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1 Third Temple - a rehabilitation and reintegration facility for parolees

Kubheka, Thami

2022

University of the Witwatersrand, Johannesburg

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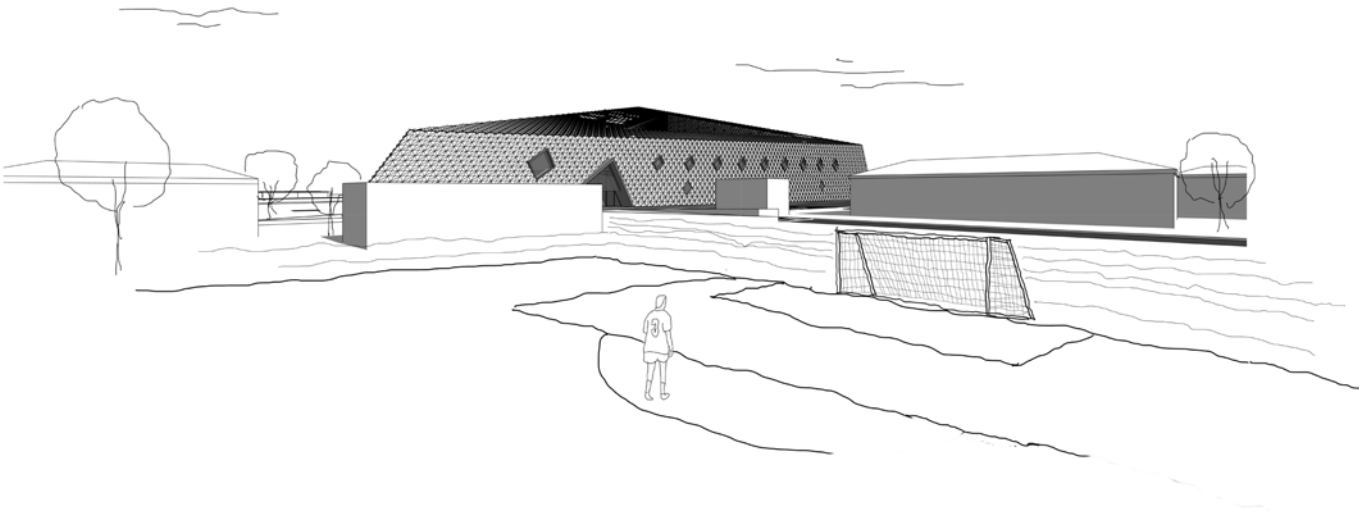
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1 THIRD TEMPLE

1 Third Temple -a rehabilitation and reintegration facility for parolees

Thami Kubheka
2022



Abstract

One Third Temple: The research outlines a design proposal for a typology concerned with rehabilitation using decolonization and related ideologies on potential parolees from the Krugersdorp Correctional Services Institution. The traumatic realities of incarceration can be an architectural responsibility. The project aims at providing relief and rehabilitation to offenders using the parole system as a point of access. Attention to an improved parole system would be beneficial for both the community (tax payer) and incarcerated. A working incarceration system can save the state money while managing issues within the incarceration system such as colonization, trauma, recidivism and overcrowding. Parole is a system that helps the previously incarcerated reintegrate into society, the architecture will explore possibilities for a new model of a "pre parole system" a system that prepares approved parole applicants for parole while serving as a parole system at the same time. The building will need to incorporate themes of spirituality and integration through parole related philosophies and various concepts of therapy in design (Therapeutic Architecture). Several parole systems exist in different parts of the world, some more successful than others. The parole system in South Africa is fairly up to date regarding the fact that it was amended less than 16 years ago. A new Correctional Services Act 111 of 1998 came into effect during October of 2004.This meant that rehabilitation would be the primary concern of the Correctional Services Department, however today South Africa still remains a country with an alarming amount overcrowded prisons and high levels of recidivism.

Aknowledgements

I would like to thank my thesis advisor Prof. Hilton Judin of the School of Architecture & Planning at the University of the Witwatersrand who consistently allowed this thesis to be my own work, but steered me in the right the direction whenever he thought I needed it. I would also like to thank the experts who were involved in the validation for this research project: Without their passionate participation and input, this research could not have been successfully conducted. A very special thanks goes to my mentors and lecturers who have been a part of my architectural studies, Kiki Doerman, Sechaba Maape whose words extensive knowledge, words of encouragement and insights into the broad field of architecture has shaped me to become the student I am today. A personal thanks goes to my friends and Family, Mark Mohan, Khotso Makote and Jason Ngibuini throughout my thesis. Finally, I must express my gratitude to my mother, who was the inspiration for this thesis. I would like to thank her for the love, guidance and continuous encouragement she has given me throughout my years of study and writing this thesis.

The research outlines a design proposal for a typology concerned with rehabilitation and reintegration using decolonization and related ideologies on potential parolees from the Krugersdorp Correctional Services Institution. To acknowledge the source of the ideas or words in my own work.

Figure 1.0
Conceptual montage, (Author 2021)

Declaration

I, Thami Kubheka 733730, am a student registered for the course Master of Architecture (Professional) in the year 23 February 2022. I here-by declare the following: I am aware that plagiarism [the use of someone else's work without permission and/or without acknowl-edging the original sources] is wrong. I con-firm that the work submitted for assessment for the above course is my own unaided work except where I have stated explicit-ly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. For this pur-pose, I have referred to the Graduate 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.

Background

The initial inspiration for the project was derived from experiences playing soccer at Krugersdorp correctional during my high schooling years at Krugersdorp high school.

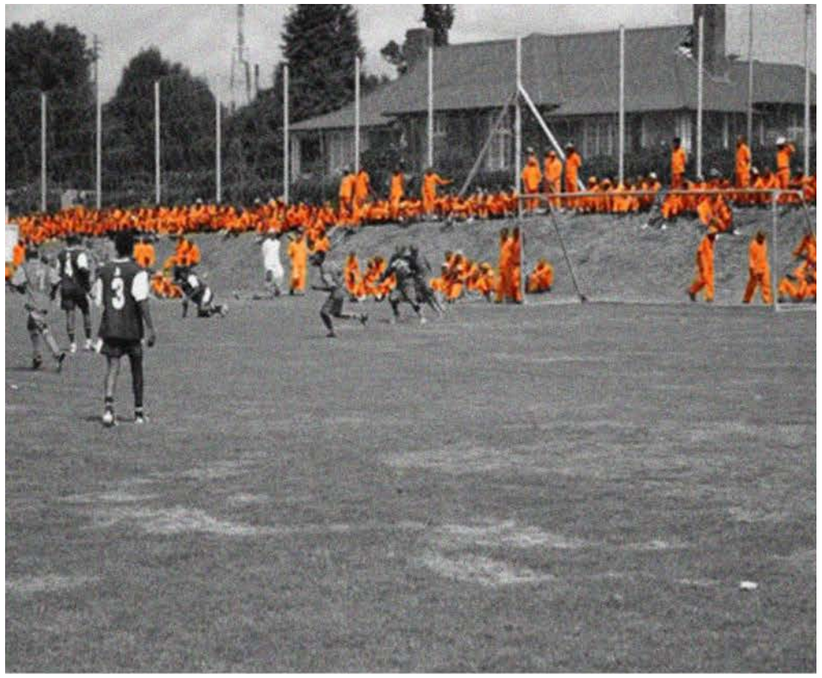


Figure 1.1
Sport brings positive change at Krugersdorp Prison
(Nadine Mare 2017)

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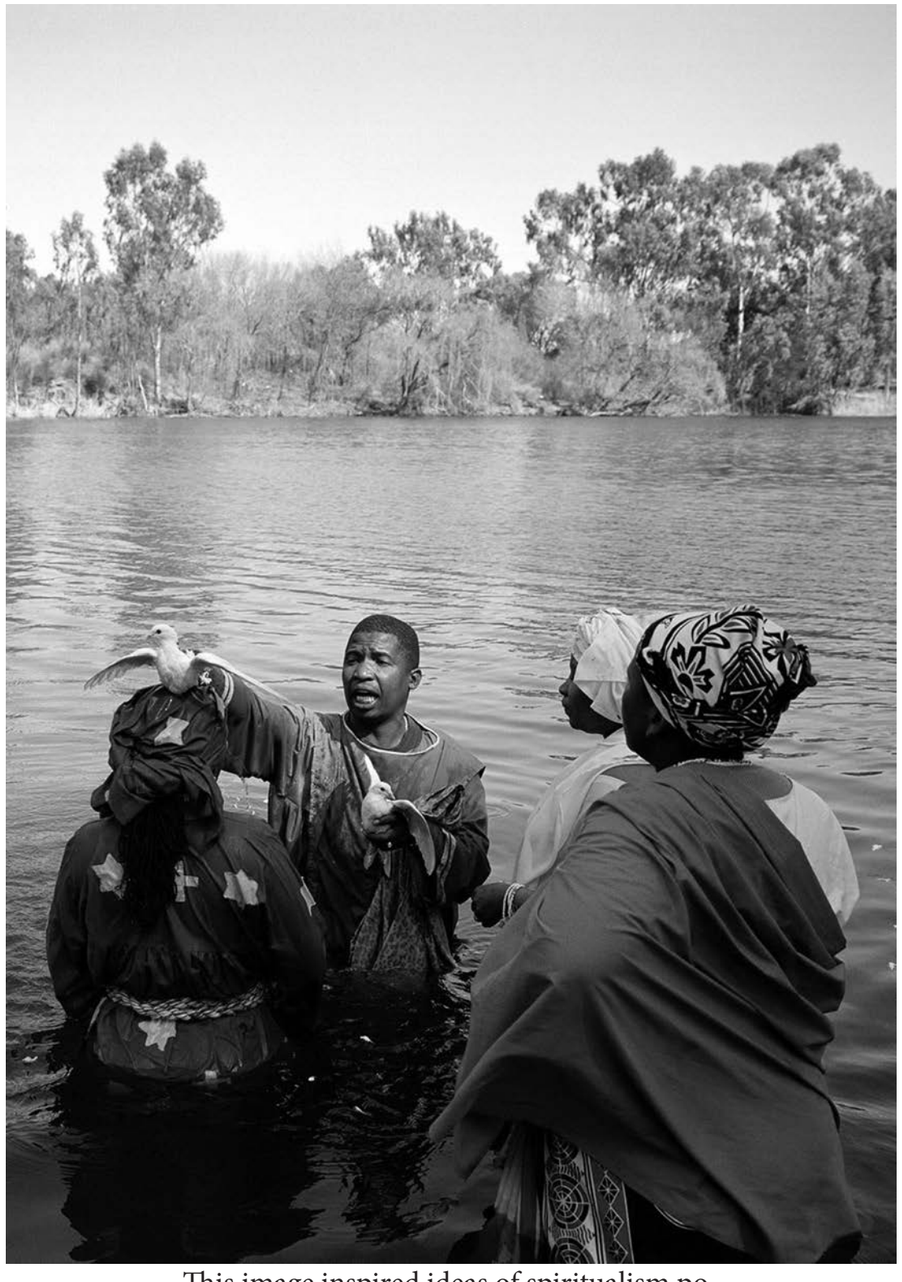
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CHAPTER 1

Introduction

This chapter encapsulates theoretical ideas along with the site and inspirations.

Figure 1.2
Ritual offering, Vaal River, Maccauvlei area, Free State. 2011



This image inspired ideas of spiritualism potentially making time in prison bearable.

