Integration of young offender’s rehabilitation centers within the community.
“You cannot train a man for freedom under conditions of captivity” Sir Alex Paterson.
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Everlasting glory be to God.
Declaration

I, Moses T. Yakobe [500770] am a student registered for the course Master of Architecture (Professional) in the year 2011. I hereby declare the following:

I am aware that plagiarism (the use of someone else’s work without permission and / or without acknowledging the original sources) is wrong. I confirm that the work submitted or assessment for the above course is my own unaided work except where I have stated explicitly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. For this purpose, I have referred to the Graduates School of engineering and the Built Environment style guide. I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my unaided work or that I have failed to acknowledge the source of the ideas or words in my own work.

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Moses T. Yakobe
Contents

Abstract 11
1.0 Introduction 12
2.0 Evolution of Juvenile Detention Centers 18
   Birth of Correctional Facilities 19
   Juvenile Corrections in South Africa 21
   Causation of Young Offending 23
   Problems in Juvenile Detention Centers 27
   Need for Intervention 29
3.0 Correctional Facilities and Architecture 32
   Panopticon 33
   Architecture of Correctional Facilities 37
   Society’s Perceptions of Correctional Facilities 41
   Architecture as a platform 45
4.0 Behind Bars 46
   Youth Correctional Centers in Gauteng 47
   Facilities in Correctional Centers 47
   Lifestyle 53
   Rehabilitation 55
5.0 Programmatic resolution 60
6.0 Design technology 78
7.0 The Site 96
8.0 Design Evolution 110
9.0 Final Design 134
10.0 Conclusion 158
Thesis Keywords
Abstract

“Youth offending has been and still is a social problem across many countries; it is a problem that affects and shapes the very fabric of society. The problem with the youth in modern society is both a national concern and an important subject for academic study” (Siegel, Welsh and Senna, 2003:9).

Since the conception of young people’s deviant behaviour as a social problem, efforts have been made to put measures in place to reduce young offending through research and community prevention programs, which seem to be very unsuccessful. Consequently, young offending exists in alarming rates, and offenders end up in correctional facilities which are problematic institutions and inhumane environments as will be discussed in due course. The creation of Juvenile Detention Centers was aimed at rehabilitation and protection of young offenders from adult offenders’ influence. However noble these intentions were, it has become worrying that these centers in South Africa are dehumanizing and not conducive for rehabilitation.

This thesis interrogates Juvenile Correctional Centre’s as an architectural typology, and explores their Panoptic design philosophy and its effects. It investigates the architectural and spatial qualities that can facilitate the rehabilitation of young offenders. Furthermore, it explores the concept of community integration through the introduction of youth rehabilitation centers within communities and creation of spaces that allow communities to participate in rehabilitative activities for young offenders.

This thesis culminates in the proposal a ‘Young Offenders Rehabilitation Center’, a new architectural typology for the rehabilitation of young offenders that becomes a platform for community participation and integration in Alexandra Township, Johannesburg.
1.0 Introduction

“Ora na azu nwa”

“It takes a village to raise a child”

Nigerian Igbo Proverb.

Figure 1: African village, community life (Kids-n-Fun, 2011)
A Youth Correctional Facility or Juvenile Detention Center as a modern architectural typology is homogenous and prototypical, developed to satisfy the need to keep young offenders away from the general society. Over the years correctional facilities have been replicated all over the world with slight variations in the form and spatial requirements due individualism of architects and governments.

‘Juvenile detention centers are secured facilities used to house young people in trouble with the law. Youths awaiting either a trial or placement in another care facility are often placed in juvenile detention for security purposes’ (Child Laws & Juvenile Justice, 2011). These centers are secured with high boundary walls, barbed wire fence, and perimeter bounding buildings and in some cases surveillance towers. These young people are held in such centers to ensure appearance in court and to protect the public if less restrictive alternatives are not available or appropriate. Youth behaviour that deviates from societies’ accepted standards is called Juvenile Delinquency. Kratcoski and Kratcoski in their book Juvenile delinquency (1990) define Juvenile Offending as any type of behaviour by those socially defined as juveniles that violate the norms (standard of proper behaviour) set by the controlling group. In his book titled Juvenile Delinquency-Concepts and Control, Robert Trojanowicz (1978) defines Juvenile Delinquency as the study of deviance selectively applied to a certain class of offenders distinguished mostly by their age.

‘In South Africa a juvenile is regarded as a person under the age of 18 years. This also corresponds with the definition of a “child” in the Children’s Act of 1960. According to this definition, a child means any person, whether an infant or not, who is under the age of 18 years’ (Sauermann in Midgley, Steyn and Graser, 1975:58). The age of a child determines the juvenile status definitions of criminal responsibility. The first age limit, in South Africa is that of seven years such children are called infants in criminal law and are irrefutably presumed not to be accountable. The second age limit is that of fourteen years. Children who have already turned seven years old, but who are not yet fourteen years old, are irrefutably presumed not accountable. However in a case where the state proves beyond reasonable doubt that, a child possessed the mental capacity to realize the wrongfulness of his or her action at the time of the crime, the child is held accountable. The third and last age limit is that of 21 years. After turning fourteen, a child is deemed to be completely accountable and therefore in the same position as an adult,(Snyman in le Roux, 2011).

This thesis is focused on male young offenders between 14 and 17 years of age. For the purposes of this thesis the terms child and youth will regard people of this age group. Male young offenders were selected as an area of interest because statistics by the Department of Correctional Services (2010) shows that there are more male young offenders within this age group when compared to females and adult male offenders.

Historically, Architects have always convened to discuss various issues including social and technology advancement and how this affects architecture and vice versa. Such change always results in various modifications of different architectural typologies even though majority of society has a natural fixation on typologies that work and simply benefit them. A slight questioning of a traditional system is sometimes received with unease until people start warming up to
Figure 2: African traditional hearing south of Sudan (Dipnote Bloggers, 2010)
the new idea and sometimes it’s too late. In his thesis, Social Milieu, Donald Changwa (2009) states that regardless of the architectural discourse that emphasizes that architecture should be product of its culture and context, some typologies disregard such discourse. One of such typologies is the House of Corrections, in this case Youth Detention Centers. A question arises, are existing youth correctional systems relevant to African context and culture? Frampton (in Changwa, 2009) states that the phenomenon of universalization, while being an advancement to mankind results in the subtle destruction of traditional cultures. How can we remedy problems that arise due to universalization of architectural typologies?

“To be truly expressive, a building should grow out of its natural, social and civilization context. It should reflect not only the personal values, needs and interest of its dwellers but also its relation to its natural and architectural site. Thus the formal organization of a building cannot be imposed on a people from outside; it should originate from the context of human life in the given region. In this origination the process of spatial articulation results from a thought-full grasp of the dynamic interaction between the material elements of architectural work and the human vision which guides this activity,” Mitias (in Changwa, 2009:8). In the same way that a building has to respond to its context, justice and rehabilitation systems should also be relevant to their context.

For the African urban society to function in the peaceful and orderly manner, laws and rules need to be reinforced, and incursion results in punishment, through various means (Patel, 1999). To some members of society, incarceration of young offenders is justice done and social and restorative justices are soon forgotten.

In rural areas in African countries, social control is achieved through African indigenous institutions. “African indigenous justice system employs restorative and transformative principles in conflict resolution. Victims, offenders and the entire community are involved and participate in the definition of harm and search for resolution acceptable to all stakeholders” argues Oko Elichi’s (2004:1) in an article titled Human Rights and the African Indigenous Justice System. In this traditional system, rehabilitation is through reconciliation of people.

Contrary to the African traditional practice, offenders in South African urban areas are subjected to the state criminal justice system, which decides their fate and punishment. In The Practice of Punishment-Towards a theory of restorative justice, Wesley Cragg (1992) states that from a retributivist point of view, punishment is justifiable when it is a response to an injustice or a wrongdoing. Cragg states retributive justice which has been the core of penal reform, is about vengeance by an offended person who feels compensated to see the offender suffer. Cragg argues that retributive justice does not satisfy everyone entirely, in most cases either the offender or the offended are left unsatisfied with the resolution of their issue. Restorative and social justice in African indigenous justice system render healing, rehabilitation and satisfaction to both the offender and the offended (Elichi, 2004). These forms of justice are central to ideas of equity, dignity and upliftment of members of a society.

Due to transformation of the world and increasing economic demands of urban life, there are growing trends in juvenile offending. This is a result of lack of basic needs, shelter, job opportunities, appropriate skills and orphanhood due to conflict, war and HIV/AIDS which forces the youth into
Figure 13: Young offenders in a dormitory at Pademba Central Prison in Freetown, Sierra Leone (Moleres, 2008).
a life of crime for their survival (World Youth Report, 2003). Consequently when young offenders are found guilty, they are isolated and excluded from the community and the old African Tradition, “it takes a village to raise a child”, dies as soon as a child is in the hands of the Department of Correctional Services, an adopted justice system which traditional African people describe as prone to abuse and corruption, and antithetical to the African concept and practice of justice (Elichi, 2004). While Elichi holds such an opinion of what he calls alien justice system, this thesis proposes that an amalgamation of this imported justice system and traditional way of life can become a very effective way of rehabilitating young offenders.

In an interview with Mama Bheki (Alexandra Township 2011), she stated that, it is common belief that imprisonment of a young offender in the South African context, forms part of the compensation to a victim, where compensation is innumerable and that prison experience will teach a juvenile a lesson.

Under the South African Criminal Justice System, a guilty young offender ends up in a youth correctional facility. According to the Department of Correctional Services (2011), juvenile correction is mainly carried out through imprisonment which is aimed at reformation and rehabilitation. The two alternatives to imprisonment are; Correctional Supervision and Parole which are called Community Corrections. The DSC defines Correctional Supervision and Parole as a component of offender control which deals with offenders still living within the community. The DSC states that the aim of community corrections is to assist offenders in their reintegration into the community and to exercise supervision and control over offenders who have been sentenced to correctional supervision as well as those offenders who have been placed out on parole. ‘Section 290(1)(d) of the Criminal Procedure Act 51 of 1977 provides that, as far as the form of punishment of juveniles are concerned, the court in which a juvenile is found guilty can recommend that the youth be referred to a reformatory as defined in section one of the Child Care Act 74 of 1983’(le Roux, 2011).

In his article Rehabilitation of young offenders: towards a good practice Andrew Day (2005) defines rehabilitation of young offenders as structured programmes that involve behavioural cognitive activities and training, that is aimed at reducing the risk of recidivism which takes place in a secure environment.

This thesis acknowledges the need for a controlled environment for rehabilitation since behavioural cognitive activities require special spatial environment and a certain amount of time, to culture and cultivate the desired behavioural attributes in young offenders. However, this thesis proposes to establish a Youth Rehabilitation Center, a new architectural typology for young offenders’ rehabilitation that becomes an integrative platform for society’s participation in rehabilitative activities. This goes back to the popular African proverb, “it takes a village to raise a child”, which has been lost due to urbanization and deterioration of the communal way of life and sharing of responsibility that was enforced in African Villages.

But what are the architectural and spatial qualities of a building that can be used as a rehabilitation centre for young offenders and that has facilities for community integration and participation?
2.0 Evolution of Juvenile detention centers

In every society, adults are generally concerned about the development of their youth and youth behaviour that derails from conventional society norms and results in social dysfunction.

Before embarking on a discussion of architectural qualities of correctional facilities, this chapter will explore origins of correctional facilities in an attempt to understand the ideology that led to development of Youth Detention Centers.
**Birth of Youth Correctional Facilities**

Incarceration is a word normally associated to imprisonment. Amazingly the word applies to many scenarios far beyond correctional confinement. Incarceration extends to borders, airports and even seaports where various authorities exercise the right to allow or deny access in and out of a country. Even access control in and out of buildings, institutions, and other facilities represents a level of incarceration for people within and those locked outside.

Over time the aims of incarceration have very greatly varied. Boston (2004) defines a Correctional Facility as a facility that incarcerates or detains juveniles or adults accused of, convicted of, sentenced for, or adjudicated delinquent for violations of criminal law. A correctional facility which is also called a prison, penitentiary, remand center, detention center and jail, is a place for physical confinement of people who have broken the law. In many countries the difference in use to terminology around the name of the correctional facility usually refers to separate levels of incarceration. Snarr & Wolforal (1985), in their book *Introduction to Corrections*, define corrections as a systematic and organized effort designed to punish offenders, protect the public from offenders, change offender behavior, and to compensate victims.

Before the American Revolution, prisons were holding areas for offenders awaiting trial and other punishments and for debtors and sometimes even witnesses (Johnston, 2011). During the period when correctional facilities were not penal instruments, death was the common penalty, though often offenders were commuted to transport abroad as a source of labour (Bender, 1987).

In the 16th and 17th Centuries, sanctions for criminal behaviour used to be public events designed to shame the person and deter others from offending. Foucault (1977) describes the public execution of an offender in front of Church of Paris which was done in the streets and was called "amende honourable".

The Howard League for Penal Reform (2006) states that the prototype house of correction was the most important innovation of this period. Originally part of the machinery of the Poor Law during the Elizabethan era, Houses of correction were used to instill habits of industry through prison labour and as a way of avoiding social responsibility for the poor who were regarded as lazy. By the end of the 17th century they were absorbed into the prison system. By the mid-18th century correctional facilities with hard labour, were beginning to been seen as a suitable sanction for petty offenders, while the death penalty was still in for other criminal offences. The state prison was conceived in the 19th century and the correctional facility was at Milbank in London, in 1816 which held 860 prisoners kept in individual cells. The ideology that offenders’ incarceration formed part of their punishment and not simply a holding state until trial or public execution was at that time revolutionary. This was as a result of the views of penal reformers like Jeremy Bentham who ensured good sanitation in prisons and that offenders were separated based on gender and age.

