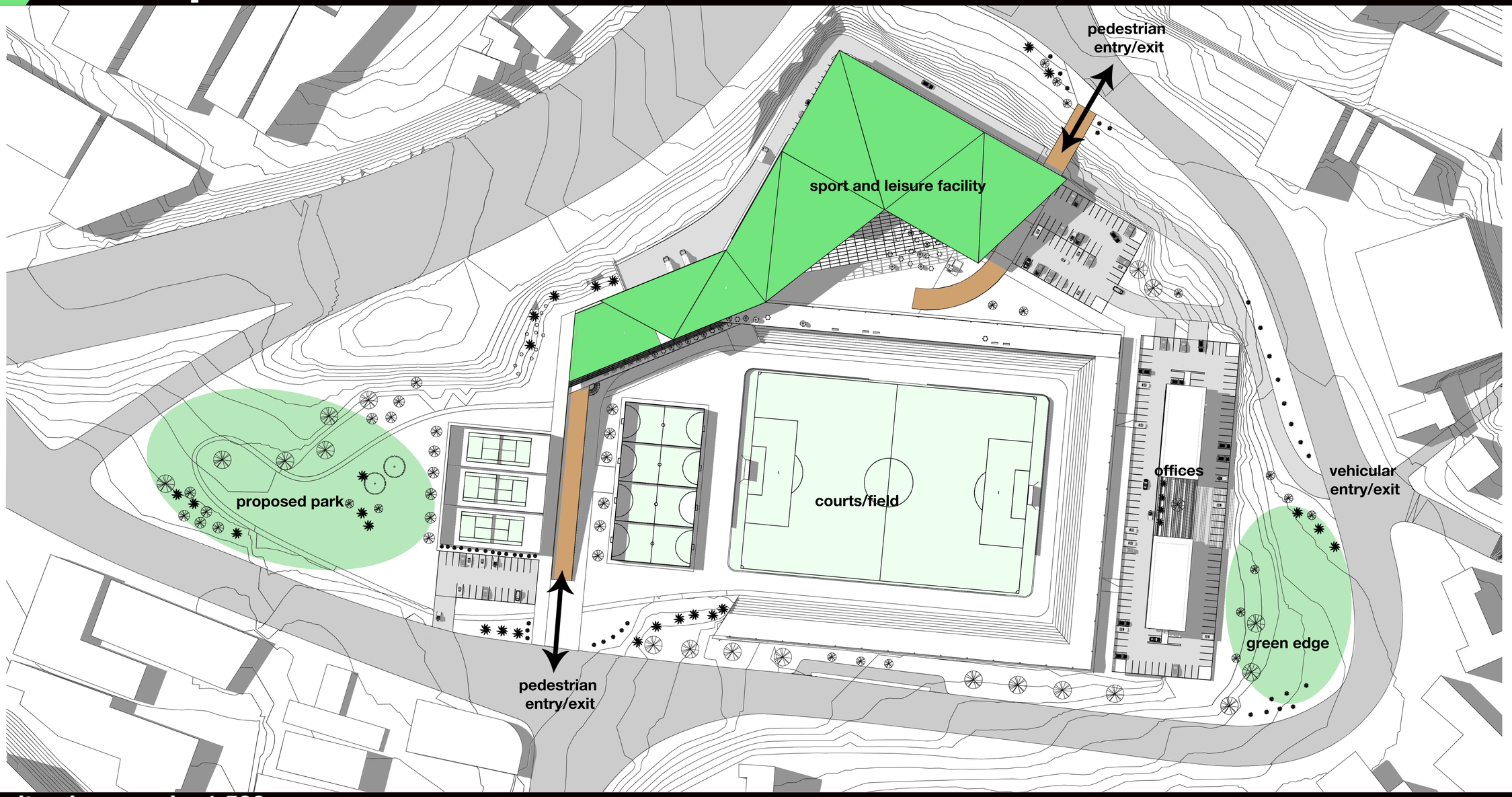




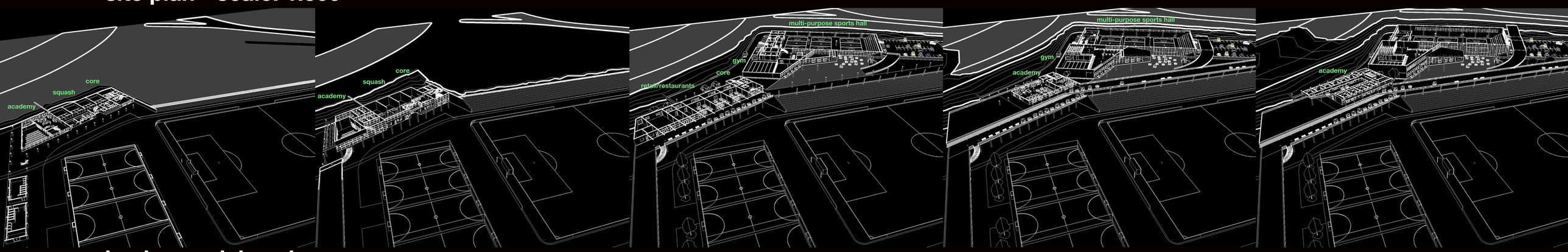




8 site plan



site plan - scale: 1:500



basic spacial zoning

lower ground and mezzanine floor