Chapter 1
Theories Diagram

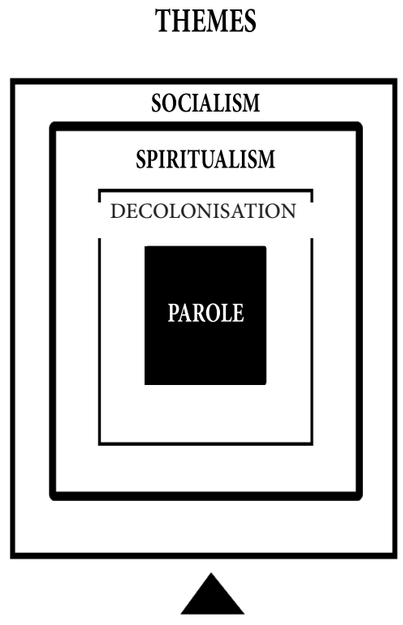


Figure 1.2
Themes diagram (Author 2021)

Chapter 1
Narrative

Spiritualism: Rehabilitation in prisons is considered despite its limitations due to context. Rehabilitation in parole today is mostly the responsibility of the parolee as they are given days out of prison independently. Context plays a valuable role during the process of rehabilitation. ” Access to parks and green spaces has been reported to positively impact on mental-wellbeing and health” (Tyyne Claudia Pollmann 2019). Experiencing nature can reduce stress and the associated hormone levels (Tyyne Claudia Pollmann 2019) **Socialism**: Successful Social Reintegration is the main objective of parole in the context of the incarceration system. Most reintegration related programs take place within the prison. Success in reintegration programs within the prison is often measured for eligibility of parole although the context isn't necessarily ideal to measure social reintegration and rehabilitation. **Decolonisation:** Once incarcerated one is colonised into the incarceration system while being exposed to other negative colonising factors such as trauma, gang culture and ritualism. All parolees would have gone through some sort of colonization during their time in prison, this is what makes decolonization an imperative influence on the rehabilitation of parolees. The overcrowding of South African prisons has raised questions about the appropriateness of the prison system for criminals. Due to recidivism being at a high rate, one questions the effectiveness of rehabilitation in South African prisons. Information from experts will give some clarity to the aims and objectives of what is acceptable and ethical in conducting research of this nature. I've managed to contact an ex Krugersdorp Correctional Services employee, a Warder who I will be asking questions about the typical life of an inmate, leading up to the end of the parole process. Architects under the University of Witwatersrand researching mental health in architecture under a research topic titled “Structuring space for acute mental health care”(Daniel Kirk Hamiltom 2008). I intend on asking questions regarding rehabilitation driven architecture in an attempt to achieve socialization and decolonization. Other architects involved would have had experience in fields related to mental health and spiritual ritualism. Sterkfontein Psychiatric Hospital deals with patience suffering from a wide variety of mental illnesses and trauma, I've arranged with an employee of the hospital under the new Occupational Therapy and sports facilities opened on the 25th of October 2018.I Plan on asking questions related to the methods of rehabilitation on patience and the relevancy of spirituality and ritualism in the context of a hospital. Successful Social Reintegration is the goal of the parole system. Experts in Education and Training will be approached regarding systems of learning and unlearning in preparation for Social Reintegration upon release.



The Paardekraal Monument was constructed when the boers found independance in the 1890's

Figure 1.3 Paardekraal Monument, Krugersdorp (Hilton T 1891)

Chapter 1
Historical Narrative

"The monument commemorates the original site of the vow made by the Transvaal Boers on 13 December 1880, prior to the armed rebellion known as First Boer War" (Christian Gerdov 1899-1927) .

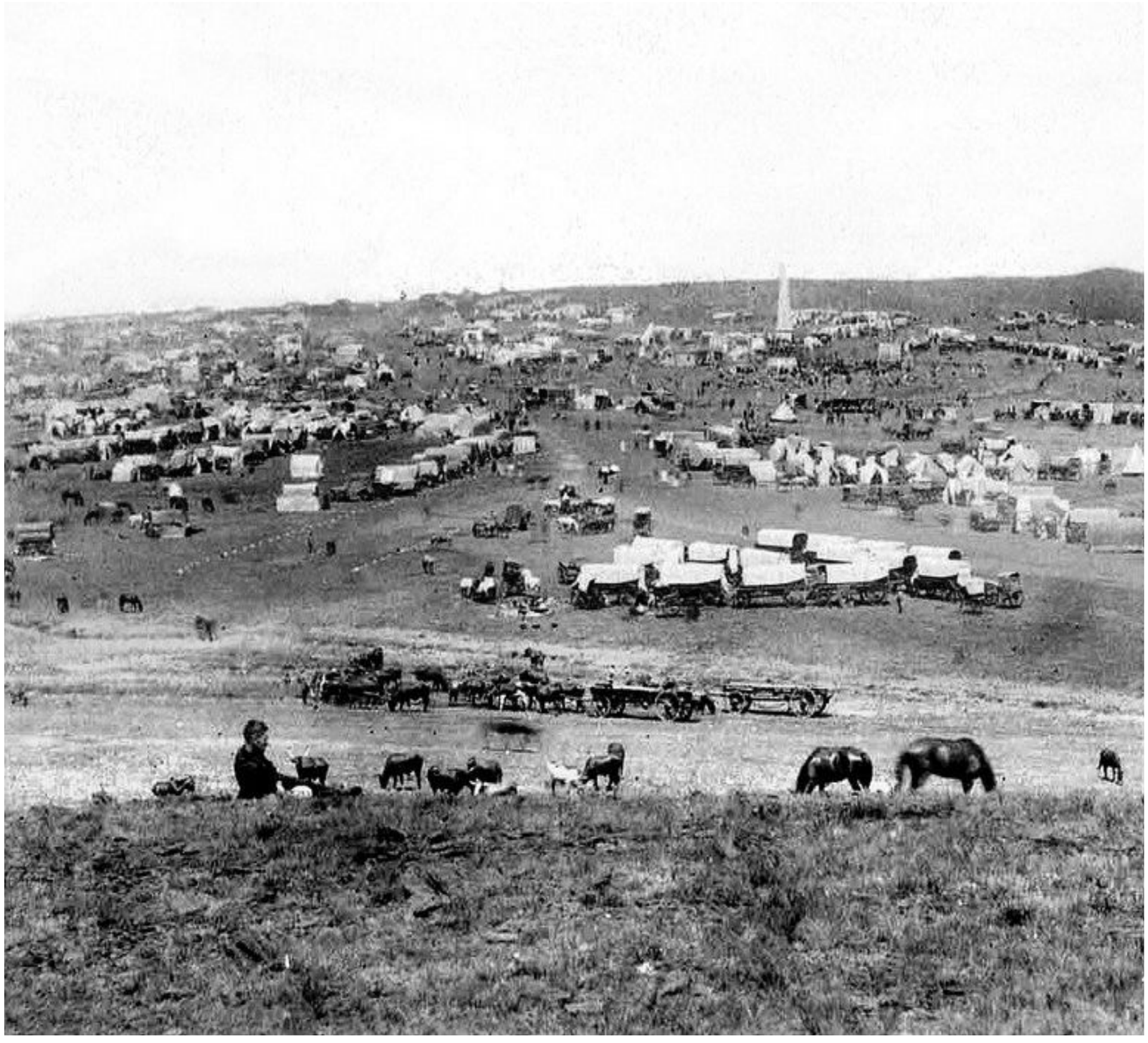


Figure 1.4 Unveiling of the Paardekraal Monument, Krugersdorp (Hilton T 1891)

Chapter 1
Methodology

The research outlines a design proposal for a typology concerned with rehabilitation and reintegration using decolonization and related ideologies on potential parolees. To achieve this, the approach of taking qualitative and quantitative methods of inquiry are described below. **Literature review:** This will help me identify the different discussions in architectural discourse in terms of how the selected themes of; Incarceration, Parole, Decolonization, Rehabilitation, Spiritualism, Ritualism and Social reintegration or Socialization influence the choice of the program; a “pre parole” and parole facility. The selected literature entails the relationship between ideologies of colonization and decolonization of the male mind. Cohesion between the different literature with the objective of creating a rehabilitative (healing) architectural typology to help those previously incarcerated (parolees) reintegrate into society. **Precedent Studies**: The architectural references enable investigation into how issues have been turned into space and approaches to rehabilitation in varying contexts. The precedents should interrogate ideas of social reintegration and rehabilitation in additions to theories such as decolonization for prisoners.

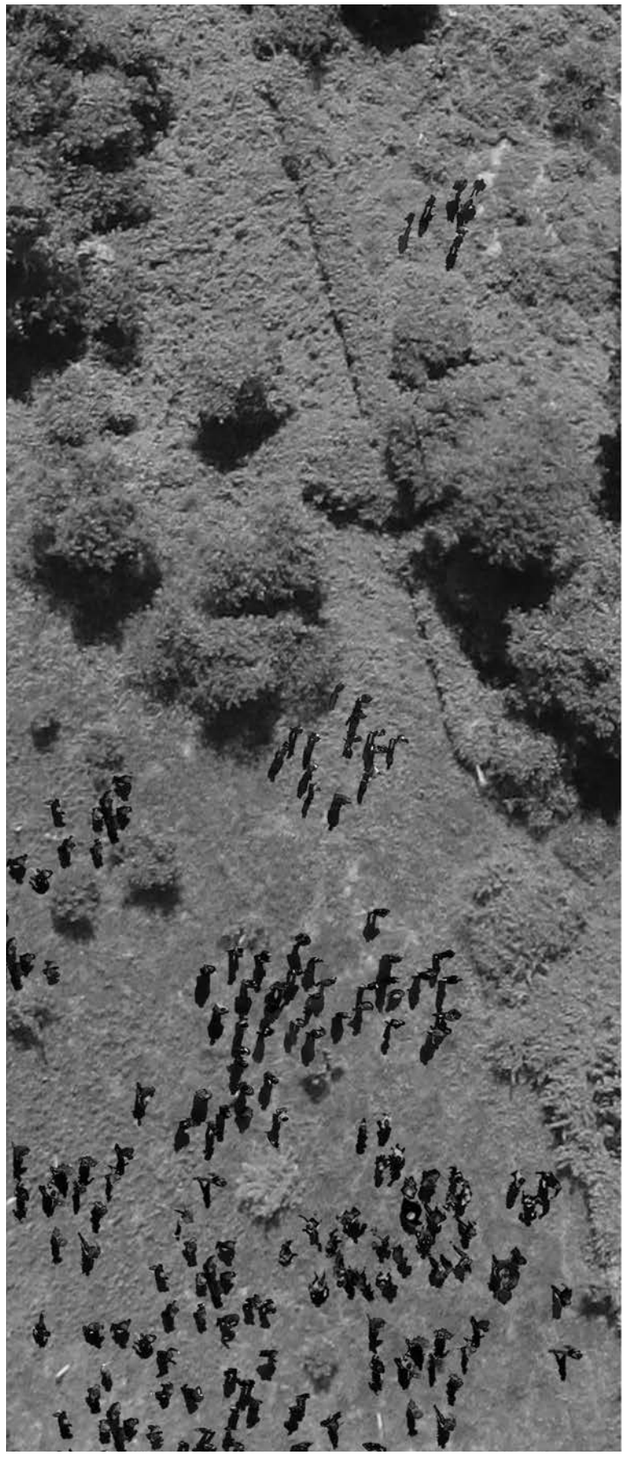


Figure 1.5 incarceration phases diagram(Author 2021)

Chapter 1
Methodology



Figure 1.6 Sketch design diagram(Author 2021)

Chapter 1
Research Question

What is the role of Architecture in the rehabilitation of citizens previously subjected to “negative architecture” parallel to a colonial past ?

CHAPTER 2

Theory

This chapter attempts to validate concepts using existing site and history

Chapter 2

Introduction to negative architecture

To understand the direct architectural influence on people, I will be looking at typologies that are historically known for having a positive influence on the physical, mental, and emotional wellbeing of people as well as concepts of spirituality as a healing aid in relation to art and architecture. The impact of the environment on our wellbeing is prevalent when considering one's mental/physical state and outlook on life. In the book, Visions for people Tyyne Claudia Pollmann talks about access to parks and green spaces having positively impacted on mental-wellbeing and health (Tyyne Claudia Pollmann ,2019). According to Tyyne Claudia Pollmann, experiencing the outdoors and nature can reduce stress (Tyyne Claudia Pollmann ,2019). Often successful architecture incorporates context through various architectural systems to certify systems such as green architecture which is often implemented through sustainability systems as well as the physical incorporation of natural elements. Within these defining elements of "successful architecture" therapeutic architecture can exist, with the direct intention of healing people with psychological and physical stimulation. In most instances architecture creates environments suitable for positive human development; it can be equally responsible for the negative impact of human development. It is necessary to associate the concept of therapy with its subject since therapy is relative. Aspects such as ethnicity, background, social relevance, and economic wellbeing need to be considered. The goal is to conceive an architecture that can reverse the negative impact created by architecture with ill intent, examples of this kind of "negative architecture" exist in an African context which has been subjected to colonization for centuries. Prisons are popularly known for hosting "negative architecture". People subjected to extreme prison environments are likely to be candidates for rehabilitation through ideologies in therapeutic architecture. Due to the uniqueness of the combination of ideas, it would be beneficial to look at each typology as well as in relation to one another to find relationships between these typologies. Aiming to develop a "new" typology for the purpose of rehabilitating those who have been affected by negative architecture. In the case of my proposed thesis the subjects are "potential parolees." The three typologies I intend combining, to create the ultimate relief and rehabilitation spaces are medical housing, social housing, and spiritual housing.