The Howard League for Penal Reform (2006) states that the
Figure 5: Millbank Prison, London. (Watkins, 1986).
first half of the 19th century, capital punishment and shaming sanctions, like the stocks, were still utilized. Imprisonment replaced capital punishment by mid 19th century, for most serious offences, except for that of murder. During the same period religious groups like the Quakers and the Evangelicals were highly influential in promoting ideas of reform through personal redemption. Ideas related to the rehabilitation of offenders and penal reform also became popular. Incarceration in this modern age still remains the main way used by courts to deal with law breakers.

In the early 1800's reformers became concerned about the overcrowded conditions in the jails and the corruption youth experienced when confined with adult felons. This growing concern resulted in the establishment of youth correctional facilities. The first House of Refuge opened in New York in 1825, as a facility exclusively for children with visions of rehabilitation, education and confinement of young offenders (Johnston, 2011).

At the end of the 19th century the borstal system (work house) was introduced. The Howard League for Penal Reform (2006) explains that the Borstal training was based on hard physical work, technical and educational instruction and a strong moral atmosphere. A young person in borstal would work through a series of grades, based on privileges, until release. It was from the borstal system that some of the concepts of the modern juvenile detention centers were developed.

**Juvenile Correction in South Africa**

“Juvenile delinquency is to be found in every society and in most classes and social groups within a society. Research has demonstrated that industrial and agricultural societies, poor nations and rich nations all have their share of delinquents. Although the higher strata of most societies are seemingly more able to conceal the incidence of juvenile delinquency within the group, this social phenomenon is in fact to be found among the rich and the poor, the illiterate and the highly educated. South African is no exception to this rule. Among South Africans, juvenile delinquency is to be found in all population groups” states Sauermann (in Midgley, Steyn and Graser, 1975:57).

Juvenile law reform in South Africa originated in the 1980s from concerns for the plight of child detainees during the apartheid era. Political activism by children, made them liable for punishment through detention. The infamous security legislation of that time saw hundreds of children detained without trial (Mosikatsana, 1998).

Due to the end of apartheid in the early 1990s, children were no longer detained without trial for political activity; as negotiations for the transition to democracy were underway. The main focus of the negotiations was on basic human rights for all South Africans. Attention was turned to children as political detainees, after the period of Negotiations, and procedural rights for children caught up in the conventional criminal justice system were developed (Sloth-Neilsen, 1999). The change in era and end of apartheid brought forth the ideology of necessary facilities for reforming young offenders in South Africa.

From the above discussion, it is evident that youth detention
Figure 6: Street children that have ganged up for their survival in Capetown. (The Homestead, 2011)
centers have evolved as a response to specific conditions of a particular era and society, like growing concerns of youth corruption during the 1800’s, the shift of penal theory from punitive to rehabilitation toward the end of 19th Century and need for child detention centers post apartheid in the 1990’s. However the nature of these centers in varying era is determined by the social factors and intentions of the governing society at that time, firstly they were places for holding, then places others for training and work, and later on if not recently places for reformation. It is important to note that the society in question shapes the nature of youth correctional facilities and their intentions. This thesis will later explore how society’s perception affects correctional facilities.

Causation of Young Offending

Juvenile delinquency is one of the major social problems in modern societies. Jamrozik and Nocella (2000:1) in Prof. M.R. Makhanya’s article Crime Research in South Africa (CRISA) define the term social problem as “social conditions, processes, societal arrangements or attitudes that are commonly perceived to be undesirable, negative, and threatening certain values or interests such as social cohesion, maintenance of law and order, moral standards, stability of social institutions, economic prosperity or individual freedoms.”

‘The problem of juvenile delinquency is becoming more complicated and universal, and crime prevention programmes are either unequipped to deal with the present realities or do not exist. Many developing countries have done little or nothing to deal with these problems, and international programmes are obviously insufficient. Developed countries are engaged in activities aimed at juvenile crime prevention, but the overall effect of these programmes is rather weak because the mechanisms in place are often inadequate to address the existing situation’ (World Youth Report, 2003:190).

In Juvenile Delinquency-Concepts and Control, Robert Trojanowicz (1978) explains that young people can become deviant because of certain factors they are reacting to in their environmental situation; whether political, cultural, religious or economic. Trojanowicz( 1978:1) states that “what constitutes deviant behaviour has evolved over time and varies from society to society, even within the same society”. Youth behaviour which is deemed unacceptable ranges from extremely antisocial actions to only minor nonconformity which is addressed with strong condemnation to a mild disapproval by society (Kratcoski and Kratcoski, 1990).Kratcoski and Kratcoski categorize different types of offences that a young offender is subject to be arrested for, based on distinction between adult and youth offences. The first type is that which adults could be arrested for; murder, arson, rape, robbery, shoplifting, auto theft, and so on. The second type are activities that would not be considered criminal for adults like truancy, incorrigibility, running away from home, violation of curfew laws, purchase of alcoholic beverages or various sexual acts.

Lofland (in Trojanowicz, 1978) categorizes youth offences by defining them as defensive and adventurous. A defensive deviant act as a response to a sense of immediate danger in one’s environment, “attacking before being attacked” commonly experienced with young gang members. An adventurous deviant act occurs because young people like all people
Figure 7: Comparison of Youth and Adult victimisation rates (after Pelser, 2008)
enjoy the thrill which comes with fear, frustration and anxiety. Lofland states that an adventurous act is committed as a reaction to a dare and the desire to satisfy a gang or peers. Thomas Phelps (1976) in his book, *Juvenile Delinquency-A Contemporary View*, states that gangs are a result of a spontaneous effort of boys to create a society for themselves where none adequate to their needs exist. Gangs develop because of the failure of controlling and guiding customs and institutions like families, schools and religious fronts to effectively develop responsible youngsters, and which results in rebellious attitudes of the youth when they feel disgruntled.

World Youth Report (2003) states that sociologists explain causation of young offending in association the social context that shape youth behaviour like the home, family, neighborhoods, peers, school. The explanation of youthful deviance varies dependent on the period of history, the character of the society in question, the social and philosophical backgrounds of the theorists, and sampling and data analysis methods used at the time the research was conducted (Kratcoski and Kratcoski, 1990).

Fred Milson (1972) in *Youth in a Changing Society* argues that the wealth of a society is a determining factor of youth deviance. Young offending is bound to exist in societies where there are inadequate resources for education and social welfare programmes, where a selected few go secondary school and there are high primary school drop-outs, where their adult prospectus are limited with near certainty of marginal poverty and unemployment and the youth lack of role models. The author agrees with the above argument and connects it to the concept of rural to urban migration which is an existing phenomenon that can contribute to young offending. Urbanization has resulted in an influx of youth from rural areas in search for good quality urban life. Unfortunately the majority of these young people do not have the necessary education and training to get jobs for their livelihood. As a result they resort to theft as a way of making ends meets. Most recently with the economic depression, a lot of companies closed down and some stopped hiring leaving a lot of young people destitute when they migrate to the city in search for jobs.
Figure 8: Dehumanizing environments troubles juveniles in correctional facilities (Moleres, 2008).

Figure 9: Fight in block 3 of Pademba Central Prison (Moleres, 2008).

Figure 10: Skin diseases on one of the juveniles in Pademba Central Prison (Moleres, 2008).
Eric Pelser (2008) in his article Learning to be lost: Youth crime in South Africa under the Centre for Justice and Crime Prevention, argues that youth involvement in crime can also be attributed to youth exposure to crime. He states that there are more youth exposed to crime than adults whether as victims, witnesses or instigators. This statement is summarized in the adult and youth rate of victimization graph, which Pelser put together by comparing the results of the Institute for Security Studies’ 2003 National Victims of Crime Survey, with those of the CJCP’s 2005 National Youth Victimization Survey (which surveyed 4,409 respondents aged 12-22). This graph shows that young people experience assault at roughly 8 times the adult rate; theft at five times and robbery at four times the adult rate. Pelser stated that what was surprising in the research, which assessed victimization within the 12-month period ending September 2005, was the indication that many of these crimes were committed in places normally considered “safe”; thus the school and home. Pelser argues that exposure to crime impacts on how the country’s youth socialize and develop their identities.

Another factor that causes youth offending is recidivism due to failure to rehabilitate and train young offenders in juvenile centers. Dilani (2009) states that in 2002, more than 60 percent of all inmates in Swedish prisons had previously been in prison. This suggests that it is common for criminals to reoffend and indicates that many societies have been unsuccessful in rehabilitating inmates. In South Africa, it is not different, the majority of youth who are released from correctional facilities end up in crime because of lack of empowerment, lack of resource and skills and an economic starter pack for a decent life post imprisonment. In this view, this thesis aims at devising a system which will have financial rewards for the young offenders to be used post rehabilitation.

In essence, the social environment and social conditions thus ‘the Village’ is responsible for shaping the minds of young people, and why shouldn’t the village take part in rehabilitation of the young offenders?

Problems in Juvenile Detention Centers
There are many problems that are in existence in Juvenile Correctional Centers in South Africa, which challenge the reformative intentions of the Department of Correctional Services.

Latessa and Oldendich (1988) state that, one of the greatest problems facing correctional institutions today is overcrowding. According to the Mail and Guardian (2009) Gideon Morris, the director at the Judicial Inspectorate of Prisons (JIP), stated that South Africa’s 237 operational correctional centers were housing 165,230 prisoners in space meant for 114,822 inmates, which means they are overcrowded by about 44%. As a result, the focus of new construction, renovations, and conversions has been the alleviation of overcrowding, and creation of spaces and buildings that facilitate rehabilitation of offenders.

A fieldwork survey conducted at Boksburg Youth Correctional Centre (BYC) a juvenile centre in Gauteng, in December 2004 and January 2005 by Centre for the Study of Violence and Reconciliation (CSVR), where young men were interviewed on their experiences of violence, sex and sexual violence in prison as well as on more general personal features.
Figure 11: Poor living environments at Pademba (Moleres, 2008).

Figure 12: Prison staff office at Pademba, an example of poor working environment (Moleres, 2008).

Figure 13: A sick juvenile, lack of appropriate treatment areas (Moleres, 2008).

Figure 14: Overcrowded environments, a big problem in juvenile detention centers (Moleres, 2008).
and situations in the institution. The author of the article the Fear, Violence & Sexual Violence in a Gauteng Juvenile Correctional Centre for males Sasha Gear (2007) states that, the youth indicated that they have problems like violence, assaults, corporal punishment, sexual abuse resulting in the spread of HIV and Aids, and lack of proper if not committed professionals to initiate and facilitate rehabilitation. Mankhanya (2002) states that this violence which is directed to fellow offenders and sometimes to staff results in human injury and destruction and psychological disruption and dehumanization. Fear of further victimization and the belief in loss of manhood and the intense feeling of humiliation, results in the under reporting of rape cases among the offenders (Gear, 2007).

Poor sanitation and the unattractive correctional environments and working conditions result in lack of appropriate professionals to rehabilitate as well as sustain the good health of the young offenders, as explained by acting director of health and physical care in the Department of Correctional Services Maria Mabena (Mail & Guardian, 2009). What spatial environments can be created that reduce victimization of youngsters in a rehabilitation center and create attractive work environments for professional staff?

Department of Correctional Services (2004) states that violence which is endemic to South African Correctional Centers is under-reported and a severe hindrance to their vision to reduce re-offending through rehabilitating offenders. Makhanya (2000) highlights that violence in prisons is thought to be expressive and a means to reduce the pains of harsh prison conditions. Gear (2007) states that the young people in BYC expressed concern about “idle” sections. These were very long periods of being locked up or in the open, without any activity to be done, and that many of the idle times even were fundamental feeders of conflict and violence. What kind of spaces and spatial connections could be created to reduce idle time and preoccupy the youngsters with activities?

Contrary to reformative intentions by the Department of Correctional Services (DCS), the devastating experiences in existing Juvenile Correctional Centers in South Africa challenge the DCS’s motive to rehabilitate young offenders (Latessa and Oldendich, 1988; Mail and Guardian, 2009).

This shows that there is high level of youth offending within the facilities that are supposed to reform young offenders, which is a result of lack of well structured programmes that involve behavioral cognitive activities for rehabilitation. As a result recidivism will be high upon release of the young offenders into society.

Need for an Intervention
Ketankumar Patel (1993) in his thesis Beyond the Wall- An interface Between Prison and City, states that, since their conception, correctional facilities have created a lot of problems as they have functioned as a warehouse for storage of people considered dangerous or dubious. This has never worked well, even though this is one of the few architectural typologies where it does not matter to the client (the political powers), if the user (the deviant) finds his environment comfortable or not.
Figure 15: A juvenile crying on the prison yard after a quarrel (Moleres, 2008).
Gear (2007) states that the juveniles at BYC expressed the horror of detention officers who watch and do not stop assaults and abuse, a clear sign of negligence. With such information on the table, it is then legitimate to question if the motive of juvenile correctional centers in South Africa is being achieved. Are they truly there to rehabilitate and reform or to punish the young offenders? It is high time the general community assisted the Correctional Officers with reformation of these youngsters.