mezzanine floor - scale: 1:200

lower ground floor - scale: 1:200

10 upper ground floor



upper ground floor - scale: 1:200

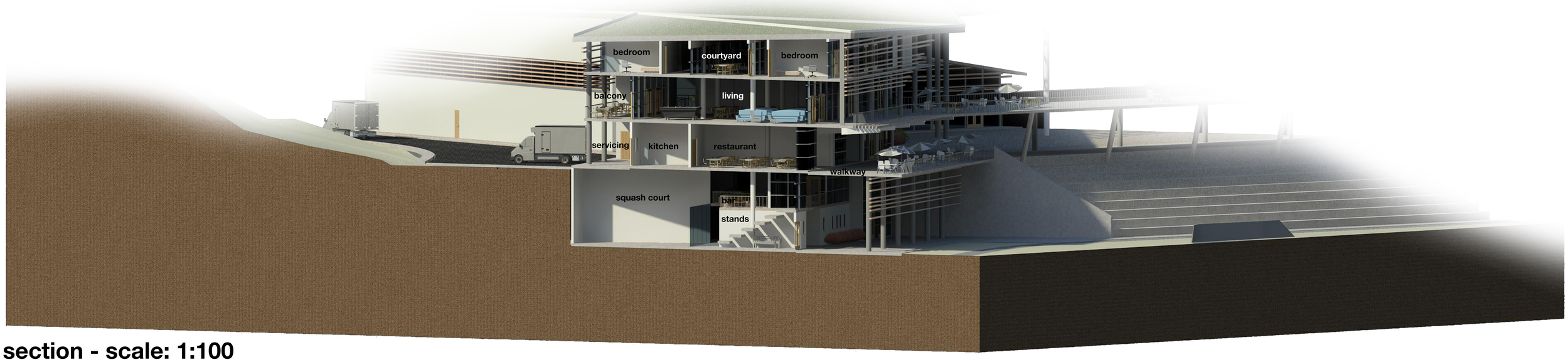
first and second floor plans