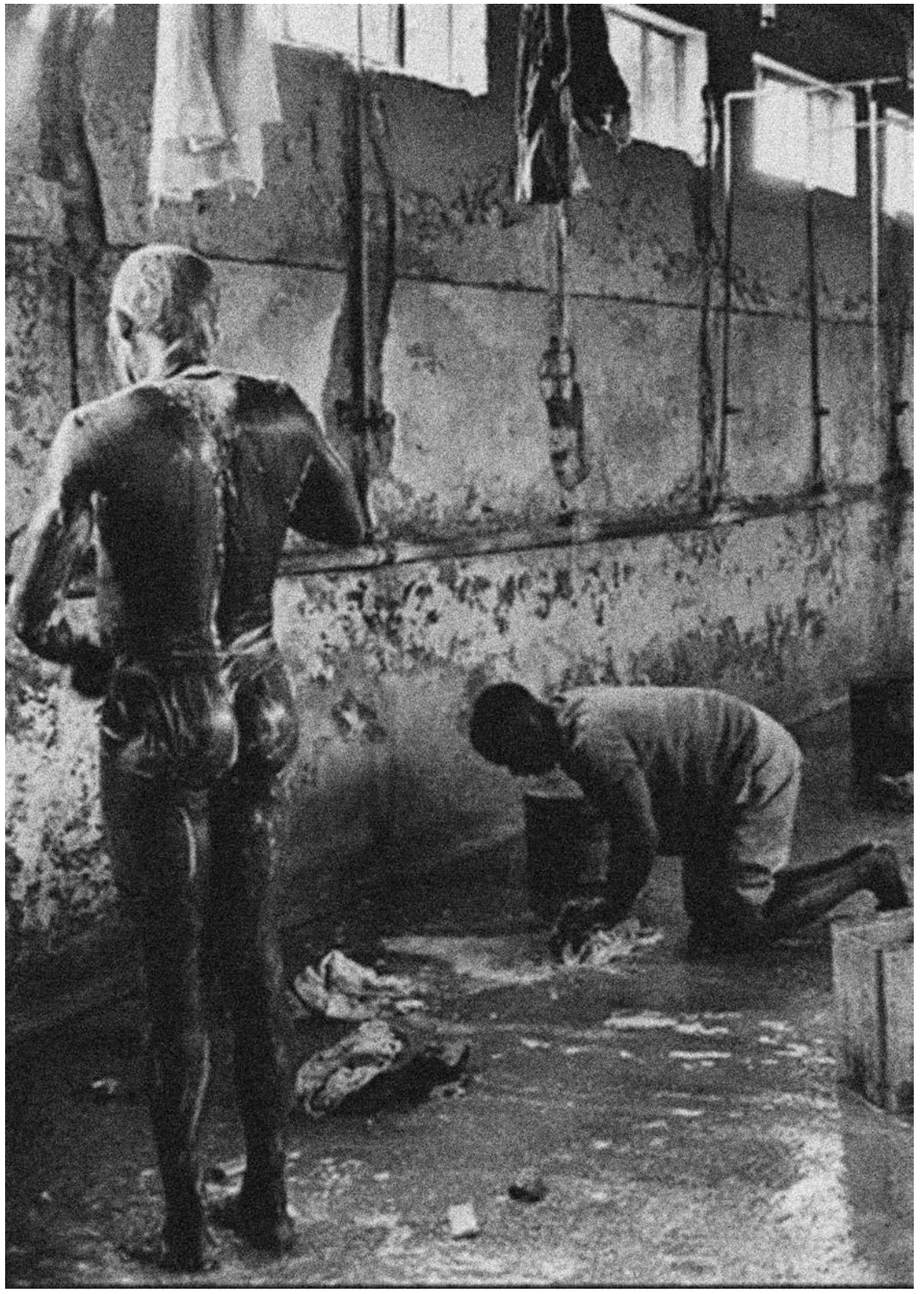
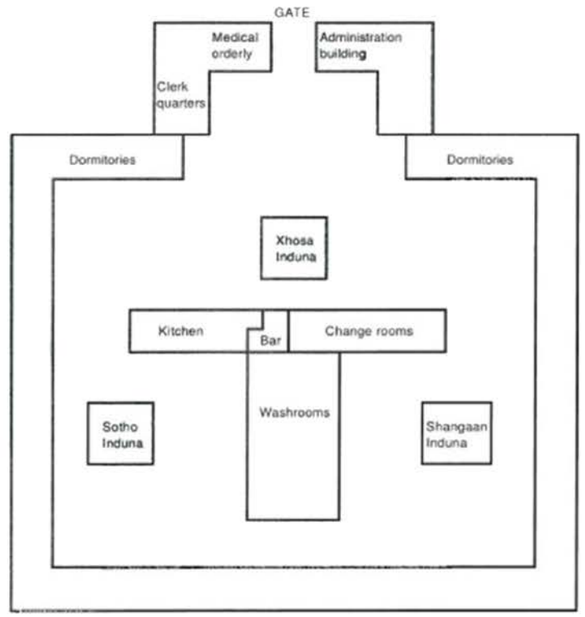


Figure 2.0 The washing conditions at the mines were primitive. Shower rooms were crowded with men trying to bathe while others did their meagre laundry.(Ernest Cole 2021)

Chapter 2
History of incarceration in SA

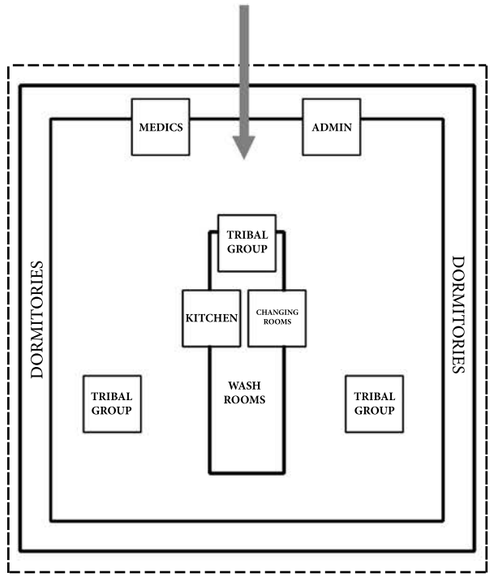
The history of incarceration in South Africa is closely linked to its colonial history. Several methods of incarceration and injustices were practiced for different environments. Historically prisons in South Africa were created for the purpose of punishment, in the 1850's when slavery laws were abolished, and the prisons focus switched from an institution of punishment to a rehabilitation and correctional facility with an emphasis on labour. By the early 1900's South African Prisons began experiencing overcrowding due to fragile and discriminatory laws implemented by colonial governments (Rudolph Jansen and Emily Tendayi 2011) . This overcrowding in prisons was instrumental for private companies and the state. Prisoners were temporarily released into working society to contribute to the building of large state projects such as buildings, bridges, and roads at no financial gain for the individual prisoner. It could be said that a large part of the economy was built on the back of prisoners. The concept of "incarcerated labour" exists in South Africa's farming and mining industry. In the mining industry working and living structures were put in place to keep colonial rule and motives through labour in mining, some would refer to this as a form of modern slavery. Workers were subjected to surveillance living and working conditions, what we know today as hostels. An example of this sort of incarceration exists in the urban fabric of South African cities and towns where mine workers of African descent were subject to negative living conIn the book, Prison conditions by Jansen Rudolph and Emily Tendayi, talks about how the state played an integral role in providing unskilled black labour from the penal system for the mining industry (Jansen Rudolph and Emily Tendayi 2011). This eventually influenced the way prisoners were treated, racial segregation within the penal system was encourage as mine owners treated white workers differently from black workers. In the 1930s unskilled prison labour was introduced to the agriculture industry at a low cost; for example, "a farm in KwaZulu Natal province had bought prisoners to work on the farm from a prison in Durban at the rate of 5cents per prisoner. For the reasons of housing prison labourers' farmers built secondary prisons where prisoners could stay at their own cost, this trend went on for decades throughout South Africa"(Rudolph Jansen and Emily Tendayi 2011) ."The use of African prisoners on private farms for cheap labour was justified by discriminatory laws at the time"(Rudolph Jansen and Emily Tendayi 2011) . In the 1960's prisons were managed under apartheid laws which saw an increase in the prison population due to the increase of political crime in the context of apartheid laws. The mining compounds like prisons developed due to the pre apartheid prison labour system remaining prominent throughout the country even after the abolishment of prison labour laws due to local and international pressures.

Chapter 2
Typical hostel plan



Schematic layout of a early witwatersrand compound, undated (Museum Africa, Johannesburg

Figure 2.1 Robenson G.M compoud drawings (Museum Africa Johannesburg)

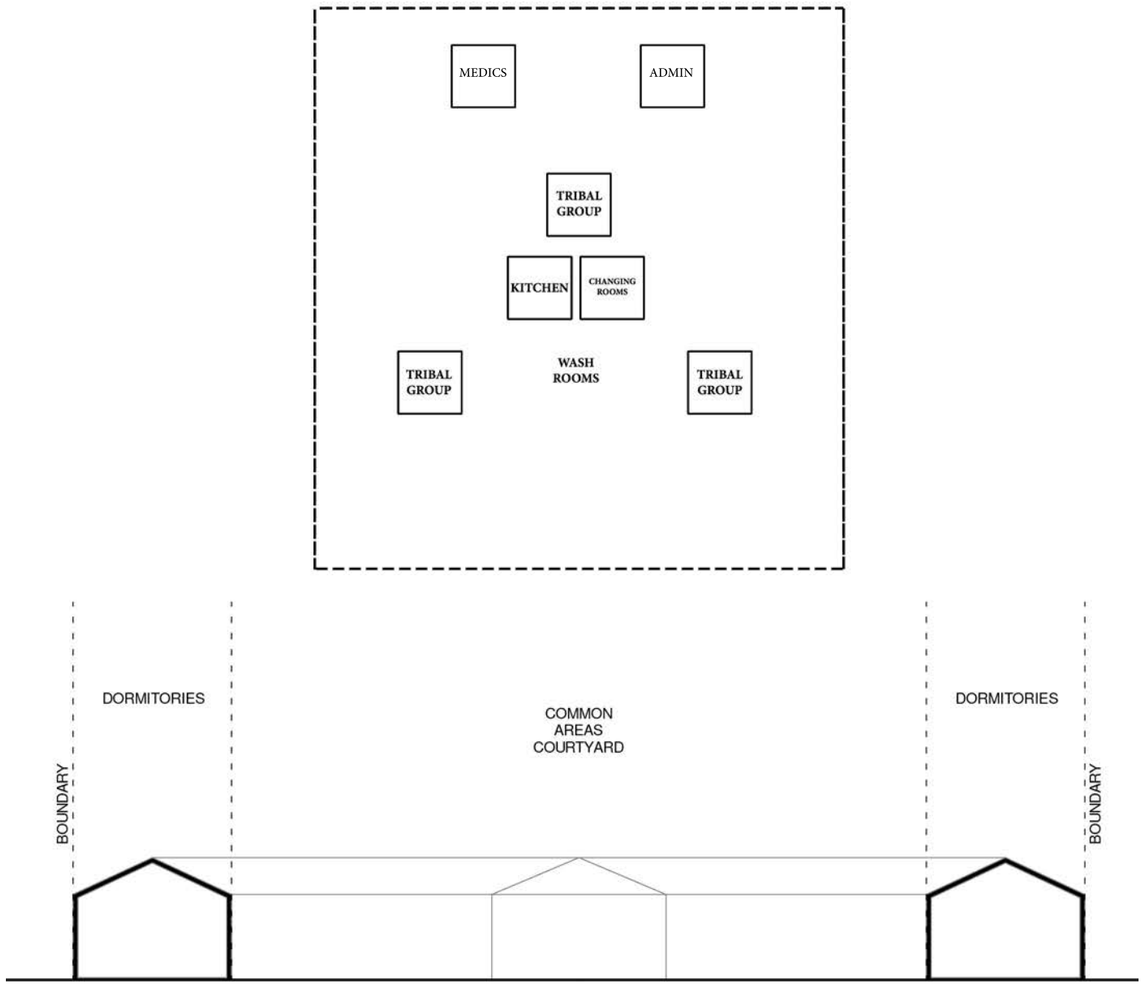


Hostels along the Witwatersrand were initially prison labour camps. Some of the design of these hostels are identical to prisons in SA.