The problems in correctional centers are facilitated by facility layout, spatial relationship, spatial allocation to activities and use and overall lifestyle governed the buildings (Klare, 1960). Randall Atlas (2007) in his article Changes in prison facilities as a function of correctional Philosophy argues that, since the conception of reformation of correctional facilities, the argument has always been that offender rehabilitation will never happen until the built environment of correctional centers has been improved and changed.

Scott (1982:37) argues that “Majority of children who have resorted to delinquency or other bad behaviour as a means of escaping from an emotionally intolerable home situation quickly become normal again in the regular life of a residential school. Although they may have stolen regularly while at home and have truanted from school and work, once in the new surroundings, where their anxieties no longer press on them, they become honest and trustworthy”. These arguments highlight the significance of the spatial and social environment in reformation and character building of young offenders. Consequently there is a dire need to revisit the negative issues surrounding Juvenile Correction Centers in South Africa, and interrogate how the space, buildings and infrastructure affects and influences rehabilitation of young offenders in order to come up with a new and functional typology.
3.0 Correctional facilities and architecture

In the preceding chapter the need for a new rehabilitation environment was investigated and justified as a continuous challenge to rehabilitate young offenders which should become the responsibility of both the rehabilitation center and the community.

To gain an understanding of the role of architecture and the built environment as a platform for rehabilitating young offenders, this chapter discusses the theory and philosophy behind the design of correctional facilities. It attempts to understand how penal reform philosophies have shaped the architecture of correctional facilities. In doing so, it is hoped that a clear understanding of the spatial qualities of a new typology for rehabilitation will be conceptualized. With an appreciation of the role of architecture in facilitating positive change, the new typology can be developed for adoption to relevant contexts and their reformation cultures.

Figure 16: Surveillance tower at Robben Island (Zandbergen, 2011).
Panopticon

The design of buildings and spaces within a correctional facility is influenced by the need of people in authority to easily exercise power, control and surveillance over offenders. This design and spatial planning is influenced by Panopticism (Patel, 1999). Michel Foucault (1977) developed a social theory called Panopticism which is explained in his book, *Discipline and Punish, Birth of the Prison*. Panopticims as a theory was developed from Jeremy Bentham’s 1791 concept of a Panopticon, a model of penal reformation of offenders by exercising power and control over them in an institutional environment. Foucault extrapolated more on the panoptic functionality of discipline in correctional facilities, and applied the panoptic disciplinary mechanisms to everyday society, as an instrument of power and control.

The Panopticon was the beginning of prison as an architectural typology and association of architecture with penal reform (Evans, 1982). “The Panopticon-derived from the Greek pan-for all and optic-for sight- was an a architectural strategy efficient in both control and surveillance” (Arnot, 2009:47).

In his book *Anatomy of Prison*, Hugh J. Klare (1960) describes the Panopticon as cell block with two to four tiers of cells squeezed in orderly rows along both walls. At the centre from which the cell blocks run outwards is a tall tunnel from which glancing in turns down the tunnel, it is possible to survey the whole prison from one spot. Foucault (1979) describes the Panopticon as an annular building with an observation tower in the center of an open space enclosed by an outer wall divided into cells. The cells had two windows, one on the inside, corresponding to the windows of the tower; the other, on the outside, that allows the light to cross the cell from one end to the other. It introduced the idea of cells to avoid the spread of criminality among the masses within places of confinement. Foucault explains Bentham’s Panopticon was an architectural figure whose principle was to induce a state of consciousness in inmates, and this constant state of awareness of visibility assures those in authority of the functionality of power. This architectural apparatus was a machine for sustaining authority regardless of who was exercising it.

“The panoptic mechanism arranges spatial unities that make it possible to see constantly and to recognize immediately. In short, it reverses the principle of the dungeon; or rather of its three functions - to enclose, to deprive of light and to hide - it preserves only the first and eliminates the other two. Full lighting and the eye of a supervisor capture better than darkness, which ultimately protected. Visibility is a trap. Bentham laid down the principle that power should be visible but unverifiable. The inmate will always see the tower at the centre yet may not know when he is being looked at while knowing it could be anytime. The Panopticon automatizes and disindividualizes power” (Foucault, 1977:201).

Architecture then, became a physical and visible representation of virtue and enforcement of the virtues to both the inmate and those on the outside (Evans, 1982).

The Panopticon served well in the interest of security, but what kind of living and working environment did it create? What problems did it
Figure 17: Panopticon Penitentiary, 1791 (after Evans, 1982).

Figure 18: Panopticon, individualization, disassociation, (after Patel, 1999).
Figure 19: Panopticon, individualization, disassociation, (after Patel, 1999).

Figure 20: London City gates (after Evans, 1982).

Figure 21: Pentonville model prison (after Evans, 1982).
Figure 22: Massive scale of detention centers in relation to human body (Illustrated London News, 1843).

Figure 23: Inside Pentonville Prison (Morris and Bazer, 1963).
pose for rehabilitation of offenders? Klare (1960) argues that this peculiar structure was actually a hindrance rather than a help which resulted in perturbing devaluation of human beings.

Pentonville prison in England was the first prison built using the Panopticon design philosophy in 1842. It held 520 prisoners, each prisoner in solitary confinement cells measuring 13 feet long, 7 feet wide and 9 feet high (Howard League for Penal Reform, 2006). In his book, *The fabrication of virtue-English prison architecture 1750-1840*, Robin Evans (1982) states that Pentonville Prison became the model prison from 1850’s where care and precision was applied to walls, further compartmentalization and separation of inmates into cells of different categories for reformation of character. Surveillance became about the space between the cells and not the inmates themselves as in the Panopticon resulting in radiating prison wings from a central space. Due to technological advancement, especially the invention of a camera for surveillance, the need for radial and circular planning in prisons has been eliminated because technology allows for all spaces to be monitored from a single space without regard of position in relation to spaces under surveillance.

**Architecture of Correctional Facilities**

Up to the mid eighteenth century, prisons were built with an architecture similar to that of ordinary buildings making it difficult to distinguish a prison building from ordinary buildings (Patel, 1999). At this point prison buildings were part of the city square and offenders were held in ordinary buildings and dungeons. In the 1750’s, prisons became part of the city gates and this led to the exclusion of the prison institution from society and due to industrialization, and the ideology of preventing the spread of criminality, prison were eventually located outside cities (Evans, 1982). The removal of the correctional house from the city meant the effective removal of offenders from society (Patel, 1999).

“The first thing to note is that, many thousand prisoners have to live herded together in what is in effect, one building. What then, is it like this place where people live in captivity, and work in physical and psychological isolation? What are the prison buildings like, and how important are they in determining the general atmosphere, and influencing the nature and degree of human contact and personal relations?” Klare describes correctional buildings’ as powerful, forbidding and desolate. He states that the internal layout is influenced by Jeremy Bentham’s Panopticon, who was more interested in ideas than in people, “tall, gaunt blocks of brick and mortar, with reluctant windows, stretch out from a central point like spokes from the hub of a wheel” (Klare, 1960:18, 19).

Most correctional facilities are housed in giant architectural monstrosities, quite out of proportion to accommodation needs of a humane environment. Internally they are densely populated spaces, often with three or four men confined in small space fit to be a single cell. The buildings are dark and constantly filled with echoes of metal sounds in the dead passages and hall ways, made by heavy footsteps, clanging keys and slammed heavy metal doors (Laing in Dalley, 1990).

Correctional facilities are described to have hard architecture. Hard architecture results from the philosophy of punishment, retribution,
Figure 24: Perimeter boundary at Robben Island framed by surveillance towers and barbed wire fence (Worldtravel, 2011).

Figure 25: High security wall, Robben Island, totally no interaction with context (Worldnomads, 2006).

Figure 26: Architecture of Old Fort Prison, Johannesburg, high placed windows, prohibiting access to views (Author, 2011).
Figure 27: Architecture of Old Fort Prison, Johannesburg, taunting tall block with high windows (Author, 2011).

Figure 28: Architecture of Old Fort Prison, Johannesburg, hard landscape in courtyards enclose by buildings, that don’t have openings at eye level for visual links. (Author, 2011).

Figure 29: Seodaemun prison, total disregard of context, security emphasis by use of high walls (Matt, 2010).
Figure 30: Dark internal environment of Pademba correctional centre, common image in people’s mind when they think of detention centers (Addario, 2006).
and incarceration and creates environments that institutionalize both inmates and staff. “In hard architecture there is a general lack of permeability, and alterations and construction are expensive. The spatial planning and location is very hierarchical with a clear differentiation between status levels. Passive adjustment is required, psychological withdrawal is encouraged, depersonalization and formalized security are essential, and the materials and furnishings are selected for ease of purchasing, maintenance, durability, and uniformity. Hard architecture contributes to the process of prison isolation, known as institutionalization. Institutionalization includes the following components: deindividualization, or the reduced capacity for independent thought or action; disculturalization that accompanies the process of acquiring institutional values; psychological and physical damage resulting from always feeling endangered or being on guard against assaults; estrangement, or the feeling of being isolated from society and social change and not having the practical skills necessary for legal defense; isolation that results from a loss of contact with friends, family, and community; and stimulus deprivation, because contact is denied with healthy and normal people” Sommers (in Atlas, 2007: 11).

Jeffrey (in Patel, 1999) states that the architecture makes the person and argues that hard architecture is dehumanizing and that dehumanization makes rehabilitation more difficult. This means that hard architecture in correctional centers as places of isolation and punishment increase offenders brutalization and anti-social behaviour. Hard architecture results in psychological and physical damage of offenders due to spatial planning that lacks a sense of privacy, results in exclusion and isolation from outside contacts, and sensory deprivation. From this description, the spatial environment formed within and around correctional facilities is unapproachable, intimidating and not conducive for rehabilitation.

**Society’s Perceptions of Correctional Facilities**

Evans (1982) states that by the end of the eighteenth century and the beginning of the nineteenth century, punishment as a spectacle which was meant to deter others from offending died out. Punishment then become the most hidden part of penal reform due to the birth of correctional facilities (Foucault, 1979). Since architecture became the physical and visible representation of punishment, deterrence was achieved through society’s psychological perception of correctional facilities.

There is a lot of stigma associated with a convicted offender within society which also affects how people perceive correctional centers besides the effects of hard architecture. “Dread of contamination and sometimes even physical fear of someone, not because he is, in fact, dirty or diseased, or dangerous, but simply because he is a convicted criminal is quite a common reaction”(Klare 1960:13).

Youth Detention Centers have different meanings to different people. To some members of society, it is a place where young criminals are banished (Patel, 1999). Klare (1960) states that, an ordinary man, a judge, and a mother of a young offender will look at a detention center with different eyes. Klare goes on to describe the image of correctional centers from varied opinions of incarcerated individuals. To a petty offender, it means inexorable exposure, ruin, social disgrace and utter degradation. To a habitual criminal, it could be a career trajectory into a permanent or
Figure 31: Pentonville Prison, dark internal environment is a result of poor lighting because of tiny wall openings (Morris and Bazer, 1963).
temporary dead end depending on the length of the sentence they are serving. To other offenders it could be relief from economic pressure of the world and a guaranteed space for bread and board. To a young offender serving a long sentence, a youth detention center is home and to staff it is a place where their working life is spent.

The image of correctional centers evoked in the mind of the general society is of greater significance, for it determines ultimately what kind of space it is or can become. Public perception affects readiness to spend money on suitable staff and buildings, or to tolerate new reforms and technological innovations (Klare, 1960). But how can such change in perception be inspired? Providing spaces for community integration within a rehabilitation center which gives the community a chance to participate in rehabilitating young offenders and promote interaction could be a starting point. Fortification of correction spaces has made them insular and resulted in their inaccessibility to ordinary people which has also influenced society’s attitude towards them. Society needs to realize that rehabilitation centers are like a rite of passage from one type of social condition and standing to another (Patel, 1999).

Teresa Caldeira (2000:19) in her book *City of Walls-Crime, Segregation and Citizenship in Sao Paulo*, argues that, it is in everyday conversations that opinions and perceptions about crime are formed. She argues that the talk of crime is not expressive but also productive. “The fear and talk of crime not only produce certain types of interpretations and explanations; they also organize the urban landscape, shaping the scenario for social interactions, which acquire new meaning in a city becoming progressively walled.” Through the talk of crime in everyday conversation, commentaries, narratives and jokes, fear is both dealt with and reproduced and violence is both concentrated and magnified and in so doing perceptions of correctional facilities and how they operated are negatively affected.

While others may see correctional facilities as negative spaces, other people have turned them into a profitable business resulting in privatization of correctional facilities. Angela Davis (1997), an anti prison and political activist argues that privatization of correctional facilities has resulted in a shift of goals from reformation to a business perspective, where it is in the best interest of the correctional centre to ensure poor rehabilitation hence recidivism, so that their investment strives. She calls this “The Prison Industrial Complex”. She argues that beyond the investment that correctional facilities have become, they are a means for governments to hide social dysfunction, and their failure to develop and provide for their people. The concept of hiding social dysfunction is not entirely new. Evans (1982) supports Davis’ statement when he states that early prisons were used to keep beggars and poor people away from society in 18th century as a way of isolating them and as a way of avoiding providing for them.