second floor - scale: 1:200

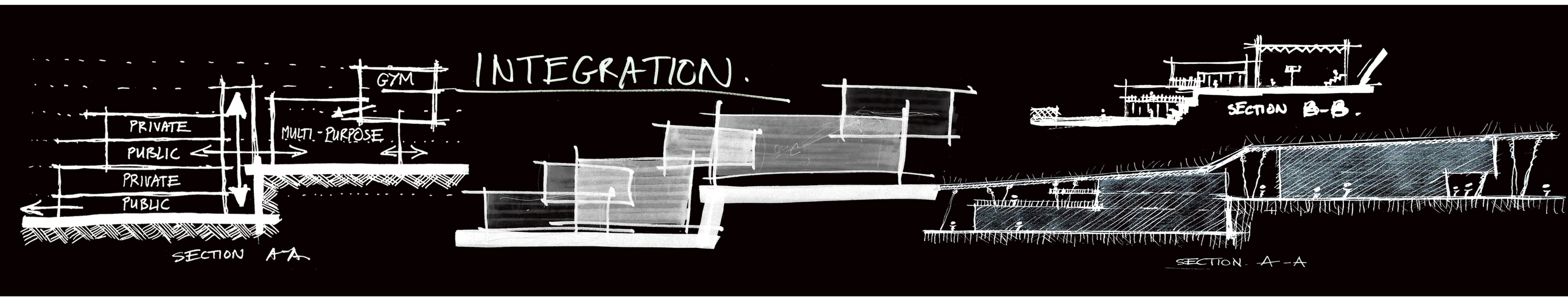


first floor - scale: 1:200

12 sections



section - scale: 1:100



13 elevation, photographic walk and renders through site