Figure 2.2 G.M compoud diagram (Author 2021)

Chapter 2
Hostel Analysis

Hostel Plan_Courtyard Spaces



Hostel Section_Courtyard

Figure 2.3 G.M compoud section (Author 2021)

The migrant labour system was invented to provide cheap labour in and around South African cities, most commonly in mining cities where labourers had to temporarily live in housing (hostels) designed to control labourers beyond the scope of their mining work. Within these compound labourers were split into different language groups to limit integration and unity between the indigenous people. This exercise was done for the purposes of identifying incarceration typologies.



Figure 2.4 Robenson G.M compoud (Museum Africa Johannesburg)

Chapter 2

History of incarceration in SA

Their prison philosophies were based on punishment and labour which has had an impact on the approach to its architecture that is purposely designed to oppress visually and in its function. “During the implementation of the bill of rights in 1993 the philosophy of incarceration was revised regarding the treatment of prisoners and standard prison conditions which then led to the introduction of the Correctional Services Act 111 of 1998 which took the human rights bill into consideration in the South African government was pressured by the white state to turn in evidence that suggests that South African prisons are in decent condition proving its democracy internationally “(Rudolph Jansen and Emily Tendayi 2011) . An example of one of these prisons that were used to substantiate claims of modern prisons within the country is Victor Verster prison in Paarl built in the late 1960’s. In the publication Victor Verster Prison Complex,1967, by “Prisons Department, Republic of South Africa, multiple documents and photographs document the experience of the prison “(Rudolph Jansen and Emily Tendayi 2011) . “It is said that the features and design of the prison enhances the personal dignity of the prisoners by floor area, ventilation, natural and artificial light, ablution and sanitary facilities, context, landscape, and beautiful views” (Rudolph Jansen and Emily Tendayi 2011) .The documents substantiate the existence of modern prisons in South Africa. This served as proof that the South African government at the time was aware of the prison conditions required to meet international standards but not necessarily implementing these conditions on the ground (Rudolph Jansen and Emily Tendayi 2011). The international prisons standards were simply forged into documents and staged images for the purpose of gaining international approval (Rudolph Jansen and Emily Tendayi 2011) . “In 1994 towards, the end of apartheid a new prison was proposed by the apartheid government which was still in charge of the management of correctional facilities for the town of Malmsbury using plans previously commissioned for prisons in Goodwood and Porterville. The architects commissioned for the job sent the department of public works at the time a list of design considerations regarding the plans that were commissioned and the proposed site Malmsbury as they feel that the scope of the design and commissioned plans was inadequate to produce a humane prison of modern international standard”(Rudolph Jansen and Emily Tendayi 2011) .

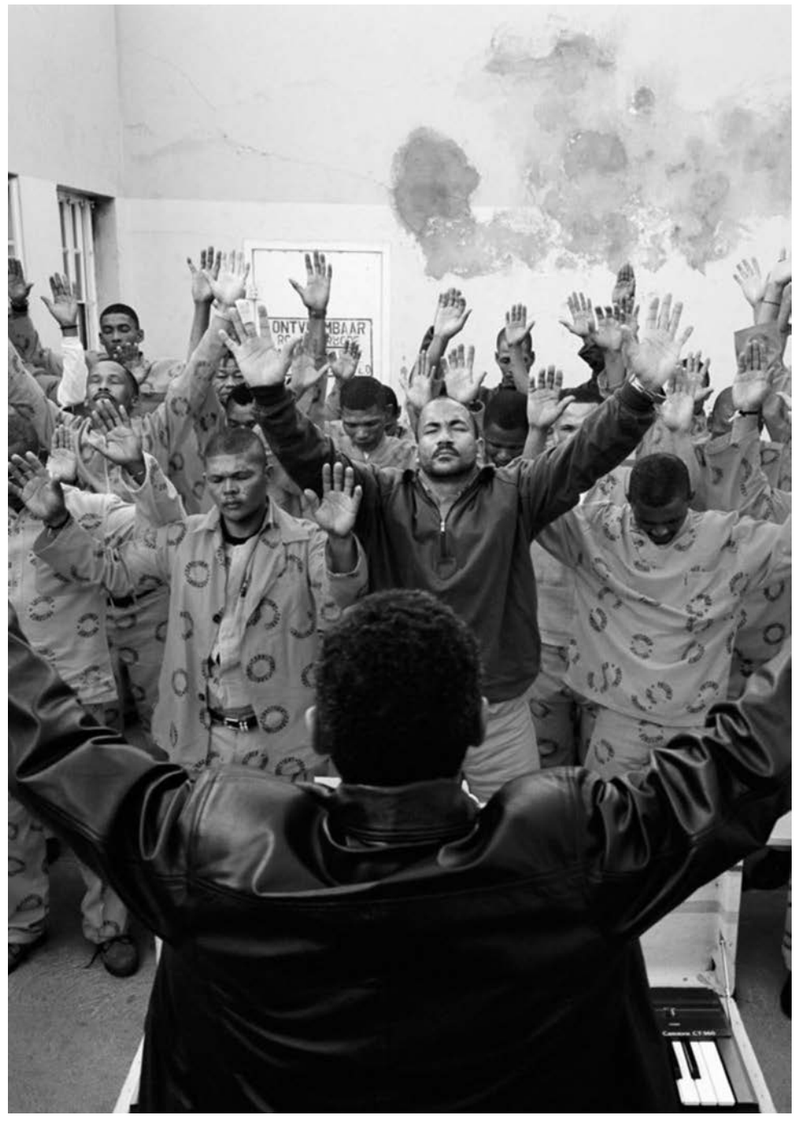


Figure 2.5 Sunday church service,Beaufort West. South Africa. Mikhael Subotzky 2006

Chapter 2

History of incarceration in SA

This is one of the few attempts from post-apartheid in South Africa to reform prison without the influence of previously built prisons in the context. Historically South African Prison forms followed the laws of contemporary prison design over 3 generations namely the Radial and Telephone pole-type prisons popularly used since the 18th century (Robin Evans 1982). These two styles of prison designs are adopted in most south African prisons as it allowed the warder to walk along long corridors to monitor prisoners, this layout required the warder view each cell individually from several different positions in the corridors, these prisons were well designed therefore one could believe issues in prisons often involve warders. Richard Werner talks about “issues in Malmesbury prison experienced regarding prison use were caused by the lack of experience and training in warders using the prisons architectural integrity as intended in design because of its newness”(Richard Werner 2011). “The department developed a new philosophy for the ambitions of Correctional Services in South Africa, the department has set out structures to turn prisons into institutions of rehabilitation and the promotion of corrections as a societal responsibility “(Richard Werner 2011).

Figure 2.5 is an image of prisoners in the western cape practicing worship in a regular room. The diagrams breakdown Islamic prayer rooms due to the incorporation of rituals into the design of the rooms.

Islam prayer room process

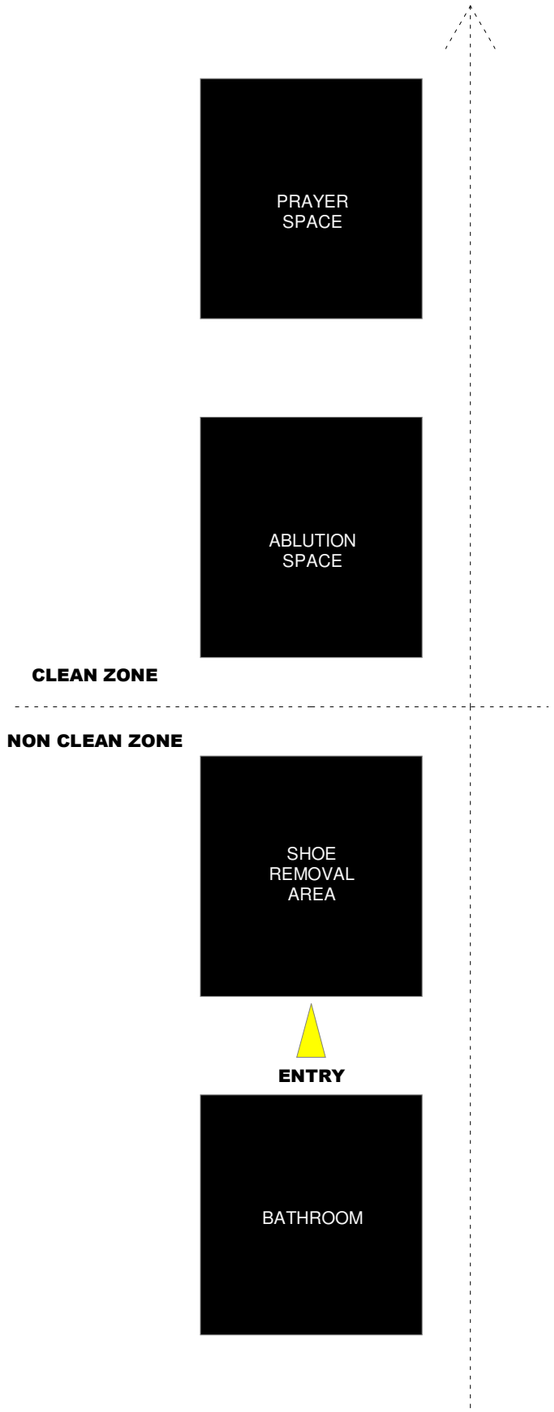


Figure 2.6 Islam prayer room diagram(Author 2021)

Islam prayer room

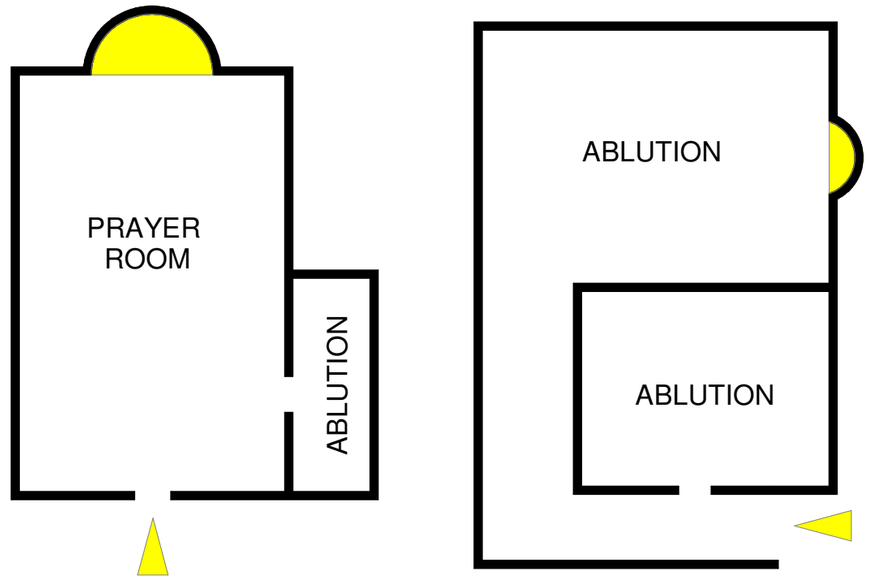


Figure 2.6.1 Islam prayer room plan(Author 2021)