In an interview with Time Magazine titled *Attacking the Prison Industrial Complex* Davis (1998) stated that previously reformation was the centre of focus for the correctional system but over time this was lost. After the conception of the Prison Industrial Complex as a system of containment and profit making, Davis poses this question; Are prison obsolete? She argues that it is time for radical options, a focus on education and skills development instead of incarceration for profit...
Figure 32: Perception of correctional facilities, dark and dull environments (Heiden, 2010)

Figure 33: Dark and cold spaces (Europa Left, 2010)

Figure 34: The general public envision a life of solitary behind the walls (Moleres, 2008).

Figure 35: Offenders discrimination due to skin infection, which how the public perceive offenders too, as disease infested people because of the poor living conditions (Moleres, 2008).
through services rendered to correctional facilities. Imagine the benefits of an educative, skills training and rehabilitative system whose initial focus is rehabilitation other than confinement or penal reform.

Architecture as Platform

Architecture has been a crucial element of penal reform, from the conception of detention centers as holding areas before execution of an offender to the conceptualization of imprisonment as a form of punishment. Architecture has formed and enclosed these spaces and determined how offenders and the general community perceive and experience spaces of confinement (Patel, 1999). The much desired rehabilitation of young offenders that will create responsible citizens requires a special environment where positive and specific cultures, trends, skills and behaviour are generated and reinforced in youngsters. Correctional centers as architectural typologies have flourished under the concept of spatial confinement, creation of spaces for the confinement of the human spirit as described by Mary Maher (2008) in her discourse Correctional Facility Planning and Design: Finding Solutions for Today and Tomorrow. However, very little has been successfully achieved in the creation of spaces that look beyond confinement and start to speak about rehabilitation and spaces that change how people live in correctional centers. ‘Historically, outdated architectural design has prevented the humanitarian reform concept from being realized. Poor design and deplorable living conditions, overcrowding, insufficient staff, and a decrepit physical plant have deprived inmates of basic needs. These conditions have violated due process and other constitutionally guaranteed rights’ (Atlas, 2007:1).

The very size of the buildings, the structure and layout of a correctional facility, the bounding walls and barbed wire fences influence the prevailing atmosphere, and morale of the offenders and the staff. From the point of view of training and rehabilitation, buildings and infrastructure have to facilitate positive behavioral change (Klare, 1960). Since correctional centers become homes, work spaces, educational spaces, interactive spaces, they need to have the appropriate spatial planning such as therapy rooms, education and training rooms and quality offices and living spaces, to facilitate various functions which are necessary for rehabilitation. Dealing with spatial elements that go beyond eradicating overcrowding is a big challenge in the design of a rehabilitation centre (Maher, 2008). But what kind of design skills and innovations can we employ as architects to create spaces that make for an excitable environment, improve living conditions and provide quality learning and training environments for young offenders? How can anti agonistic functions of rehabilitation and security be subtly tackled in these centers to avoid hard architecture?
4.0
Behind Bars

In the preceding chapter architectural characteristic of correctional facilities and how they shape the built environment and influence societies’ perception of youth detention centers was discussed, and it can be concluded that there is a need for transformation of the architectural and spatial qualities of these centers in order to facilitate rehabilitation and community integration.

This chapter will discuss the various spaces that are in existence within youth correctional facilities and what they are used for, in order to make a better proposal of spaces for rehabilitation.

Figure 36: A youngster satisfying the need for interaction with the outside world (Moleres, 2008).
Youth Correctional Centers in Gauteng

The Department of Correctional Services (2010) states that there are 240 active correctional centers in South Africa, 13 of which are youth correctional centers. There are about 23 correction centers in Gauteng Province, 5 of which are juvenile centers. One of the five is for female and it is based in Soweto and the rest are male juvenile centers in Krugersdorp, Boksburg, Baviaanspoort and Johannesburg areas, with the Johannesburg Correctional Centre housing one of the highest numbers of young people from the ages of 18 to 25 nationally.

According to the Department of Correctional Services (2011), there are four types of correctional facilities based on the security risk of an offender which are: Minimum, Medium, Maximum and Super Maximum institutions. Individuals in Minimum and Medium security classes are allowed 2 visitors per visit, 5 visits a month and 45 in year and each visitation can last up to 60 minutes. Those in Maximum and Super Maximum are allowed 2 visitors per visit which lasts 30 minutes and not more than 3 hours in a month and 24 visits a year.

This thesis aims at designing a low security rehabilitation center for offenders with low security risk; whose offences are that of theft, violence and disorderly behaviour to mention a few. Security features such as barbed wire, high boundary walls and surveillance towers, which are common on correctional center campuses that are focused on security, will be eliminated and a different architectural language that speaks of rehabilitation and community integration will be devised. This new architectural language should defy qualities of hard architecture, and have qualities such as transparency, adequate lighting, architecture that places emphasis on visual connectivity between the community and the young offenders and allows for various levels of permeability, with a homely residential component and very strong indoor outdoor relationships.

Facilities in a Correctional Center

Correctional centers have a number of facilities that are meant to support various functions and uses during the rehabilitation and training of young offenders.

In the case of Bosasa Youth Correctional Centre in Krugersdorp, the center has: a main entrance/gate, which is the main security check point which also connects to a visitor’s center as well as administrative spaces. It also has a visitors’ center which is a central space and the main public interface where visitors meet young offenders. Apart from these facilities, the center has other facilities such as a clinic, a library, a dining hall, a recreation hall, workshops and classrooms. The residential component comprised of shared ablutions and rooms, with 8 youngsters sharing a room.

The department of Correctional Services (2011) states that correctional centers’ physical infrastructure should comprise of spaces that support safe and secure custody, humane conditions, and the provision of corrective services, care and development, and general administration. Juvenile detention centers in Gauteng have what the author describes as a campus layout which comprises of several buildings secured behind a brick wall or a barbed wire fence. This
Figure 37: Baavianspoort aerial image in relation to the rest of Pretoria (Google Image, 2011).
Figure 38: Baavianspoort in relation to support infrastructure like staff housing (Google Image, 2011).
Figure 39: Baavianspoort in relation to support infrastructure like staff housing (Google Image, 2011).
Figure 40: Photograph of Baviaansport Centre (WBHO Construction, 1998).

Figure 41: Security Check point for public access (Neethling, 2010)

Figure 42: Emphasis on security using barbed wire fence and security lighting posts (Neethling, 2010)
Figure 43: Young offenders doing some daily chores (Addario, 2006).

Figure 44: Young offenders Preparing their food (Addario, 2006).

Figure 45: Queing to received food (Addario, 2006).

Figure 46: Idle time for young offenders (Addario, 2006).
conclusion was drawn from analyzing aerial images of Baviaanspoort (in Pretoria) as a precedent. A campus layout allows for transitional outdoor experiences as young offenders move from one building to the next or from one activity to the next. These outdoor spaces are used for sport and other communal activities.

Baviaanspoort Youth Development Centre was constructed by WBHO Construction in 1998. It is located to the far east of Pretoria and isolated from the rest of Pretoria by a buffer of agricultural fields.

Booyzen, (2005) states that Baviaanspoort youth centre holds 3000 young offenders between the age of 15 and 25. ‘The Baviaanspoort Prison is situated on Cullinan Road, east of Pretoria and 12 km off the N1 Zambezi Off-ramp’(South African Government Information, 2004).

As a result the community cannot easily access the facility and an integrative platform cannot be created. In addition, the built environment and architectural qualities are very Panoptic, inward looking and highly sensitive to security for easy control, and do not engage with their context. This is evident in the barbed wire fences, and a campus design and layout that is focused on containment. Public access is restricted, controlled and specific to particular times. The centre was designed to create green courtyard spaces and the campus layout of the buildings is such that offenders can be kept within the courtyards formed, and all these spaces are enclosed behind a security fence. The space is experienced through movement of offenders in between interior and exterior spaces.

The proposed intervention seeks to locate the new facility at the heart of a community, and develop subtle ways of securing the new center using green walls, made of hedge(s) and fence(s) which are more visually pleasant than barbed wire and ordinary fences. Unlike some of the existing centers, where offenders are completely supported by the tax payers, the new proposal will have an income generating component, through community services such as motor vehicle mechanics and selling of articles and items produce from wood and metal skills training. The intervention will have full public accessibility to the various spaces deemed public and controlled public access in semi public/semi-private spaces.

**Lifestyle**

In an interview with one of the young offenders at Bosasa Youth Correctional Centre in Krugersdorp, he described a typical day as starting with showering and other morning toilet activities in communal ablutions at 6 a.m. Communal breakfast is consumed in a dining hall at 7 a.m., and from 8 a.m. the youngsters assemble for a briefing and notification of different issues in the main courtyard space before attending classes and/or skills training sessions. At this centre, the Department of Correctional services provides matric education and skills training in electrical and electronics engineering as well as wood work. The interviewee stated that there is a lack and limitation of resources and books for their education.

Lunch is served between 12 to 1 p.m. and the youngsters then attend afternoon classes or training until 3 p.m. From there, they have free time to play various games and sports while other simply sit and watch.
Figure 47: Spatial environment that will facilitate rehabilitation of offenders at Justizzentrum Leoben prison complex in Austria (Izismile, 2009).
This period is what was described as idle time which was deemed unproductive by young offenders at Boksburg Correctional Centre in their interview with Gear (2007). Supper is served at 7 and thereafter they go to sleep in their respective dormitories.

He pointed out that visitations happen during weekends Saturday and Sundays. Meeting with visitors take place in the visitors room, in an enclosed space that does not flow into a courtyard or outdoor area for the simple reason of constant surveillance and security. An offender is searched on arrival to meet a visitor at the visitors room, and the same when they return to their residential space. Visitors are also searched twice on their way to the visitors room, at the main entrance and on arrival into the visitor’s room, and same when they leave. Bags and other parcels are left at the main security gate and claimed by visitors on their way out.

Rehabilitation

Even though it might bring satisfaction if not a certain level of compensation to see an offender punished, retributive justice is in conflict and incompatible with values that reinforce human relations such as compassion, forgiveness and reconciliation (Cragg, 1992). Retributive justice fails to understand the personal characteristic of an offender which is an initial step to rehabilitation, since the central focus is on the wrong that has been done.

Rehabilitation of an offender cannot take place effectively in a society that focuses on retributive justice. Patel (1999) states that the idea of a reformative institution is relatively new and (with particular reference to South Africa) largely only by name. Patel argues that the majority of correctional facilities are merely warehouses for the storage of offenders because they are poor rehabilitation environments.

“The purpose of rehabilitation is to diminish offenders’ criminal propensities through psychiatric therapy, counseling, vocational training, educational up-grading, substance abuse programmes, and any other scientifically grounded techniques for reducing recidivism” (Cragg 1992:44)

However, it is only when an offender truly wants to reform that real rehabilitation can take place and thus the creation of such a desire should have been the principal aim of a correctional center (Klare, 1960). It is understood that the antisocial actions by offenders are due to the lack of basic concern for others, which implies a need to induce appropriate moral values. Inculcating moral values requires those being educated to be brought to understand and believe in the moral values being advanced (Cragg 1992). But what are the therapeutically activities that exist in South African Youth Correctional Facilities that are central to behavioral change and not only skills development?

The Department of Correctional Services (2011) states that they provide several therapeutic services to offenders which are run by psychologists, with the cooperation of other professionals like social workers and correctional staff. The first form of therapy is the Individual Psychotherapy which is meant for individuals with a unique problems, who require close interpersonal relationships. The second is Group Therapy which is deemed more economical because more people with similar problems are involved at one time (approximately 8 to 12 persons). The third is Couples and/or Family
Figure 48: Use of soft landscape to create attractive courtyard spaces (F. Møller Architects, 2010).

Figure 49: Interior view showing natural lighting (F. Møller Architects, 2010).

Figure 50: Articulation of hard and soft landscape (F. Møller Architects, 2010).
Therapy which recognises the previous social unit in which offenders existed and to which they will return upon release. This form of therapy strengthens family ties and facilitates integration upon release. The last one is Structured Programmes such as anger management programmes for offenders, probationers and other persons under Correctional Supervision.

Unfortunately these therapeutic activities are mainly compulsory for offenders who have been diagnosed to be in need of therapy. Therapy is open to all other offenders who would like to take part but it is not seen as the main way of inducing behavioural change in an offender. There are no specifically designed spaces for therapy and behavioural cognitive activities in these correctional facilities besides the meeting and counseling rooms. Formal education and skills development and training can go a long way but they do not do much with regards to behavioural transformation. Consequently in addition to Psychotherapy which already exists in correctional centers, the intervention introduces art therapy as one of the ways that could facilitate behavioural modification. In his book *Theater in Prison-Theory and Practice*, Michael Balfour (2004) states that rehabilitation programmes comprise of various activities designed to transform and eradicate antisocial behavioral attributes in an offender.

Dutlinger (in Balfour, 2004) states that theatre, performance, art and music in correctional camps helps in claiming individual identity from the collective and sustains hope, a sense of oneself and the will to live. Art therapy comes with art education which requires a provision of studios for various arts. Arthur Robbins a professor of Art Therapy at Pratt Institute in his book, *The artist as therapist*, states that artwork can offer an individual a level of control and self protectiveness while inspiring self expression. He argues that the use of art therapy offers structure to impart confidence and self discipline in an individual.

In the artistic world of an offender, art therapy permits the recreation of a lost object or the past. It helps an individual to connect with people who are out of touch or return to a relationship which was broken. Art enables individuals to represent in pictorial form, that which they find frightening, such as being in a confined space, nightmares or even addressing an audience and this becomes a stepping stone in confronting their fears. (Birtchnell in Dalley, 1990).