west elevation - scale: 1:100

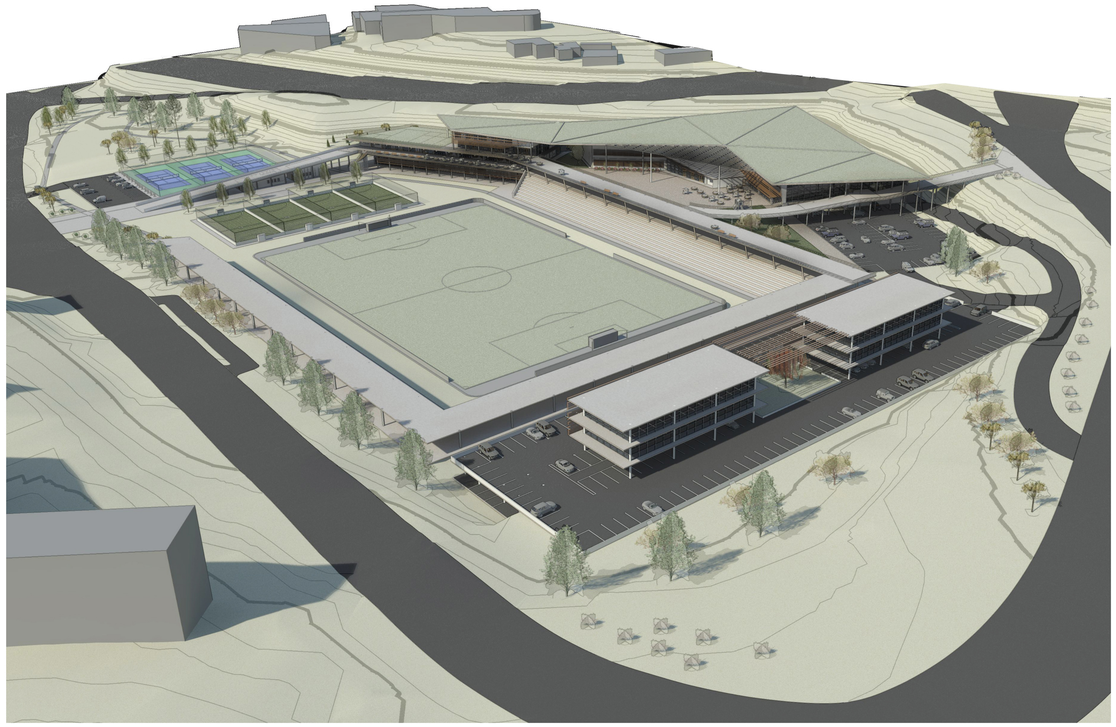


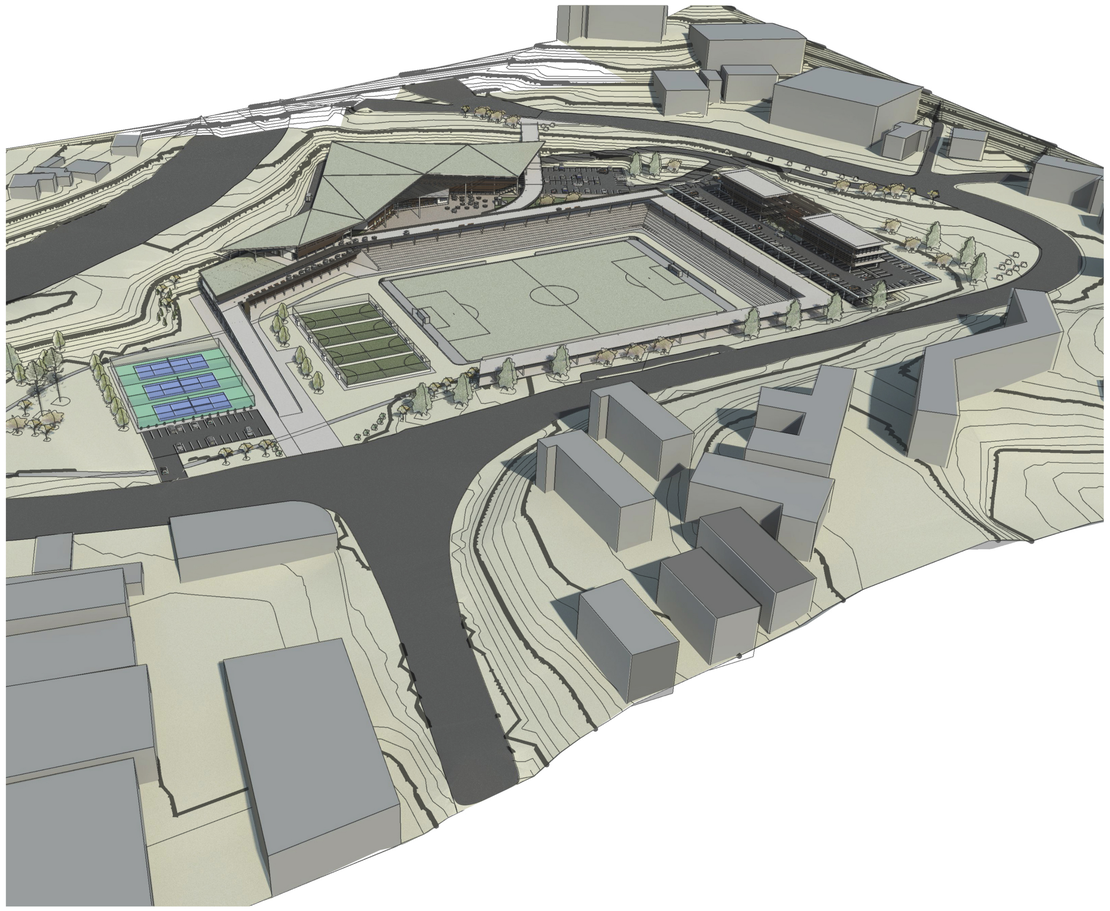
photographic journey from cato manor into the city