Chapter 2
Medical housing

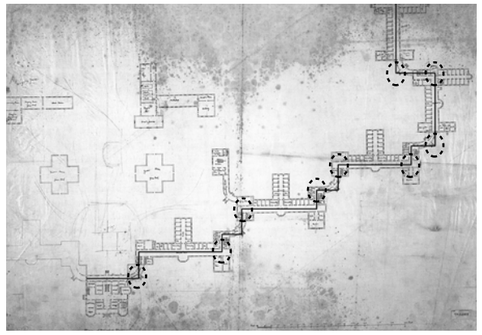
Mental and physical illness may occur from prolonged exposure to "negative architecture" which exists in most African societies. There are instances in African society where colonization has been built with the sole purpose of dis empowering indigenous people. Architecture is said to be a massive variable in the healing processes of those who are mentally ill. The contemporary hospital has managed to departmentalize itself, allowing for different typologies to exist within the different specialties of the medical professions. Therefore, diagnosis and treatment can be more focused. "The Architecture of madness demonstrates that nineteenth century psychiatrists considered the architecture of their hospitals, especially the planning, to be one of the most powerful tools for the treatment of the insane"(Carla Yanni 2007). For centuries architecture had been used as a supplementary healing aid in the medical field. Hospitals and mental asylums were designed with the intention of curing of insanity and illnesses through planned layouts, natural lighting, and ventilation. However, these approaches to illnesses using architecture were not necessarily successful as they lacked specificity which in turn led to the testing of alternative methods such as art and therapy. In recent times, psychiatric hospitals & clinics carry out the functions previously carried out by mental asylums. These spaces are often designed to treat people with mental illness ranging from anxiety disorders to psychoses . "Any obstacle in our environment requires extra energy from us" (Kate Johnstone & Evangelia Chrysikou, 2020). When we are well and active this is manageable, when we are ill it is more difficult to overcome such obstacles, as we need to draw on resources (Kate Johnstone & Chrysikou, 2020). "Designing spaces according to people's perception and physiology, and therapeutic best practice, is the essence of therapeutic architecture" (Johnstone & Chrysikou, 2020). "It involves using the environment to be restorative and support health and wellbeing "(Kate Johnstone & Evangelia Chrysikou, 2020). Besides the incorporation of natural elements, the solutions for creating architecture to aid in recuperation from illness may also be in the seamlessness of architectural design through physical elements that inform materiality and circulation. Other contemporary solutions for therapy in architecture often involves recreational based solutions such as sports and wellness centers, bath houses, museums, parks, and landscape architecture. Context plays a critical role in decision making regarding appropriateness which eventually informs the architectural design. "Environmental Determinism is the idea that the environment, including architecture, shapes behavior has been called environmental determinism, and it remains a concept, however elusive, in architectural discourse today" (Esther Surgihto 2016).



Figure 2.7 Asylum photography (Carol Hardijzer 2017)

Chapter 2
Medical housing

In the case of asylums, nineteenth-century thinkers clearly believed the environment could not only influence behavior but also cure a disease (Carla Yanni 2007) . The role of the environment in medical, social, and spiritual institutions is imperative to our existence. Figure 2.8 is a sketch of Buffalo State Hospital for the insane by H.H. Richard which demonstrates the use long passages and symmetry allowing light and ventilation through-ought the building which is said to assist in the processes of healing.



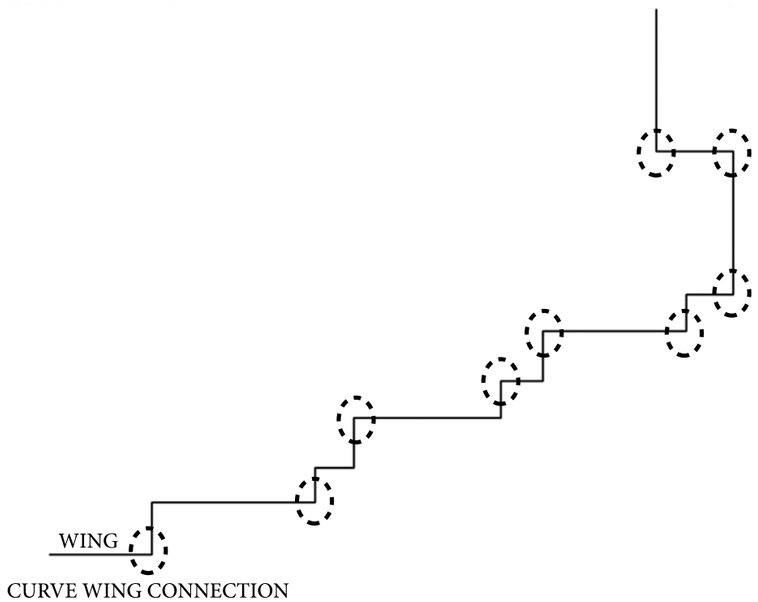


Figure 2.8 Sketch by HH Richard diagram (Author 2021)

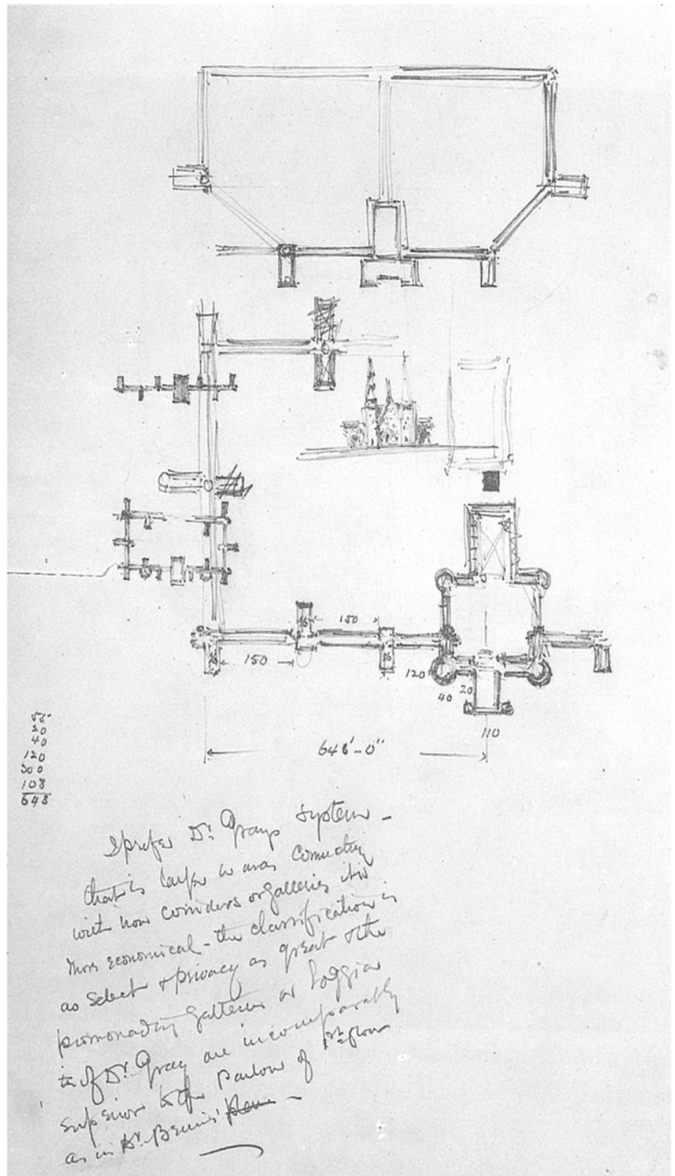


Figure 2.9 Sketch by HH Richard (Carla Yanni 2007)

Chapter 2
Social housing

In South Africa, where racial classification is reflected in the landscape and proximity to resources, architecture was further used to racially divide and disenfranchise the majority. In many ways it assisted in the generation of resources for minorities, great examples of this are mining towns, hostels, prisons, and townships. Although there is a logical case for the existence of prisons, financial implications are also considered. Prisoners are subjected to free labour for large corporations while serving their sentences. In the book Social, housing South Africa by Astrid Wicht, which talks about how In South Africa the coloured and Indian areas provide a buffer strip between the white and African communities (Astrid Wicht 1999). "The African townships are located on the periphery of the city. 35% of people are housed in informal squatter settlements, 34% in site and service schemes, and only 31% are adequately housed" (Astrid Wicht 1999). High numbers of crime in the Gauteng area are economically motivated, second to that are crimes related to violence, this could be due to multiple factors which require knowledge on socio-political South Africa. Going forward South African architecture will need to constantly weigh in factors of apartheid past to ensure that some sort of architectural decolonization is happening, to reverse the effects of architectural colonization. This means that the design of prisons/schools/hospitals and other public services institutions will have to do away with the "1 size fits all" approach and employ context specific methodologies when designing institutions. In the book Social Housing in South Africa by Astrid Wicht it was discovered that household occupancy rates range between 5 to 8 people."Extended families lack privacy, and coupled with overcrowding, it creates volatile living conditions" (Astrid Wicht 1999). Overcrowding in prisons is no cultural shock to individuals that have been subjected to life in townships and informal settlements, the two institutions face similar problems, overcrowding, violence, crime, and economy in the sense that the value of materials change within these environments. In less tangible ways the township breeds a toxic mentality to those who reside within it. The same could be said about an individual who has been previously incarcerated. The narrative behind high recidivism rates is largely linked to gang culture, it is said that once you're in a gang you must kill or get killed to get out, a sacrifice must be made. The parallels between the two worlds makes the experiences similar in a lot of ways therefore one's background has to be investigated thoroughly in order to invest in appropriate rehabilitation solutions. In the book Social Housing in South Africa by Astrid Wicht which talks about the "Masakhane campaign to change the mindset of Non-payment for rates and services due to rent boycotts, a tactic of the mass democratic movement in the 70s and 80s to cripple the state" (Astrid Wicht 1999).