These activities are expressive and allow the young offenders to learn self expression in a social context, develop interpersonal skills, self
Figure 51: Security wall, no active dialogue with context (F. Møller Architects, 2010).

Figure 52: Panoptic figure grounds of new Danish Prison Building (F. Møller Architects, 2010).

Figure 53: Prison exterior view showing gardens and landscaping (F. Møller Architects, 2010).

Figure 54: Panoptic layout of Johannesburg Central Prison (Google Images, 2011).
The intervention takes behavioral cognitive activities to be the starting point of transforming young offenders. Theatre, performance, art and craft will no longer be seen as activities that offenders do in their free time, but they will be professionally encouraged and groomed as therapeutic endeavors and cognitive mechanisms that will form the main part of the rehabilitation of each young offender. Exhibition of art work and theatrical performances present an opportunity for community participation as trainers as well as audiences and also economic support through the purchase of various art pieces.

In the interest of creating rehabilitative environments, the Danish Prison by C. F. Møller Architects in Denmark was selected as a case study, because of the revolutionized correctional environments that was achieved. The environment is no longer dull and dark like that of pure hard architecture, it is more radiant, well lit and very elegantly glazed. ‘I have often wondered why it is that prison design isn’t something similar in condition to a 17th century naval prison ship, and I’m guessing the answer is possibly more complex because offenders have feelings too’ (Varey, 2010). And yes, the answer goes beyond mere feelings, and becomes more about the need to transform offenders into responsible and productive members of society. As discussed earlier, the one thing that can transform correctional centers and their functionality is a society that desires reformation and rehabilitation of offenders other than retribution. Surrounded by landscape design, with a layout that creates a village feel, or that of a condensed urban space this is a correctional facility with lofty ambition. The most notable innovation is the manageable number of inmates to be housed, specifically 250, which enables easier interaction and demonstrates that this center aims at reformation. The proposed intervention aims at housing a similar number if not less.

The Danish Prison will inform the intervention through the design of both the interior and exterior environments, aimed at elevating residents’ spirits. Like the Danish Prison, the Intervention will have green courtyards which are useful for residents’ recreation and outdoor activities instead of using hard landscape only. Bright materials and colours will also be used. A lot of natural lighting which is always lacking in many of the old prison will be emphasized to avoid dark and gloomy environment as seen in the facades and the sky lights (Figure 49).

However, the main difference to the proposed intervention is that this Danish Prison still has Panoptic design without an intended dialogue and interaction with context upon its completion in 2016, as evident by the perimeter security wall (Figures 51 &52). While this thesis does not aim at recreating a prison, it is interesting to note that even recent prison designs are still caught up with the old prison design philosophy, even though the actual environments have been improved.

The figure grounds of the Danish Prison are similar to Panopticon, Pentonville Prison (see Figure 21) and to Johannesburg Central prison, a central area with radial wings for easy surveillance.
5.0
Programmatic resolution

Correctional facilities restricted from public use do not support the global trends of sustainable development and multi use of structures. Deconstruction of the youth detention center, thus opening it up and its inclusion within society, presents an opportunity for sharing of amenities. A mere recreation of a prison environment within society belittles this research on malfunctions of the Juvenile Detention Centers. Consequently this thesis advocates for a new architectural typology that aims at rehabilitation of young offenders in a controlled environment, but within the community.

The programme has been conceptualised based on the theory discussed and some of the existing programme in detention centers, and the need for the architecture and spatial qualities of the new center to facilitate rehabilitation and community integration. To make precedent studies more meaningful, they were selected based on the programmatic evolution and requirements and were analyzed in relation to the programme under discussion.

Figure 55: Flow diagram of the anticipated ideal functionality of the new intervention (Author, 2011).
The Intervention

From the research, it is evident that existing youth correctional centers as an archetype are problematic and do not facilitate the much needed rehabilitation of young offenders. It has also been established that the responsibility of reforming young offenders has been left only to the Department of Correctional Services and the old African tradition in which it took mutual effort from village members to raise a child, no longer exists.

The central idea of the intervention is that of **INTEGRATING** young offenders’ rehabilitation within the community and allowing the community to participate in their rehabilitation. In this new facility topped with behavioural cognitive activities, is hoped that the young offenders will be reformed into responsible and constructive fathers, husbands and members of society. As a result, the cycle of young offending will be broken.

The young offenders and the center’s staff, and the general community, both the youth and adults are the intended users of the facilities in the proposed intervention. 40% of the facility will be specially for young offenders because this intervention is mainly for them, 40% will be on spaces that are will be shared between the young offenders and the community while the remaining 20% will be mainly for public use.

**Programme**

Klare (1960) states that to achieve rehabilitation of offenders, the fundamental structure and philosophy of reformation should create
Spatial programming, sequence and relationships in a typical juvenile detention center

Figure 57 by Author, 2011.
Spatial programming, sequence and relationships for the intervention

Main public facilities
- Library
- Open space/ courtyard
- Clinic

Intermediate space
- Canteen
- Visitors center
- Exhibition space
- Library

Main facilities
- Classrooms
- Workshops
- Indoor sports
- Accommodation
- Therapy Spaces
- Computer room
- Cafeteria

Shared facilities

Private facilities

Semi-permeable edge

Figure 58 by Author, 2011.
The initial attempt explored dormitory living and a few smaller rooms for isolation and some as incentives for good behaviour. Circulation was envisioned to be from an external passage into a common lounge and a passage leading to the rooms and the dormitory and ablutions which were shared. But such living environment has lack of privacy and unit family life.

Second attempt was to create en suite rooms of 2-3 children each which share a passage that leads to a communal space. The design also incorporated the idea of family cooking to enhance sense of belonging and contribution since supper would be prepared in turns by the youngsters. However, the design remained largely communal without a sense of an actual family unit.

Third attempt was to create a family unit. An individual flat with one house parent and a private lounge and kitchenette and with 8-10 youngsters. This was redesigned to perfect the flat design and in response to South African Bureau of Standards regulation on foster care ratio 1 parent-6 youngsters.

Final attempt has the approved foster care ratio 1 parent-6 youngsters. Circulation will be from an external passage into a Lounge and then a smaller internal passage. Vertical circulation will be through an external staircase. The roof space will be used for drying.

Figure 59: Exploration of the spatial arrangement for the housing component for the proposed intervention (Author, 2011).
the desire for rehabilitation in offenders. Klare suggests that the ideal structure would be a correctional facility for about 150-200 people, where buildings are designed to allow 12 offenders living and working together, separated from the larger group except for occasion like church service or leisure activities. Klare argues that small groups mean better and easier supervision than larger groups and difficult offenders can be allocated and re-allocated to those groups where there are least disturbing. Smaller groups also enable members of the staff to get to know the offenders, their characters and their problems which would not be very successful in large groups. He envisioned each section of 12 to have its own workshop, a small dormitory and shared facilities like dining and recreation rooms.

However this ideal structure described by Klare, does not do much to alter the existing lifestyle in correctional centers where offenders live as a group and there is no idea of family life. What kind of spatial environment can we create to facilitate and motivate change in young offenders? What kind of architectural programme can be conceptualized to ensure success in rehabilitation?

**Accommodation for young offenders**

In the preceding arguments, it has been established that overcrowding is a major problem in correctional centers, as well, dealing with offenders in large numbers which Klare (1960) describes as herding of offenders, does not create a good rehabilitative environment and opportunities to address individual problems.

In *Disturbed Children-therapeutic factors in group living*, Elliot Studt (edited by Robert Tod, 1968) justifies the need for foster families in children’s rehabilitation, by explaining that family living is essential for child development since it provides the basic emotional experiences necessary for physical and mental growth of a child. Studt recognizes the significance of living in a group and explains that it is beneficial through sharing of ideas and experiences across different children and depersonalization of rules and procedures because they apply to everyone alike. However, he singles out smaller family units as very significant for child development and highlights that living in a family is psychologically and culturally imperative in societies. He suggest that in a foster family unit, there should be opportunities for children to be able to contribute to their unit as well as benefit from it so that they are fashioned into a life of sharing.

For this new center, getting to know young offenders becomes a critical point of learning how best they can be assisted to change their attitude. But what are the spatial and lifestyle elements that can be introduced to facilitate interpersonal relationship between young offenders and their mentors or trainers?

The residential component of this new center will be designed to house 150 to 200. To enhance family lifestyle and interpersonal relationship, accommodation of young offenders will be done in small family units which have one house parent to six youngsters, so about 34 House Parents. Each family apartment will have four rooms all of which are en suite, one for the house parent and three shared among the youngsters. Before allocation of the young offenders to suitable house parents, there
Figure 60: Exploration (PRP Architects, 2007).

Figure 61: Flower gardens and how they relate to the block of flats (PRP Architects, 2007).

Figure 62: Section showing the various floors and vertical circulation (PRP Architects, 2007).

Figure 63: Brick work and wooden windows of the block of flats, (PRP Architects, 2007).
will a bigger family unit which will serve as an observation point, where youngster will stay upon arrival until they are assigned to a family.

Besides enforcing family life, the intervention seeks to recreate the idea of being part of a bigger society which is experienced even with the general public. As such shared spaces become critical components for interaction and exchange of ideas between different family members within the new center. Consequently, breakfast and lunch will be served in a communal cafeteria, while supper will be prepared and consumed in family units. Other shared spaces will be the study room, television lounge, the games room, and a chapel for religious activities.

<table>
<thead>
<tr>
<th>Family unit:</th>
<th>130 m² x 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginners accommodation:</td>
<td>280 m² x 2</td>
</tr>
<tr>
<td>Guest room:</td>
<td>130 m² x 12</td>
</tr>
<tr>
<td>Youngsters Cafeteria:</td>
<td>300 m²</td>
</tr>
<tr>
<td>Tv Lounge:</td>
<td>130 m² x 12</td>
</tr>
<tr>
<td>Study:</td>
<td>90 m² x 3</td>
</tr>
<tr>
<td>Games Room:</td>
<td>100 m²</td>
</tr>
<tr>
<td>Chapel:</td>
<td>100 m²</td>
</tr>
<tr>
<td>Computer room:</td>
<td>100 m²</td>
</tr>
</tbody>
</table>

**Precedent Study**

*Binfield Triangle block of flats* is located in Bracknell, England and was commissioned in 1974. The flats are arranged in one continuous three to four storey block largely around the west and south with a spur back into the site which allows the creation of two large landscaped areas. The block of flats create an active pedestrian area to the west which is populated with trees and the block overlooks a public open space to the west (PRP Architects, 2007). The idea of creating a pedestrian street will be used in the intervention to create a public space furnished with concrete benches, and enforce the intended relationship between the intervention and the surrounding context, in a bid to enhance positive public perception of new facility and facilitate integration. Like Binfield the intervention will be three to four storeys high. The housing block frames a courtyard which has a playground and parking spaces. Similarly, the residential component in the intervention will form part of the enclosure of a courtyard. In addition to that the proposed courtyard will have a hard and soft landscape, brick paving for circulation paths and a flower and vegetable garden which will enhance the spatial qualities of the courtyard.

In terms of materiality, the use of brick creates a facade that requires less maintenance which could be ideal for the intervention being a public building. However, with the objectives of the scheme to create a visually and mentally stimulating living environment and avoid gloomy spaces, a careful articulation of brick, concrete and painted plaster will be used on the facades.

**Therapy**

This thesis has highlighted the need for specific behavioural cognitive activities which are absent in existing correctional facilities and the absence of specially designed spaces for behavioral cognitive activities. Consequently, there will be group therapy space, a multipurpose performance hall, art and craft school and theatre school which will be the designated spaces for therapeutic activities and
Circulation around the concert hall

Figure 64: Franz Liszt Concert Hall entrance and exterior landscape (Author, 2011).

Figure 65: Franz Liszt Concert Hall (Author, 2011).

Figure 66: Section through Franz Liszt Concert Hall (Uffelen, 2010).

Figure 67: Section through Franz Liszt Concert Hall (Uffelen, 2010).
interaction between the young offender and the community who will become remote parents. Various levels of therapy will be devised to respond to individual problems. Level one will be for beginners, mainly assignments to assess character and group and individual therapy. Level two will involve behavioral cognitive activities, art, craft and performing arts therapy. Level three will involve skills training like, wood work, metal work and motor vehicle engineering. At level four, the young men would be involved in mentor programmes for beginners and sit for different exams for the skills training sessions in preparation to rejoin society. All these activities will happen along side formal education (matric) which will be open to all boys based on the class they were in before they came to the new center.

Group therapy: 72 m² x 2
Multipurpose Performance hall: 320 m²
Art and craft school: 240 m²
Theatre school: 100 m²

**Precedent Study**

*Franz Liszt Concert Hall* is in Raiding, Austria. It was designed by Atelier Kempe Thill Architects and Planners (Uffelen, 2010). This case study was chosen because Frans Liszt Concert Hall’s main design ambition was to create a relationship between the interior of the hall to the surrounding landscape which was achieved through the use of symmetrically positioned windows offering a spectacular view of the outdoors from the public foyer.

In the Franz Liszt, the public foyer is enclosed and it is the main interphase between the main concert hall and the surrounding
Figure 70: Usasazo secondary School in Khayelitsha (after Google Images, 2011).

Figure 71: Various infrastructure surrounding Usasazo secondary School in Khayelitsha (after Google Images, 2011).