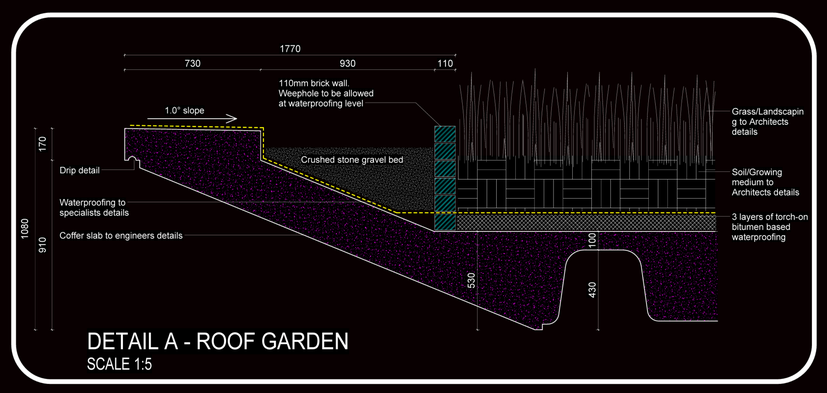
rendered journey through site

site 3d perspectives and details

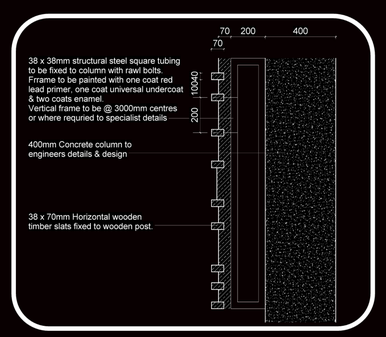




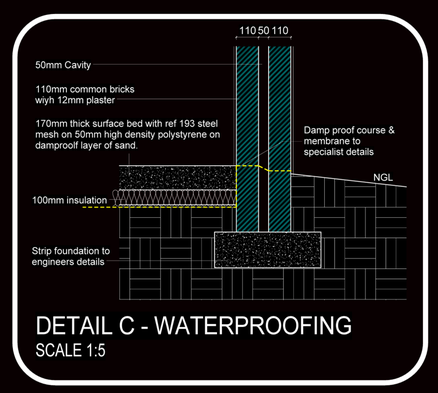
site 3d perspectives



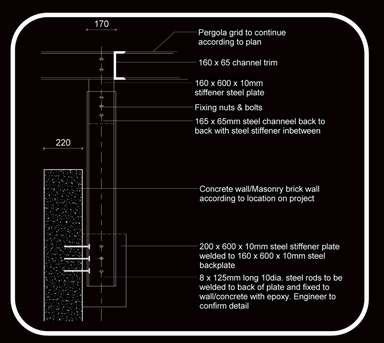
DETAIL A - ROOF GARDEN
SCALE 1:5



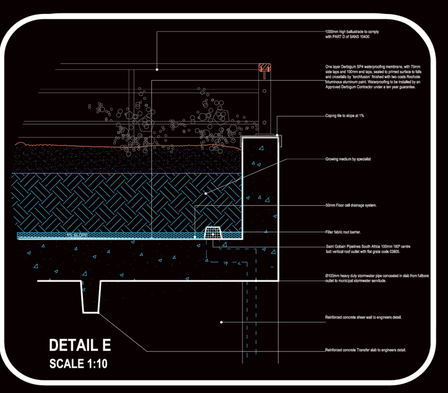
DETAIL B - SUN CONTROL LOUVRES
SCALE 1:5



DETAIL C - WATERPROOFING
SCALE 1:5



DETAIL D - PERGOLA DETAIL
SCALE 1:5



details

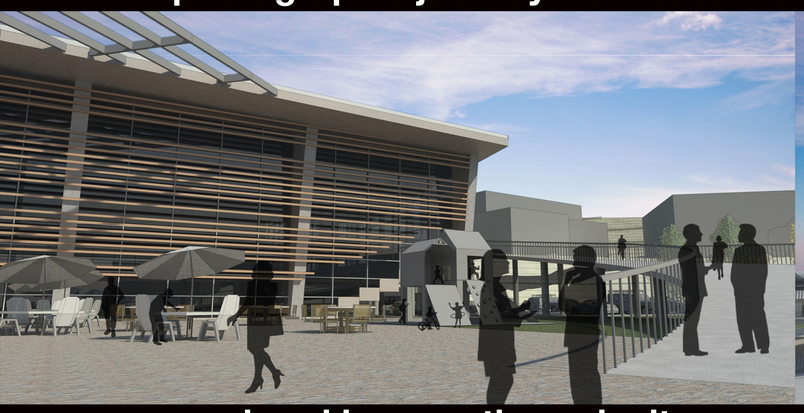
15 elevation, photographic walk and renders through site