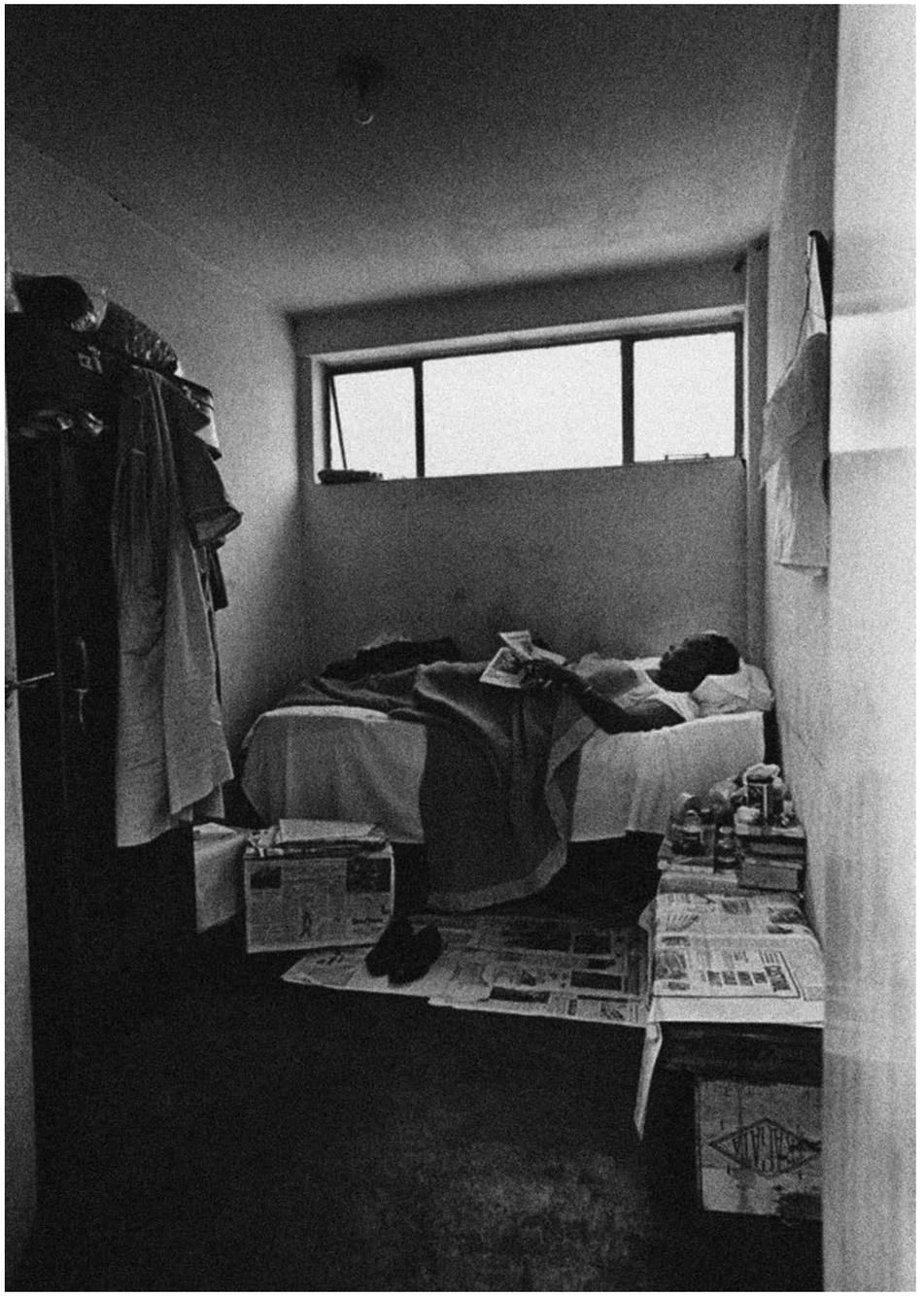


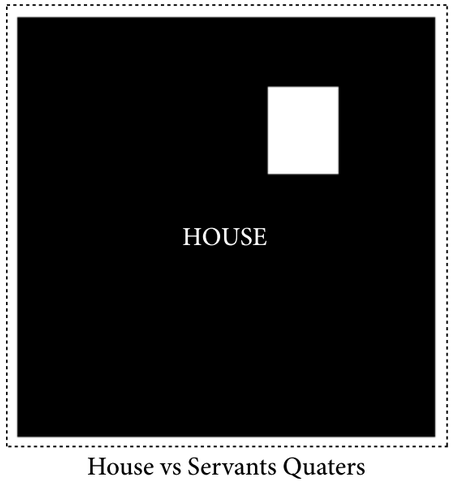
Figure 2.10 Newspapers are her carpet, fruit crates her chairs and table (Ernest Cole 1960-1966)

Chapter 2
Social housing

Hostels, Special needs housing, Urban and rural balance, Housing and the Reconstruction and Development, Consumer protection and education, Accountability, and monitoring (Astrid Wicht 1999). The implementation of RDP housing was meant to rectify the injustices in the South African economy and land distribution at the time. This low-cost subsidized housing had a lot of roll out issues and beyond that the areas occupied by RDP's lacked efficiency in the delivery of basic services, eventually RDP housing became extensions of already existing low-cost housing implemented by the apartheid government, which is contributing to an on-going overcrowding problem in townships and informal settlements. "Government has put policies and acts in place to try and rectify imbalances by setting out plans to develop subsidised low-cost housing (RDP) in post-apartheid South Africa" (Astrid Wicht 1999). Understanding the typical township can cast more light upon injustices experienced by marginalized communities, living is these communities, this often results in a life of crime and violence. When it comes to creating special provisions for people in prison on their rehabilitation journey, one needs to take their backgrounds into account. A unique form of social housing has developed as a result of mine workers needing accommodation nearer to work, in the collapse of mines and mining companies' hostels remained and were eventually adopted by the next generation of mine worker's families.

House vs Servant's Quarters

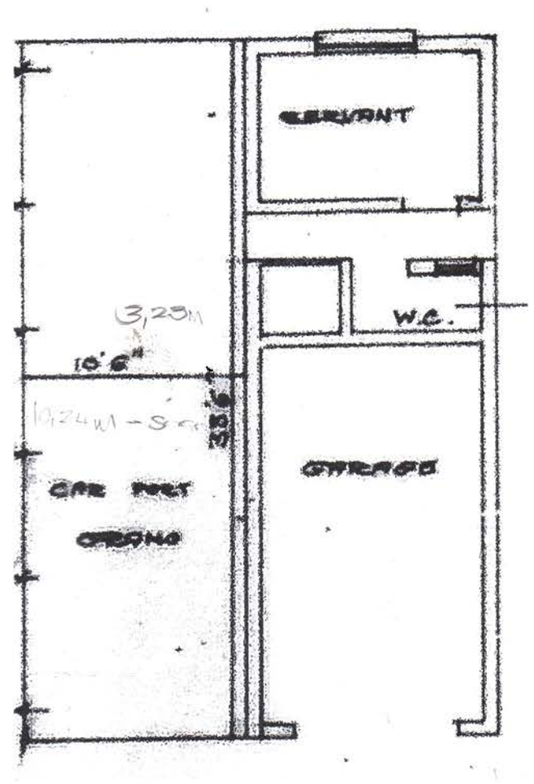
Dormitories have now become family units resulting in overcrowding which would eventually lead to problems in the hostel regarding living conditions and quality of life. Other forms of institutional housing such as schools/boarding schools were also designed with intent to marginalize the indigenous people of South Africa. Again, we see overcrowding when it comes to marginalized communities. This was the "to go to" architectural weapon of oppression with the intention of breeding mentally & physically ill members of society.



House vs Servants Quaters

Figure 2.11 Back-room diagram (Author 2021)

Servants room in Krugersdorp home



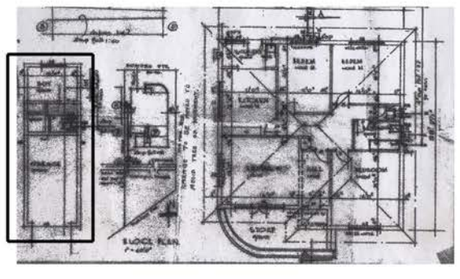


Figure 2.12 Hompes street krugersdorp Back-room diagram (Author 2021)

Chapter 2
Spiritual housing

In the book African spiritual phenomena and the probable influence on African family's author Johannes Knoetze says, Spirituality is not always religious but is always concerned with the quest for meaning of life. "When such a quest involves an explicit reference to God or the Divine, then that spirituality is religious" (Johannes Knoetze 2019). Spirituality is relative, different ethnic groups define or practice spirituality in different ways hence it is imperative to take one's background into account when understanding spirituality. For the purpose of my research, I will primarily be looking at practices in African spirituality due to the fact that majority of the subjects in consideration are of African origin, other ethnic groups make up plus minus 10% of the prison population. Architectural examples of African spirituality are rare in a contemporary setting, one has to refer to ancient temples and churches, to further supplement architectural ideas of spirituality into a parolee's rehabilitation model. This will require a democratic approach to spirituality. The second most practiced form of spirituality in Africa will be investigated. I will be looking into African spirituality which can be interpreted as modern day African Christianity for practices and function alongside Islamic Mosque architectural solutions for form given their strong presence on the African landscape. Author Johannes Knoetze stresses that there is not just one single African spirituality, although many of the characteristics of the African spiritualities are alike, but it may have different interpretations. If genuine, they respond to changing needs and perceptions of reality. "Religious assumptions are always in historical flux, integrating elements from outside, reacting to new experiences" (Johannes Knoetze 2019). The integration of external elements into different spiritualities is an indicator that spirituality is constantly changing and readjusting itself, the differences are witnessed over long periods of time. This makes the concept of spiritual unity viable given that spirituality is open to influence and growth. To accommodate as many African spirituality groups as possible I will identify the most common shared practices between the groups such as prayer, worship, and repentance. This unison of spiritualities should not take away from the individualities of each spiritual group therefore some isolated options should be accommodated too. Author Johannes Knoetze explains how "Africans make use of intermediaries in the form of ancestors during worship". Therefore, worship, which is described as prayers, sacrifices, offerings, singing and dancing, is focused on pleasing or contacting the intermediaries or ancestors, or the invisible or spiritual world (Johannes Knoetze, 2019). The Pretoria Central Prison (Kgosi Mampuru) is known for offering decent educational programs, rehabilitation programs, therapy related to crime and spiritual programs however most these programs do not go into architectural depth for example the same multipurpose rooms are used for different purposes therefore limiting the experience.



Figure 2.13 Traditional healers of southern, central and east Africa perform holistic and symbolic forms of healing (Hayden Philips 2021)

Chapter 2
Spiritual housing

Different rituals and ceremonies require different space consideration and design. The practice of communicating with ancestral linage to gain access to higher powers is a central belief in African spirituality; most rituals involve communication with ancestral linage although the rituals may differ. The similarities between Islam and African spirituality lie in many rituals such as prayer, worship, sacrifice, fasting, circumcision, polygamy etc. In the article Power of the blood author William Hual explains sacrifice: "They bring chickens, goats, sheep, donkeys, cows, and even dogs to sacrifice— offerings to carry favour in their search for fertility, stability, prosperity, and security in life " (William Haun 2021). "Others sacrifice were created to make amends for evil acts and to reverse the negative consequences of sin or curse" (William Haun2021). Sacrifice plays an imperative role in most traditional African belief systems. It is highly common to practice sacrifice to communicate with higher power. It has a sense of repentance or the beginning of a new life, like baptism which is popular in Christian groups. Other commonalities in African spirituality are found in the key elements of church/ temple design, such has an area for prayer and worship, an area for preaching and an area for communal gathering. Most African churches exist with the bare minimum when some sort of financial stability is established

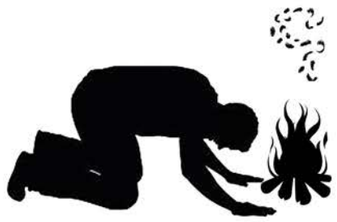
Initiation Ceremony
(to become a sangoma)



Potential Sangoma
Chicken above head and between arms



Potential Sangoma
drinks contents of gall bladder from sacrificed chicken



Potential Sangoma
is grounded by the burning of herbs and the singing of fellow sangomas

Figure 2.14 Sangoma initiation diagram (Author 2021)

African Spirituality (Thwasa)

Corruption and greed becomes the enemy of progress. "In the article An Architectural Reading of Mystical Ideas author Samer Akkatch says that Islam opposes the production of art works and architectural designs that depict figures of animals or human beings. According to Islam, all living creatures with the ability of locomotion fall in the domain of God and should not be replicated in any form such as art" (Samer Akkatch 2005). Modern day Africans today practice either Islam or Christianity. Unlike traditional African religions, these religions are similar, in that they both believe in one God. The religions began out of Africa and spread throughout the continent. African spirituality is associated with the concepts of mind, body, soul, earth, and astrology often the symbolisms represent these concepts, which are closely linked to geometry and mathematics. The two religious roupsmay complement each other in the way that they both have relationships with geometry, repetition, and storytelling through art.



Figure 2.15 Chicken sacrifice and dream medicine (Corinna Kern 2017)

Chapter 2
Spiritual housing

The practice of communicating with ancestral linage to gain access to higher powers is a central belief in African spirituality; most rituals involve communication with ancestral linage although the rituals may differ. The similarities between Islam and African spirituality lie in many rituals such as prayer, worship, sacrifice, fasting, circumcision, polygamy etc. “They bring chickens, goats, sheep, donkeys, cows, and even dogs to sacrifice—offerings to curry favor in their search for fertility, stability, prosperity, and security in life (Samer Akkatch 2005).