Figure 73: Aerial photograph of Usasazo Secondary School (Noero wolff Architects, 2004).

Figure 74: Street photograph of Usasazo Secondary School (Noero wolff Architects, 2004).
landscape. The intervention will emulate a similar arrangement but instead of using an enclosed public foyer, the intervention will create a strong indoor outdoor relationship by using an open public foyer. An open public foyer has advantages of becoming part of circulation and people could sit and wait while looking into a nice courtyard.

Similar to this concert hall, the multipurpose hall will be a two story volume space but instead of a partly flat and partly stepped floor design, the proposed hall will have a flat level floor to allow for flexible use of the space and arrangement of furniture which would be difficult in a fixed and stepped auditorium setting. As well the intervention will try to free space around the performance hall volume to be used as circulation and emergency exits.

Visitors Center + Art Gallery + Reception
The visitors center which will flow into the art gallery will be the main integrative space. This is where the community meets the young offenders as well as access other spaces within the facility. The reception area will be the main security checkpoint.

In order to enhance community participation, visiting hours will be longer than two hours so that realistic relationships are established between the young offenders and the community as suggested by Franklin (1968).

The visitors center will open into a courtyard so that there is both indoor and outdoor interaction, other than enclosed space only. This will give an opportunity for a choice of premise for discussion as well as an outdoor experience for some family time. This is very important for reformation as it will encourage social interaction unlike in closed booths or separate meeting rooms.

Visitors Center: 160 m²
Art Gallery: 150 m²
Reception: 50 m²

Staff Spaces and Security Stations
The intervention will be a minimum security center due to type of offences of the youngster to be trained at this center and security will be achieved mainly through the use of access control. Each youngster will have an access control card that will determine where they can access and not and at what times. Consequently there will be a need for a technical support room which will overlook or access protocols. The use such technology allows for freedom and independent of circulation through various spaces by the youngster at designated times without physical need for supervision. Similarly staff and Visitors will also be given an access control card that will seen them in and out of designated spaces. There will be a security check point at the Visitors center where visitor will be processed. There is also a need for management offices and a staff common room, where staff can interact, have their meals, as well as store their various possessions. A Canteen will be positioned to be shared between the visitors center and the staff common room.

Offices: 200 m²
Staff common room + Canteen: 220 m²
Technical Support: 25 m²
Figure 75: Interior photograph of Usasazo Secondary School Hall. (Noero Wolff Architects, 2004).

Figure 76: Usasazo Secondary School entrance and how it opens to the street. (Noero Wolff Architects, 2004).

Figure 77: Usasazo Secondary School classrooms overlooking the courtyard. (Noero Wolff Architects, 2004).

Figure 78: Internal courtyard. (Noero Wolff Architects, 2004).
Formal Education and Training

The Center presents a unique opportunity not only to educate institutionalized youth but also the general community. The spaces for formal education and training form the bulk of the shared facilities; a classroom for young offenders’ education during the day and a community evening school for adults. The laboratory could also be used by students from other schools because some school lack properly equipped laboratories. This eliminates the notion of people questioning why provide good infrastructure for young offenders when ordinary learners are lacking the same amenities. The sizes of classroom, laboratories and other school amenities has been developed based on the Department of Education’s (2009) National Minimum Uniform Norms and Standards for School.

<table>
<thead>
<tr>
<th>Nominal room Size</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom: 48 m²</td>
<td>70 m² x 3</td>
</tr>
<tr>
<td>Laboratories: 60 m²</td>
<td>70 m² x 1</td>
</tr>
<tr>
<td>Educators offices: 48 m²</td>
<td>80 m² x 1</td>
</tr>
<tr>
<td>Workshops: 60 m²</td>
<td>500 m² x 2</td>
</tr>
<tr>
<td>Sports hall: 60 m²</td>
<td>700 m² x 1</td>
</tr>
</tbody>
</table>

Precedent Study

Usasazo Secondary School in Khayelitsha, Cape Town was selected as a suitable case study because of its location in a township since the intervention is intended to be located in a township. It was designed by Noero Wolff Architects and construction was completed in 2004. This secondary school consists of 37 classrooms, a library, computer room, hall and an administration section. The brief was expanded by the architects to allow the school to be adapted to further Education and Training legislation which calls for more entrepreneurial training. The classrooms on the street edge are designed to be used for entrepreneurial teaching with hatches that open to the street to allow interaction with the public. This single storey line of classrooms have a fragmented articulation that mimics the scale of the informal settlement around it, whilst also declaring its institutional character by the giant order of this wall of classrooms.

The central circulation courtyard is filled with trees and benches to receive its many users. The canopies on the perimeter of this space are designed to facilitate circulation on the scale of an individual and of a crowd. From this space one enters the various functional blocks of the school. The roof lights are shaped to cause suction on the leeward side of the roof and to improve natural ventilation in summer when the warmer South-easterly wind blows. (Noero Wolff Architects, 2004).

The proposed intervention will have an element of education and training which makes a school a good precedent study. School campus design vary but the concept and design of this school and how it responds to its context by creating a good quality urban space and street edge will be used to inform the design of the intervention. The school is located in Khayelitsha, an area in which schools are the main durable and permanent public buildings. In such areas public building have a critical role in the formation of good quality urban environments. Like the design of the Usasazo school, the proposed intervention aims to create a good street edge and enforce the trade idea that is provisional in Usasazo.
Figure 79: Site image showing permeability of the spaces between the buildings (after Google images and n+b architects 2011).

Figure 80: Photograph of interior courtyard, hard landscape (Kozlowski, 2010).

Figure 81: Photograph of interior courtyard, hard and soft landscape (Kozlowski, 2010).

Figure 82: Photograph showing how buildings border together to form interior courtyard (Kozlowski, 2010).
design as an active way of attracting the community to the new center. Like Usasazo, the interventions aims at creating a balance between the formal and the informal settlements and allow the balance to inform the design.

**Community Facilities- Library and Clinic**

Patel(199) described correctional centers as mini cities which contain all necessary amenities found in ordinary cities. In view of integration, the Library and the Clinic become community facilities that are open to the public from morning to evening without restrictions. During the evenings, young offenders will be allowed to access the Library. As well when a youngster is sick, they will be take to the clinic which will be serving the community at large.

Technical Support: 25 m²  
Library: 360 m²  
Clinic: 180 m²  
Public Lobby: 100 m²  

**Precedent Study**

*Hérault Valley Community Center* by n + b architects, in Gignac Town, Hérault, France, was completed in 2007. The community center was selected because of its elegant use of materials and the articulation of hard and soft landscape which the intervention will utilise. The project consists of numerous buildings that form a village environment sheltering a central garden. Each building has independent access onto the garden, giving each entity its autonomy and identity.
“The main building is the only one that positions itself perpendicularly to the rest of built masses. It marks the facade of the city and the access to the site closing again and protecting the interior garden. Their composition is relatively symmetrical, united, modular and evolutionary. Zinc, stones and concrete from the site are the essential materials of construction relating to the traditional materials used in the region” (archdaily, 2009).

This is similar to what this thesis is trying to achieve, a community centre that uses buildings to create an internal, protected courtyard without use of security walls, the mixture of hard and soft landscape within the internal courtyards and building materiality that enhances the exterior, outdoor environmental quality.

**Precedent Study**

*Saynatsalo Town Hall (1950-61)* by Alvar Aalto was built on Saynatsola Island and it become a civic symbol for the residents of the new town at that time. “This particular building highlights the meeting of urban fabric and nature. The different expression of public and private identity creates a sense of belonging that is necessary to feel at home in a space resulting in making that space-place. (Patel: 2008:23).

Aalto uses the buildings to frame a courtyard space, and instead of using the whole building to enclose the courtyard, Aalto created two apertures that allow the courtyard to become a space to go to and a space to pass through. The intervention intends to create a public courtyard framed by a public building like with this case study. Like in Saynatsalo where the courtyard is used as an interphase between the public library and the council chambers, the intervention intends to use the courtyard space as an interphase between the public spaces and the young offender’s residence.

**Economic empowerment-shops and informal market**

The new center is supposed to become a self financed establishment in the long run. As such there will be provision for a market space which will draw the community to the center and reinforce the integration of the center within the community.

The market area will be under a covered structure adjacent to parking space so that over the weekend the market can spill over into the parking area, in this way making the parking an activity node over weekends.

Formal shops will be located within the market precinct and these shop will serves as outlets for the products that the youngster will manufacture and fabricate in their training. Besides financing the intervention, commissions from sells of art pieces, tickets for performances or metal and wood articles, motor vehicle engineering services, will be served in the participating offender’s account as starter pack for their afterlife. This will also be an incentive to inspire offender to work during their training. In order to instill habits of budget and responsibility as well as the freedom to buy various commodities that the center does not provide, there will be tuck shop within the residential component of the new center.

Shops and Market area: 800 m²
6.0 Design Technology

Active security is a central feature in Correctional Facility design. While the aims of this thriving typology has been human confinement, the intervention takes a step back and reflects on the African tradition of restorative justice and the need to bring back the African notion of community responsibility in upbringing of children. It aims at solving the numerous problems in existing Detention centers discussed previously, through innovative architectural design.

Creation of a new typology that is central on upliftment of the human spirit, rehabilitation and the idea of integrating the community and the young offenders brings about questions of accessibility, safety and security. As such, the discussion that follows is on the design techniques to be utilized.
Innovative design techniques

Carter (in Maher, 2008) states that architecture and space making has a lot to do with making people feel safe and getting their basic needs met especially relevant to the correctional facilities. It cannot be denied that architecture has been a powerful force in creating a sense of security, providing a forum for behavioral change, and meeting the expectations of a vast community of people affected by the realities of incarceration.

There is a wide understanding among practitioners in this growing specialty of correctional facility planning and design, that steel and concrete alone do not ensure successful outcomes in terms of rehabilitation. A link must be forged between the built environment and what goes on inside that environment. Consequently, there is a need to devise new design techniques that can be used to develop a new architectural language and typology for rehabilitation of young offenders.

The main aim of the intervention is to create a homely environment for young offenders, and use passive security measures to achieve this. The design techniques that can be used as passive security and improve spatial quality are:

- Glazing
- Level changes and landscaping
- Colour and building materials
- Green roofs
- Green walls
- Green technology

Besides these design techniques, solar shading becomes a very important element of the design because of the glazing to enhance visual connection and defy Panopitc space making. Unfortunately due to the sensitivity of the scheme, some shading devices can be perceived as hard architecture and there is a need to explore which shading devices could be suitable for the scheme.

In the interest of sustainable architecture, the intervention intends to maximize use of space including roof space. Some of roof space will be used for rain water and solar harvesting while other roof space will be used for vegetable gardens and laundry and drying space.

Besides maximizing the use of roof space, locating laundry and drying space on the roof frees the ground space for other activities and allows each block of residential units to have its laundry and drying area on the roof for easy access and security.

Last but not least, the intervention will use various green technologies to generate solar power and also rain water harvesting.
Figure 90: Cell in Pentonville Prison (King, 1957)

Small window opening

Figure 91: Cell in Pentonville Prison (King, 1957)

Figure 92: Small opening in wall (Author, 2011)

Figure 93: Larger opening with structural glass (Author, 2011)

Figure 94: Illusion of continuity of space, glass almost invisible (Author, 2011)
Glazing

Anthony D. King in his book (1957) *Buildings and Society-Essays on the social development of the built environment*, explains that with penal architecture the idea of confinement was based on belief in reformation through reflection, as well as deterrence. Consequently, cells were designed to provide minimum distractions, the window was located sufficiently high in the walls to give light but excluded and disconnect the outside world. But these small openings resulted in dull spatial qualities and poorly lit internal environments.

Consequently, the intervention will use a lot of glazing to ensure well lit spaces and environments that uplift the human spirit. The use of glazing as a design strategy presents an opportunity for an architecture with emphasis on visual connections an illusion of continuity of space which is absent in many correctional centers.

The architecture of the new typology will be about transparency, the use of structural glass which is robust enables the freedom to place windows at any level and of any size unlike at high heights common in correctional architecture. Use of glazing will also contribute to sustainable architecture since a lot of glazing will result in a lot of natural lighting, getting rid of dull, dark and depressing environments while saving electric energy. With a well articulated design, the occupants of this new center will not be denied of pleasant views and they will be able to look into the public realm beyond the glass, creating a sense of belonging. The same glazing will be used to separate interior spaces and create partitions, whilst maintaining visual links.

![Figure 95: External use of structural glass as main envelop (Glass Design, 2010)](image)
Figure 96: External use of structural glass with columns enclosed (Glass Design, 2010)

Figure 97: Interior use of structural glass to separate spaces (Glass Design, 2010)
Structural glass will be used for passive security which solves problems of security when ordinary glass is used. According to Glass Design (2010) structural glass can be attained in thickness between 12 to 19 mm thick.