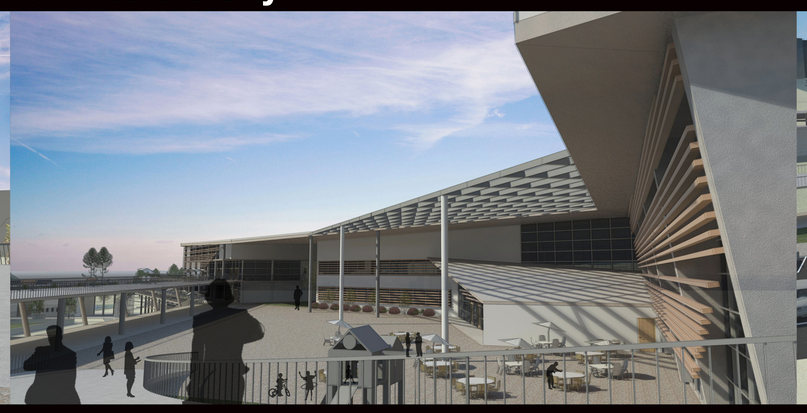


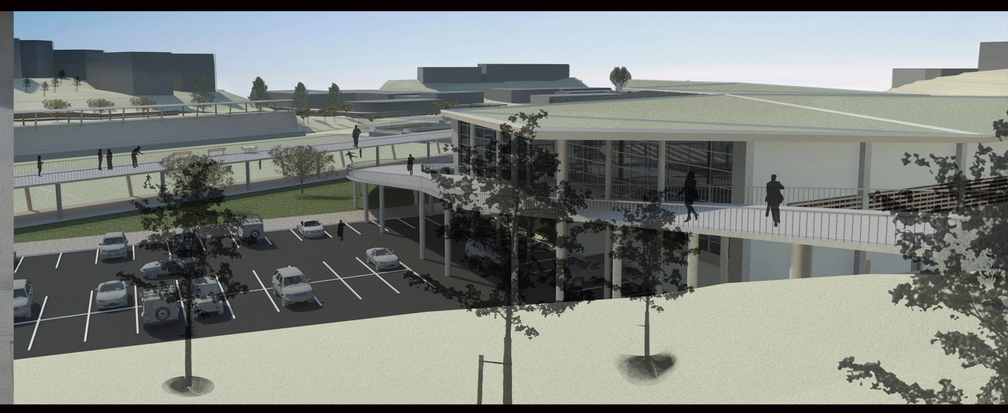
west elevation - scale: 1:100



photographic journey from cato manor into the city