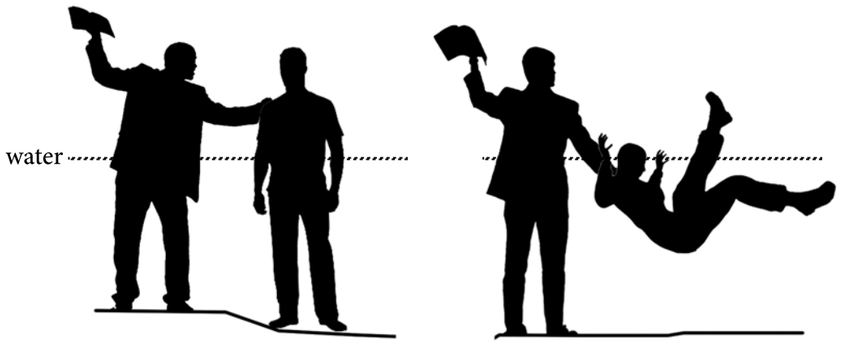


Figure 2.16 Mass baptism diagram (Author 2021)

Baptism Process

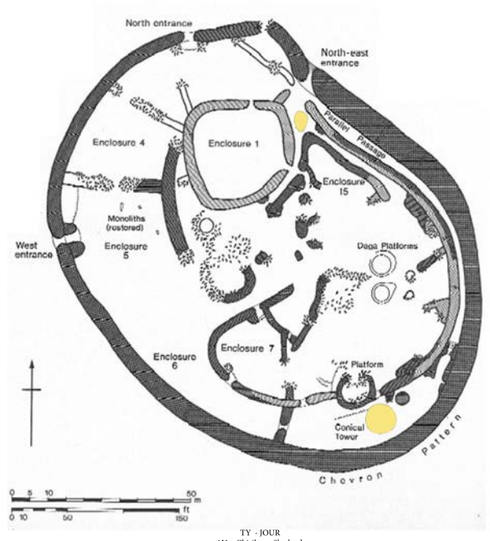
Baptism is a process whereby members, usually infants of the Christian community are cleansed of sin by water. Often higher members of the Christian faith push members underwater for a few seconds while praying in tongues. The initial inspiration for the proposed thesis derived from the process of baptism which meant that the architecture may need to translate these ideas using water features .



Figure 2.17 Mass baptism (Greg Marinovich 1998)

Chapter 2
Spiritual housing

According to Shadrack Chirikure the author of Inside and outside the dry stone wall, the Conical Towers based in the Great Zimbabwe ruins are known all around the world for innovation, construction and building technology at the time (Shadrack Chirikure & Innocent Pikirayi 2008).”Evidence proves that the area of the Great Zimbabwe Ruins was utilised by the indigenous people (Shona) for trading with countries across the Indian ocean” (Shadrack Chirikure & Innocent Pikirayi 2008).”The ruins have been linked to astrology , according to simulations in the book South African Cosmogenic Geo mythology(following a star_The Zion Christian Church by author Richard P wade on the 24th of January the start supernova remnant RX J0852.0-4622 aligns with the conical towers making the apex of the tower appear to be flat” (Richard Wade 2014).



TY - JOUR
AU - Chirikure, Shadreck
AU - Pikirayi, Innocent
PY - 2015/12/01
SP - 976
EP - 993
T1 - Inside and Outside the Dry Stone Walls: Revisiting the Material Culture of Great Zimbabwe
VL - 82
DO - 10.1017/S0003598X00097726
JO - Antiquity
ER -

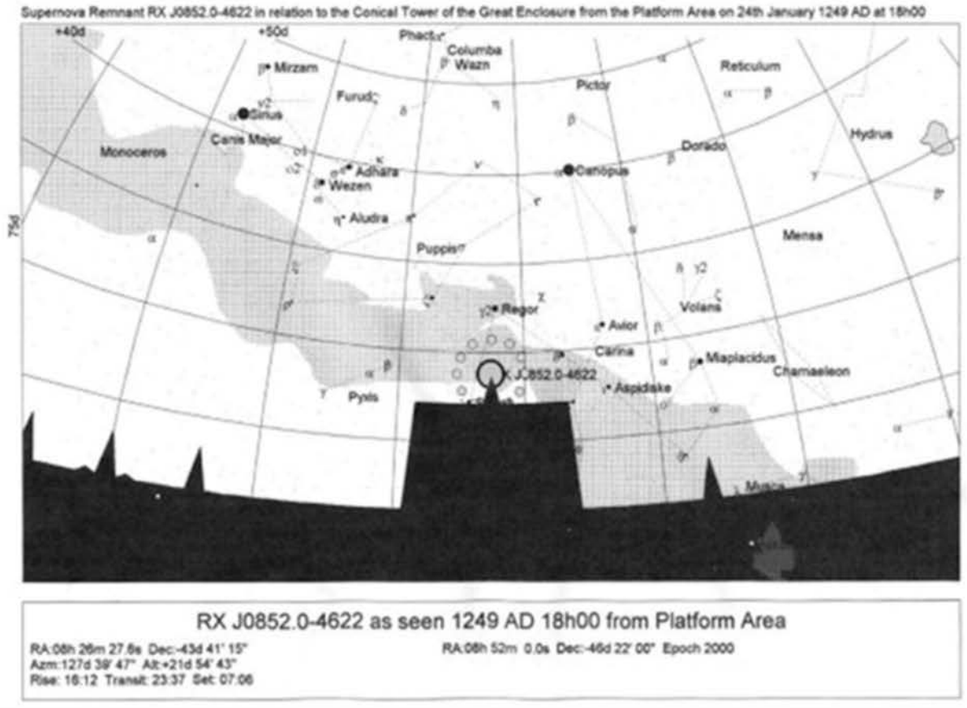


Figure 2.18 Inside and Outside the Dry Stone Walls (Shadreck Chirikure 2015)

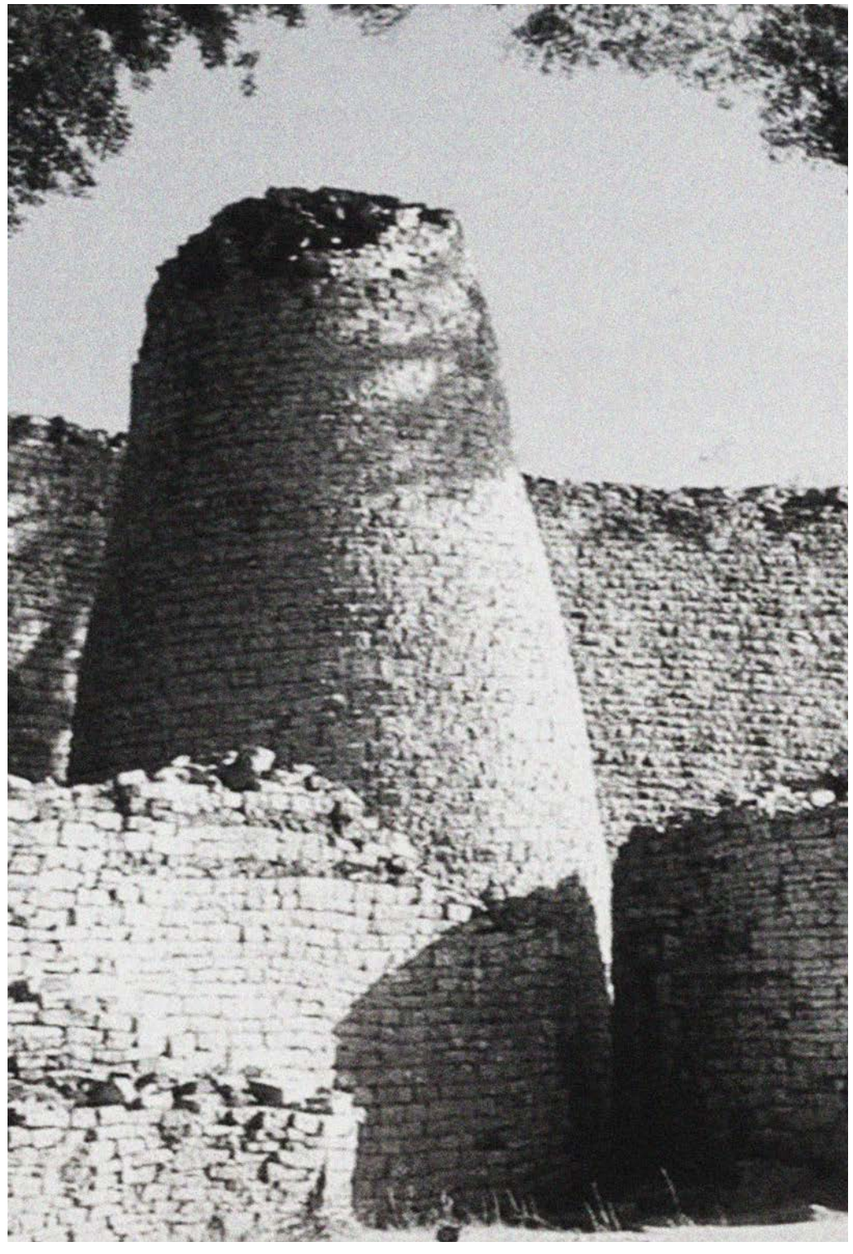


Figure 2.19 Inside and Outside the Dry Stone Walls (Shadreck Chirikure 2015)

Chapter 2
Spiritual housing

The crucifix form of the Christian chapel is derived its meaning from the life giving cross. "South African architect Moerdijk believed that the Dutch Reformed Church needed its own unique style given its South African context.



Illustration 13. Seal of the NGK, ca 1885.

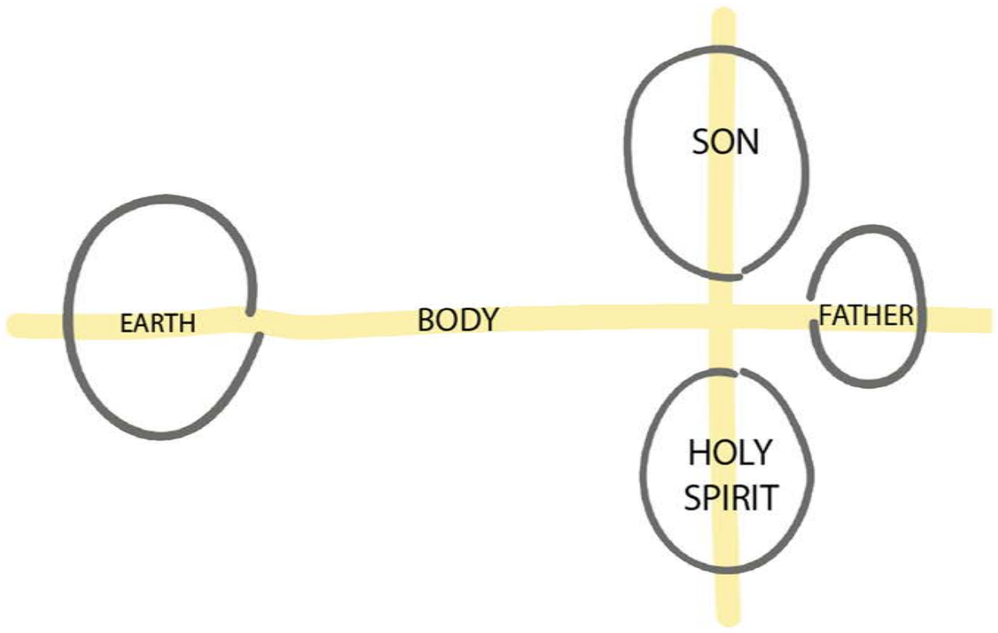


Figure 2.20 Reformed Dutch Church diagram (Author 2021)