**Precedent Study**

The *Justizzentrum Leoben* is a court and prison complex located in the quaint city of Leoben, Austria. The Justizzentrum Leoben was selected as a case study because of its innovative use of glazing in a correctional facility. In his article, *World’s Most Luxurious Prison*, Lawrence Gridin (2008) states the complex houses about 200 prisoners in improved living accommodation. Like the intervention, it is for low-risk offenders and the maximum period of rehabilitation is 18 months.
Figure 102: An internal space in Justizzentrum Leoben showing how glazing enhances internal quality and use of colourful materials (Gridin, 2008)

Figure 103: Some solar shading devices can be perceived as hard architecture because of the type of the scheme, while same shading are completely aesthetical in other projects like the Ubuntu Centre in Port Elizabeth (Field, 2011)

Figure 104: Solar angles for shading devices (Author, 2011)
**Precedent-solar shading**

Richard Meier’s *Ackerberg House* is on Pacific Coast Highway, Malibu Beach, California and was completed in 1986. Meier maximized use of glazing to increase views of the beach even from the indoors (Frampton, 2003). What is significant in Ackerberg House is the simplistic form of sun shading that has been used which blends interestingly with the facade design (Figure 104 & 105). Figure 103 is Ubuntu Centre by Field Architecture in Port Elizabeth, as an example of ordinary solar shading that can be perceived as hard architecture due to the typology of the intervention. Since this thesis aims at improving society’s perception of rehabilitation centers via architectural design, intervention will attempt to create solar shading that blends with the facade like in Ackerberg House and can not be perceived as hard architecture. The solar devices will be designed to allow winter light into the building to warm the interiors and to block summer lighting which carries heat.

Figure 105: Ackerberg House (Jalowy, 2009).

Figure 106: Detail of brise-soleil around the glass-walled living room and view from the north entrance onto the terrace overlooking the sea (Frampton, 2003)
Figure 107: Level changes in Justizzentrum Leoben as a passive means of security (Gridin, 2008)

Figure 108: Exploration of outdoor Level changes and landscaping (Author, 2011)

Figure 109a: Exploration of volumes and level separation (Author, 2011).

Figure 109b: Exploration of volumes and level separation (Author, 2011).
**Level Change and Landscaping**

Use of various levels in the new intervention will enable creation of good quality internal environments through volumetric exploration of spaces and visual connectivity at different level. Level changes will enable occupants to look into higher or lower spaces and enhance spatial experience of people from one level to the next. Different levels of accommodation can also be used to separate young offenders based on varying needs or levels of training.

In terms of courtyard spaces, level changes can enable separation of outdoor spaces when they are at different heights, allowing for two varying uses of open spaces in one courtyard. Courtyard spaces will have a mixture of hard and soft landscape other than hard landscape only common in existing correctional facilities. Flower gardens will form the core of the courtyard for the young offenders so that these gardens enhance the therapeutic environment.

Level changes also emphasize the beauty of landscape and gardens, when trees, flowers and shrubs are laid out following stair or ramps and terraces. Level changes in landscaping allows for use of a water feature like water fall ending up in a pond, which boosts the quality of the outdoor space.

In the intervention, a symbolic water feature will be placed in the young offenders’ courtyard and it will flow to the public courtyard’s pond. This water feature will symbolise the connectivity of the two spaces and as the water feature will supply water to the public pond, so will the new center supply society with reformed and productive youth.
Figure 113: Morington Center (Pell, 2010).

Figure 114: Morington Center (Pell, 2010).

Figure 115: Morington Center articulation of materials (Pell, 2010).

Figure 116: Morington Center (Pell, 2010).

Figure 117: Morington Center window pattern and brick work (Pell, 2010).


**Colour and Building Materials**

“Colour Therapy or Chromotherapy refers to the use of colours to change a person’s physical, mental or emotional health, (Patel, 2008:12).

Gappell (in Patel, 2008) suggest that colour stimulates the brain in various ways affecting people’s emotions, perceptions and their general mood. Gappell states that when cool colours like blue and green are in use, time is underestimated, weights seem lighter, objects seem smaller and rooms appear larger and vice versa when warm colours like red, yellow and orange are in use.

From Patel’s (2008) *Blurring the Line* thesis research, the following colours have been selected for use in the intervention’s various internal spaces: **Orange** which is believed to inspire working mood and a positive attitude towards life.

**Red**, the vitality colour, which is believed to be an energy colour, and brings out courage, confidence and a spontaneous character.

**Yellow** which is believed to increase awareness and stimulates interest and curiosity. Yellow is linked to one’s mental self, facilitating the ability to perceive and understand things.

**Green** is believed to bring about a feeling of renewal, peace and harmony. It relaxes muscles, nerves and thought processes.

Most of the walls in rooms for therapy, games and entertainment and formal education will have at least one of these selected colours.

The building materials that will be used are mainly brick and concrete. Colour of these building materials will be the colour of their natural state and occasionally these materials will plastered and painted to have an articulate facade that is visually stimulating.

**Precedent-solar shading**

*Morington Center* is a rehabilitative services and residence building in Victoria, Australia designed by Lysons Architects. It takes its form from local beach side architectural character of rough cut wood cladding which is expressed and reinterpreted through brick work (Pell, 2010). What should be highlighted in this case study is the use of various brick colours to create a pattern as that of grains of wood. As such the intervention will try to find an innovative way of creating an attractive brick facade.

![Figure 118: Orange](Author,2011)

![Figure 118: Green](Author,2011)

![Figure 119: Red](Author,2011)

![Figure 119: Yellow](Author,2011)
Figure 120: M Central in Sydney, offers residents a green usable roof space (Hopkins and Goodwin, 2011)

Figure 121: M Central in Sydney, hard and soft roof landscape (Hopkins and Goodwin, 2011)

Figure 122: M Central in Sydney, hard and soft roof landscape (Hopkins and Goodwin, 2011)

Figure 123: Ubuntu Centre, roof garden (Riordan, 2011)
Green Roofs

“The drift to cities by the human population puts pressure on housing, land, water and energy supplies, and sewage and waste capacity” states Brian Edwards (2005:3,7) in his book Rough Guide to Sustainability. As such land is becoming a scarce commodity. “For the Architect, sustainability is a complex concept. A large apart of designing sustainably is to do with addressing global warming through energy conservation and using techniques such as life-cycle assessment to maintain a balance between capital cost and long-term asset value. However, designing sustainably is also about creating spaces that are healthy, economically viable and sensitive to social needs. It is concerned with respecting natural systems and learning from ecological process.”

As such this thesis will introduce the concept of Green roofs and green walls. The green roof space will be utilized for cultivation of vegetables. These vegetables for subsistence while the excess will be sold to the surrounding community in the center’s market. The green walls will be used to create visually stimulating barriers.

In their book Living architecture: green roofs and walls, Graeme and Goodwin (2011:31) explain that the density of our cities is a result of less open or green space. They state that besides aesthetical advantages some of the benefits of green roofs and walls are:
- Reduced energy consumption and temperature control
- Noise reduction through insulation
- Improved indoor air quality
- Increased usable open space and human comfort

For intensive roof gardens, factors like structural load, water insulation, plant types, need to be considered significantly (Graeme and Goodwin, 2011). But because of the simplicity of the intended roof garden for the intervention, garden pots and planters will be placed on the roof for vegetable farming like Ubuntu Centre’s organic rooftop garden (Figure 123).
Figure 126: Living wall at Capital Canberra (Hopkins, 2007).

Figure 127: Living wall at Capital Canberra after 25 years (Hopkins, 2007).
Green Walls

In the interest of visually stimulating barriers and creation of a new architectural language, *trompe l’oeil* an old architectural trick, can be used to create visually stimulating boundaries by using green walls.

Green walls can be easily constructed from climbing plants from a flower pot at the top of the roof or on the ground. “Architect and landscape architect Graeme Hopkins in 1988 designed and constructed a trellis wall of climbing plants to screen air conditioning ducts in an adjacent public courtyard area” (Graeme and Goodwin, 2011:13). In the same way, the intervention intends to use plants to create visually attractive boundaries.

Use of an attractive thorny hedge can replace barbed wire fences and create green edges. The art of creating green walls also present an opportunity for afforestation which is also vital for combating climate change and reducing temperatures within the micro climate through evapotranspiration.
Figure 130: Solar powered energy system and rain water harvesting and usage (after Hill, 2007).

Figure 131: Photovoltaic solar panels which cover the whole roof (Google Images, 2011).

Figure 132: Hydraulic elevator, serves energy and does not need engine room reducing costs (Google Images, 2011).
Green Technology

Modern technologies conceived from and for the Industrial and Information societies have brought prosperity that could not be envisaged by preceding human civilizations. While this success has been celebrated, it has become worrying that this prosperity may have come at the expense of Mother Earth.

Technological growth has resulted in a society that is highly dependent on mechanized and energy consuming lifestyles, industries, and transport systems (Edwards, 2005). Unfortunately, the mechanized world consumes energy that results in pollution and a lot of waste that comes as byproducts of industrial processes.

In his thesis Sustainable by Design, Duanne Render, (2009:9) states that “As a society we have become accustomed to a certain rate of growth and prosperity, and comfortable with the mechanism of achieving them, but if we continue along this path we will inevitably destroy ourselves.” Edwards (2005) suggests that environmental stress can be addressed through the use of more intelligent technologies, greater respect for natural resources and a shift from non-renewable resource exploitation to self-sustaining renewable practices.

It is with this level of awareness that architects across the globe are taking a stand in designing environmentally responsive buildings and furnishing them with sustainable energy systems. Edwards (2005:10) argues that “Community architecture often ignored the power of design and technology to solve human problems. But sustainability brings the two camps together: it not only reinvigorates architecture, it gives fresh moral validity to the creation of human settlements, provides a new ethical basis for the architectural profession, and ultimately refashions the aesthetic/cultural landscape.”

The intervention being a community building seeks to be an energy efficient building through solar harvesting, solar geysers, and rainwater recycling. Rain water and solar energy harvesting will reduce running costs for the center. It is the desire of this thesis for the new center to run on 100% solar power. As such, majority of roof space and roof design will be prioritized for solar harvesting and large machinery like elevators to be used in the public lobby will be carefully selected in terms of energy consumption. Harvested Rain water will used for running toilets, and gardening purposes.

Figure 133: Solar Geysers (Google Images, 2011).
7.0
Site Analysis

The success of this project lies in the idea of integrating a rehabilitation center within community and creation of integrated spaces that are shared between community and young offenders.

A suitable site has to facilitate integration and eliminate questions on some society members minds; why provide good spaces for young offenders when the general community is lacking such amenities? The idea of an integrated institution will improve societies perception of youth rehabilitation centers and embrace the idea of participating in rehabilitative activities. Besides mere integration of activities, multi use of space goes a long way in contributing towards sustainable development and sustainable architecture.
Townships
A township as a potential area to locate the intervention became of interest because of the various similarities in the evolution philosophy of township location in relation to correctional facilities and the dire need for community facilities in townships which would enhance the concept of integration and reduce pressure on existing amenities.

A lot of non-white townships established under the apartheid era need upliftment. Majority of these townships are overcrowded due to development of informal settlements. Townships and informal settlement need urban planning and architectural intervention that improve spatial quality and provide both outdoor and indoor communal spaces for varying activities (Patel, 1999).

Townships have Panoptic philosophy in their planning. In her book, The Transformation of Townships in South Africa-The Case of kwaMashu, Susanna Godehart(2006:1) defines townships as, “formally planned and racially segregated residential areas for non white residents at the peripheries of South African cities.” Hence location of township was outside cities embracing the ideology of seclusion that is evident in locating of correctional centers. Like Patel, Godehart understands townships as areas of exclusion that need to be developed and included into the cities.

Formation of townships in South African was a result of the Group Areas Act No 41 of 1950 enacted by the 1948 elected National Party which dictated municipalities to racially separate residential areas. (Codehart, 2006). The law was effected in 1954 by removal of people racially deemed to be in the wrong residential areas (Evans, 2011).

Consequently, in 1951 South Africa saw the birth of the largest urban housing programme for non white groups (Codehart, 2006) which was called Native Housing Policy (Chipkin, 1993). However, the motive behind this housing project was not to provide formal residents for the non-whites but to house the urban labour force for the growing industries at that time (Smit, in Codehart, 2006). In the view of housing labour force, hostels for single migrant workers were built in many townships alongside the family housing units (Codehart, 2006; Maasdorp and Humphreys, 1975). Clive Chipkin (1993) in his book, Johannesburg Style, highlights that this housing development was more part of the apartheid government framework to gain domination so as to easily exercise their power, hegemony and control of the non-white population, as was with power and control over offenders in the Panopticon.

To further paraphrase Chipkin (1993:211), he quotes a 1951 statement by the Secretary for Native Affairs, Dr. Eiselen:“Only by the provision of adequate shelter in properly planned Native townships can full control over urban Natives be regained, because only then will it will be possible to eliminate the surplus Natives who do not seek or find an honest living in the cities.” Townships were poorly furnished with infrastructure unpaved roads and a single tap shared amongst several houses, as a way of deprivation and ensuring that of non white populations remained under oppression and dependence of the apartheid government. In the present day, townships are centers of a mixture of formal and informal
Due to sprawl, informal settlements developed.

Due to sprawl, Correctional facilities were engulfed by cities.

Figure 113: Diagrammatic analysis of the similarities of the locational evolution of townships and correctional facilities.
dwellings; wealthy and poor members of society. Due to poor service delivery and lack of adequate housing, townships slowly became encroached by informal settlers, exerting more pressure and demand on the already limited existing infrastructure, as such these areas need regeneration through provision of new facilities.

Site Criteria
The choice of site within a particular township was determined by the following factors:

Community
For the success of integration, the site needs to be located at the heart of a community so that it blends into the existing urban fabric and to ensure many people access it. The site also need to be located in an area with high population density that lacks public facilities and spaces and an area that needs upliftment.

Pedestrian accessibility
The site has to be easily accessible for pedestrians who form the bulk of the community in many township areas.