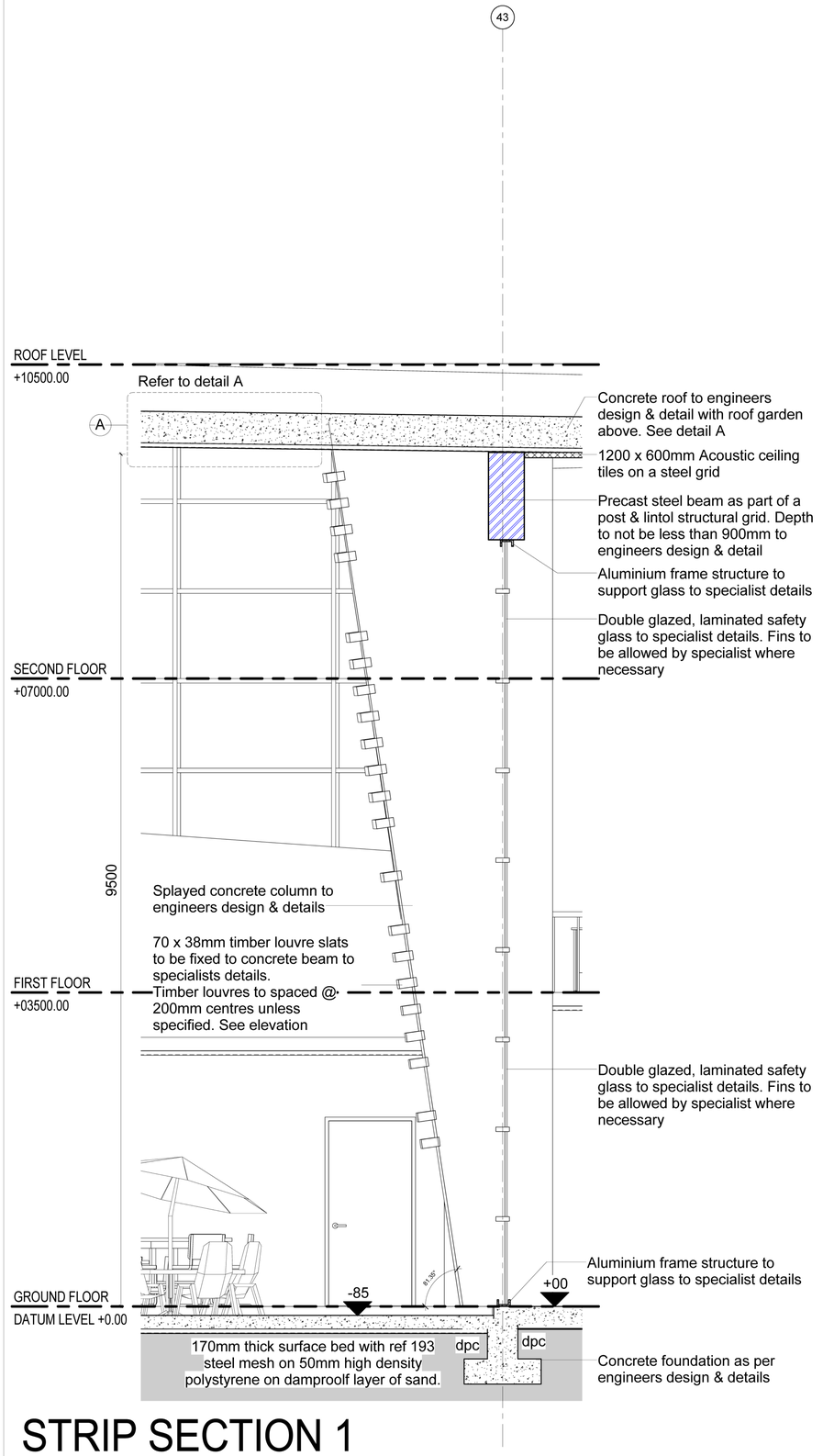




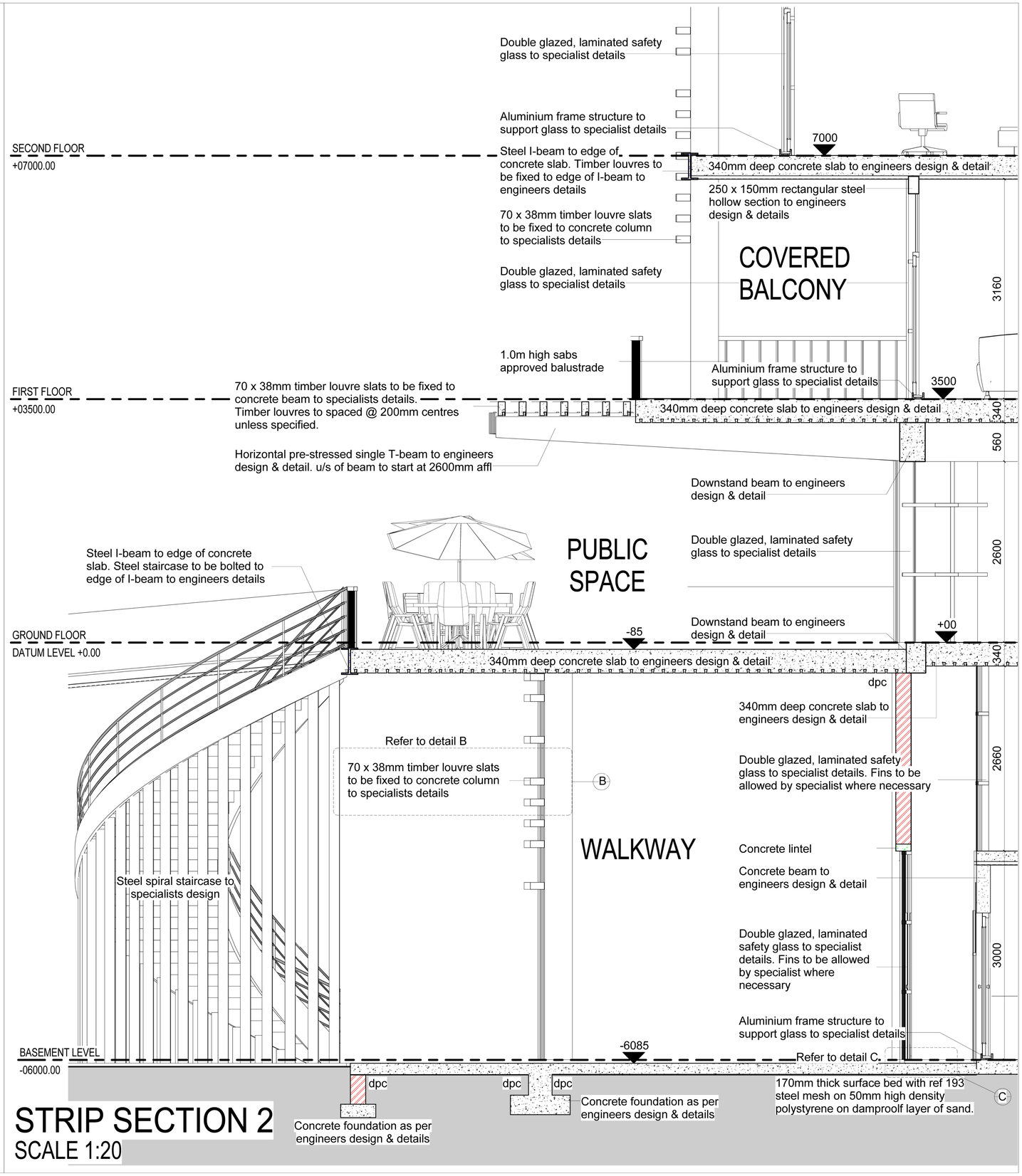


rendered journey through site

16 strip sections



STRIP SECTION 1
SCALE 1:20



STRIP SECTION 2
SCALE 1:20

model



model