Transport
The site needs to be fairly close to a public transport system to cater to public movement.

Size
The site has to have a sufficient amount of land, because there are a lot of amenities to be provided in the new center.

Site selection
During Site selection, three townships were considered, Diepsloot, Soweto and Alexandra. Diepsloot and Soweto were left out because there have been a reasonable amount of upliftment works in terms of providing community facilities when compared to Alexandra.

Alexandra Township was selected as the township to locate the project because it is one of the poorest urban areas in the country. Alexandra was established as an African residential with land tenure rights in 1905, situated 13-km Northeast of the centre of Johannesburg and covers 7.6 square kilometers. Alexandra is township which was planned for 70,000 people whose population estimated between 350,000-500,000 which is the highest of townships in Gauteng (UNESCO, 2003). This shows that the area has inadequate public facilities and infrastructure and the intervention would contribute to alleviating the lack of public facilities.

Selected Site
The site is an empty sport field zoned for public use in Alexandra Township, Corner Roosevelt and 6th Streets.
Figure 114: Location of Alexandra in South Africa. (Google images, 2011)

Figure 115: Location of Alexandra in Johannesburg (Google images, 2011)

Figure 116: Location of Site in Alexandra (Joburg GIS, 2011)
Public amenities around the sites

Figure 117: High density housing north of site (Author, 2011)

Figure 118: Formal trade (Author, 2011)

Figure 119: Primary school (Author, 2011)

Figure 120: High density housing East of site (Author, 2011)

Figure 121: Hostel west of site (Author, 2011)

Figure 122: Community facilities at the south of the site (Author, 2011)

Figure 123: Informal trade (Author, 2011)

Figure 124: Alex Children’s Library (Author, 2011)

Roosevelt Street
6th Street
Figure 126a: Youth on site during weekends (Author, 2011)

Figure 126b: Youth playing soccer (Author, 2011)

Figure 126c: Youth playing soccer (Author, 2011)
Figure 125: Roosevelt street, north of site (Author, 2011)

Figure 126: 6th street, east of site (Author, 2011)

Figure 126d: Youth lack storage rooms (Author, 2011)

Figure 126e: Youth climb up and down 4m fall on site (Author, 2011)

Figure 126f: Author and other youth on site (Author, 2011)

Figure 126g: Intervention to become a formalized space for youth interaction to enhance use of site already existing (Author, 2011)
Various Infrastructure Around the Site

This mapping shows the diverse and varied structures around the site. The existing institutional buildings with a thick line around a figure ground are new developments under the Alex Renewal Project with fences as a way of framing the site and for security reasons. As a result, the pattern of enclaving that exists with these institutions has resulted in formation islands of public facilities and specific attention paid to a particular site and there is no attention to space making and how the development transforms the broader context.
Figure Grounds of Built Form
This mapping shows the scale of various structures around the site, the hostel, the school, the flats and both formal and informal housing. The great variation in scale of the figure grounds and uncontrolled development of informal housing resulted in a fragmented urban fabric.
Movement and Activity Nodes

Movement of people is mainly determined by activity nodes created due to formal or informal trade or the need to access community facilities like taps or toilets. Roosevelt street has a very high pedestrian and vehicular activity while 6th street is much more public. Circulation of people within the informal housing is from the formal street into the space left over for the need to move through the informal housing. These spaces are highly accessible and permeable without limits and control, and due to lack of good public spaces for interaction, the street and the footpaths are the main public spaces.

<table>
<thead>
<tr>
<th>Site</th>
<th>Pedestrian movement</th>
<th>Vehicular movement</th>
<th>Pedestrian movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roosevelt Street</td>
<td></td>
<td></td>
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<tr>
<td>6th Street</td>
<td></td>
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<tr>
<td>Formal trade</td>
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<td>Informal trade</td>
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<td>Alex renewal site for Hall</td>
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<tr>
<td>Activity node</td>
<td></td>
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<tr>
<td>Community facility</td>
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</tbody>
</table>

Figure 127: Vehicles and pedestrians on Roosevelt Street (Author, 2011)

Figure 128: Pedestrians on Roosevelt Street (Author, 2011)

Figure 129: Corner Roosevelt and 6th streets (Author, 2011)

Figure 130: 6th street, more pedestrian than roosevelt (Author, 2011)

Figure 131: movement around the communal facilities (Author, 2011)

Figure 132: movement around the informal trading area (Author, 2011)

Figure 133: Pedestrian movement to taxi rank (Author, 2011)

Figure 134: Movement around formal trade activity node (Author, 2011)
Street Edges
The streets being the main public space provide access to various spatial experiences and open spaces. The street edges frame the street while enclosing a particular public facility. These edges are formed by hard walls from building and security walls, barbed wire and steel fences, informal housing and sloping landscape of the site. As a result some of the open spaces are permeable, others semipermeable while others are completely inaccessible. The quality of the permeable open spaces is unpleasant, unusable and dead space, while the quality open spaces are semi permeable located within public institutions. The biggest open space is in the hostel and is inaccessible because of hard architecture that encloses it and defines it as private space.

Key
- Semi permeable
- Open space
- Hard edge-wall
- Trading edge

Figure 136: Hard edge-hostel wall (Author, 2011)
Figure 137: Hard edge-security walls framing Roosevelt Street (Author, 2011)
Figure 138: 6th street edge framed by fence (Photograph by Author, 2011)
Figure 139: Steel fence on site (Author, 2011)
Figure 140: Permeable open space east of site (Author, 2011)
Figure 141: Encloses courtyard inside hostel (Author, 2011)
Figure 142: Children’s library yard (Author, 2011)
Figure 143: Street, main public space (Author, 2011)
Formal and Informal Structures

The informal housing’s development pattern is in response to existing edges, like that of the hostel and the road. It can be concluded that the formal structures and spaces influence the development pattern of the informal structures. Similarly, the rehabilitation of young offenders has to be in response to the communities way of life, which is the formal structure. Among the formal housing existing in Alexandra are backyard informal housing. These structures coexist and create a symbiotic relationship between the formal and the informal, which the intervention is emulating, the idea of coexistence of the young offender sharing amenities with the general community.
In conclusion, the intervention will attempt to respond to the various contextual issues raised in this site analysis since the intervention will be a product of the theory and the context. Attention will be paid to issues of permeability realizing that, though this thesis is mainly focused on young offenders, its success also lies on the community interaction with the center. In addition to that, it was noted that ordinary youth use the site quite extensively during weekends hence a need to open it up to the community. This will require a balance to be created in the use of space within the shared facilities. As such various levels of permeability and semi permeability will be allowed in the new facilities. As well, location of different amenities will be influenced by the intended use of the spaces. For example, the educational and sports components will have to located next to each other because they form the bulk of shared facilities. They will also be a need a for public accessibility to shared facilities without passing through the visitors center so that they can completely be open to the public over the weekend and closed for young offenders use during the week.

Special attention will be made to the quality of the street edges made by the intervention, in the interest of space making and improving society’s perception.

Last but not least, the intervention aims to create a balance through codependency between the young offenders and the community. This has been inspired by the symbiotic relationship between people living in formal and informal structure around the site where a tenant in an informal backyard structure gets accommodation and the land lord benefits financially.
8.0
Design Evolution
Design Objectives
The design evolved around the theory and the response to the site context. The design objectives are:
- Create new architectural typology
- Create an integrative center
- Create good quality street edge
- Create network of open spaces
- Use building to create boundary and edge
- Intervention to spill into context and activate dead spaces

Understanding the site
The site is approximately 300 m long and 115 m wide. There is a steep slope made by 2 m contour heights.
Excavate part of site towards the west

to push the earth further in from 6th street

So that building is at street level and not 4m above

Step the building to respond to slope and context

building massing-

6th street images where the level manipulation will start in order to put the building on the street level
Design Development
The design has to respond to several aspects of the context as well as theoretical arguments. The diagrams on this page show the various contextual aspects that the design will respond to.
Hostel

The initial context response was to respond to the hostel since its a physical representation of Panoptic design. But the Hostel is going to be demolished under the Alex Renewal project to create a new blocks of flats. At the moment there are no proposal for the new housing, as a result, several exploration as proposal for the new housing project were carried out.

To avoid an inward looking housing complex, mixed use blocks were introduced to the street facing sides of the site, thus the north and the west side of the proposed housing.

The urban proposal for new housing aims at framing open space and allowing free circulation and permeability; to and through open space.
Concept: Integration

Create various levels of permeable and semi permeable spaces

Create spaces open for public access

Intervention becomes a place to move through and to go to
Concept ideas:
Create a center that serves community and young offenders
Create courtyards to be central circulation space to access various buildings
Public building to frame public courtyard and public courtyard to be primary interface to shared spaces
Visitors center to be secondary interface to shared spaces
Typical courtyard building

Courtyard building like Aalto’s Saynatsalo Town hall

Public courtyard exploration

Public courtyard exploration for final design

Building

Courtyard

Building

Public courtyard to be permeable

Private Courtyard with single access

Single entry point

Sports field

Private courtyard

Public courtyard
Active street edges on both 6th and Roosevelt streets

Create active street edge - 6th street market proposal

Water feature connected under the visitors center
Initial site programming
- Public facilities positioned to respond to community hall,
- Public building framing public courtyard
- Young offender’s residence in a secure space
- Shared facilities have two access points,
- Sport field more open to public

Second exploration
Access to shared spaces through Young offender’s residence

Third exploration
Figure ground too heavy as a footprint, needs to be fragmented

Final exploration
Figure ground fragment through creation of a series of courtyards and pergolas
Used shrubs and fencing to create enclose courtyard and create attractive boundaries

Final context to which the design will respond plus the site manipulation and level changes
The intervention spills out into surrounding context defining it as a precinct and stimulates pedestrian movement in the surrounding context.
Public facilities put at the corner to create a civic node and respond to community hall proposal. The L shape form to frame the public courtyard.
Shops and Market adjacent to the 6th street activate the edge.

One shop, the art and craft shop to face the public courtyard and create an interactive edge.

Green wall creating a good boundary and a good view.

Residential component positioned in response to housing urban proposal.

Terracing to make seating watching sports.

Public penetration.
Education component placed together with sports facilities and workshop because they form the core of share facilities.

Introduction of pergolas to enhance indoor outdoor relationship.

Solar Harvesting

Laundry and drying areas

Roof garden
Initial Sketch-Public Building
Initial Sketch-Public Courtyard
Final Sketch-building stepped down to respond to site nd context
Initial Sketch-Scale and Proportions

Final Sketch-Scale and Proportions
Form Exploration Models
Final Model
9.0
Final Design
Ground Floor Plan

1-Lobby
2-Clinic
3- Library
4-Public Restrooms
5-Reception
6-Canteen
7-Visitors Loung + Art Exhibition
8-Security
9-Tuckshop
10-Visitors Restrooms
11-Staff Basement Parking
12-Art and Craft Shop
13-Market
14-Public Parking
15-Motor Vehicle Workshop
First Floor Plan

1-Lobby
3-Library
4-Public restroom
8-Security
16-Meeting room
17-Offices
18-Staff common room
19-Therapy Room
20-Multi purpose hall
21-Theatre class
22-TV Lounge
23-Chapel
24-Cafeteria
25-Art Therapy room
26-Laboratory
27-School staff offices
28-Classrooms
29-Workshop
30-Maintenance stores
31-Sports hall
Third & Fourth Floor Plan

32-Family unit
33-Observation unit
The new civic node and entrance to public lobby
Perspective

Looking down Roosevelt Street
Corner Roosevelt and 6th streets
New market on 6th street with that will spill into the car
Perspective

Entrance to public courtyard on 6th Street
Perspective

Therapy room overlooking public courtyard
Perspective

Public courtyard
Perspective

Visitors center courtyard
Perspective

Main courtyard for the residential component
New public green space between intervention and proposed housing
10.0 Conclusion

It does not make sense to banish an offender into an inhumane correctional facility for murder by arguing that they have right to live and should not face death penalty yet in these environments majority of their rights are violated.

Based on this research which has explored and exposed the negative existing spatial qualities, lifestyle and various negative philosophies of correctional facilities as instruments of penal reform, it is clear that a new typology with a focus on rehabilitation, should be adopted. In the same way that death penalty became deactivated, this thesis believes existing correctional facilities should be declared obsolete and this new typology should be adopted into relevant contexts.

Consequently, society must embrace this new perspective to rehabilitation of young offenders and understand that only by true reformation through a combination of quality built environments and behavioural cognitive activities, can we succeed in rehabilitation of offenders and combating crime. This thesis hopes to be a starting point to a more revolutionary analysis of offenders rehabilitation centers, and how the spatial environments of such center can promote and facilitate rehabilitation. The education and training in the new center is hopped to be a stepping stone for young offenders to bigger achievements in their lives.

Lastly, this thesis hopes that society will embrace the concept of integration and take an active role in taking part in young offender rehabilitational programmes, so that it should once again take the whole village to raise a child. It is hoped that the sharing of spaces and the intermingling of people results in FADING BOUNDARIES, between young offenders and the general community.
Bibliography

Books


Tod, R., J. (1968) *Disturbed Children*, London; Longmans, Green and Co Ltd.


Articles and Papers


Theses


Interviews

Tsepo Khumalo and Mama Bheki-Alexandra Township (Interviewed June, 2011)

Young detainee-Bosasa Youth Development Center (Interviewed July, 2011)

Internet


www. Google Earth