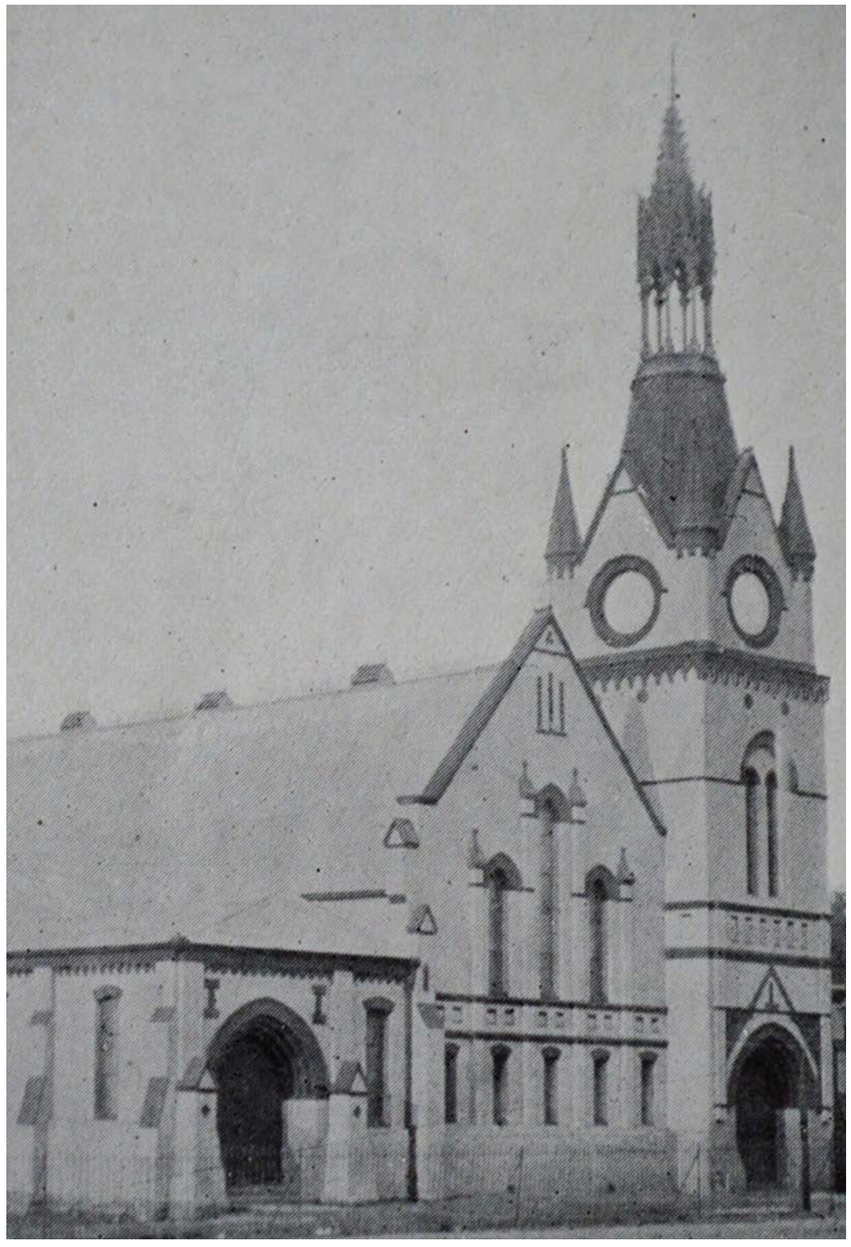
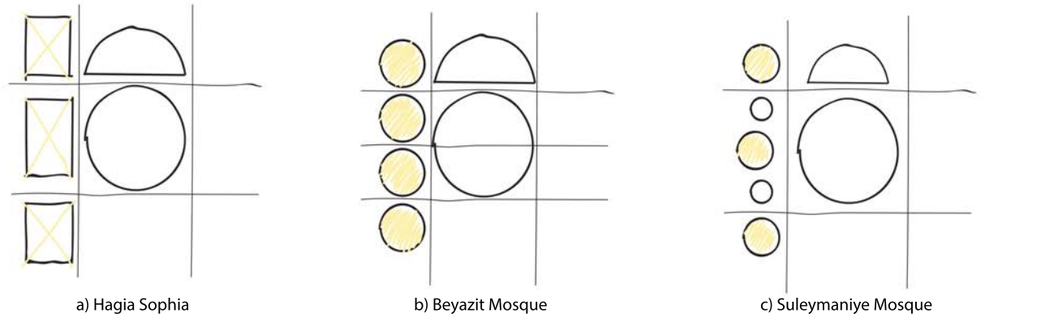


Figure 2.21 Die kerkgebou omstreeks (FOTO: GGSA

Chapter 2
Spiritual housing

The Nizamiye Mosque in Midrand is the largest Muslim mosque in Southern Africa, it is able to host 6000 worshipers. It has been referred to as “Istanbul to Johannesburg” because of its striking resemblance too Selimiye Cammi Mosque in Istanbul built in the 16th century. In the publication God in the details author Lisa Van Wyk talks about “the breath taking details and elaborately decorated prayer dome. The tiles in the ceiling take on intricate geometric shapes developed using mathematics and hand painted finishes. Muslim mosque architecture is highly expressive and celebratory” (Lisa Van Wyk 2012).



Layout plans and arch positions of a) Hagia Sophia, b) Beyazit Mosque, and c) Suleymaniye Mosque

Figure 2.22 Mosque ceiling diagram(Author 2021)



Figure 2.23 Welcome-Nizamiye Mosque, Andrew Moore 2019

Chapter 2
Environmental determinism

In the online article Architectural determinism by blogger Esther Sugihto Architectural determinism also known as environmental determinism is described as the effect of architecture on an individual's behavior (Esther Sugihto 2016).This phenomenon can be seen as a desired result in numerous architectural style post 1956, however human behavior is not solely based on the environment and architecture, there are other contributing factors such as the psychological and emotional well being of an individual. Therefore environmental determinism is one of many contributing factors for positive or negative behavior in individuals. In the case of individuals having experienced negative architecture perhaps architectural gestures or design features that oppose "negative architecture" can contribute positively to an individuals behavior. This idea is valid under the conditions that individuals experiencing a particular space are from an environment where negative architecture and the experiences that come along with it are promoted such as prison environments, this suggests that environmental determinism is understood relatively, ones previous experiences in different environments will dictate positive and negative environmental determinism. Ester Sugihto writes about the panopticon prison arrangement by Jeremy Bentham and how that system of surveillance can reduce fear levels in a prison environment (Esther Sugihto 2016). This gesture proves that significant architectural adjustments in specific environments can have a positive effect on the behavior of the people. Jeremy Bentham introduced the idea of radial surveillance where one prison guard can see into every prison cell. This could be a matter of privacy, one guard looking at your cell can lead to a greater level of privacy which inturn gives a prisoner a greater feeling of freedom and dignity. In designing a rehabilitation space supplementing Krugersdorp correctional facilities for potential parolees one needs to indirectly take environmental determinism into account, Esther Sugihto suggests that architectural determinism should be viewed less as an absolute methodology for design, but rather an awareness of the potential affects on our behavior in space .

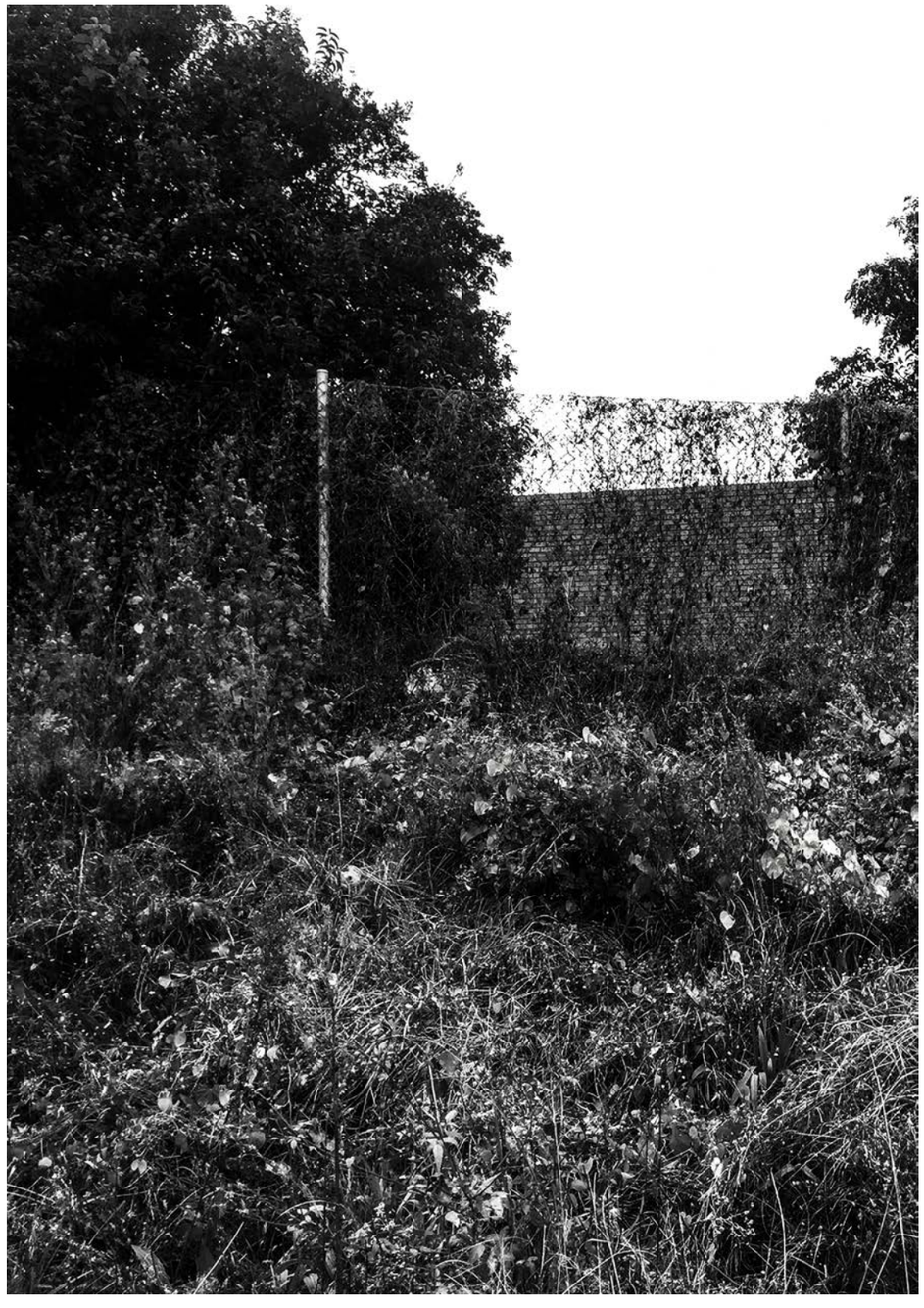


Figure 2.24 Trees on site image (Author 2021)

Chapter 2
Conclusion

Medical housing for a variety exists to assist in the recovery of the ill, contemporary architecture is sensitive to the fact that different diagnosis/treatments require different architectural solutions, specificity in solutions is imperative therefore specific diagnosis and treatments will be taken into account when imagining the parole solution. Social Housing is more about the consideration of the spaces where parolees are originally from versus the spaces in prison versus the spaces that are meant to heal them from exposure to previous spaces "negative architecture." In this exercise colonization and decolonization need to be thoroughly investigated in context. By identifying spiritual processes one can then start to incorporate these into architectural elements that will support these activities in a way that churches and temples have previously done essentially creating a universal church for parolees that offers multiple religious and traditional practices for Africans. Once all these aspects are in place one can assume architectural determinism based on the behavior of individuals having experienced spaces that are meant to contribute to positive behavior. In combining all these typologies I hope to achieve a "diversely inspirational utopia" A world that will give those previously marginalized a sense of hope and self-worth.

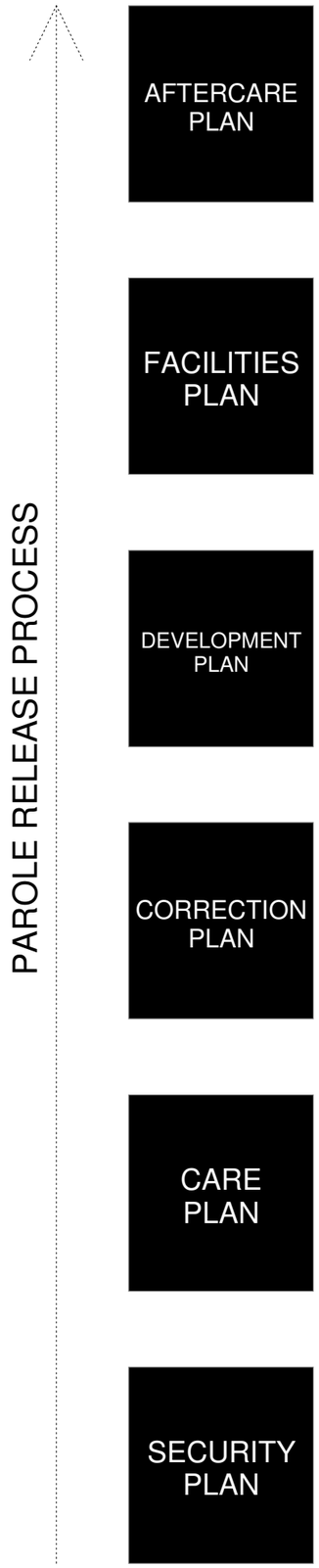
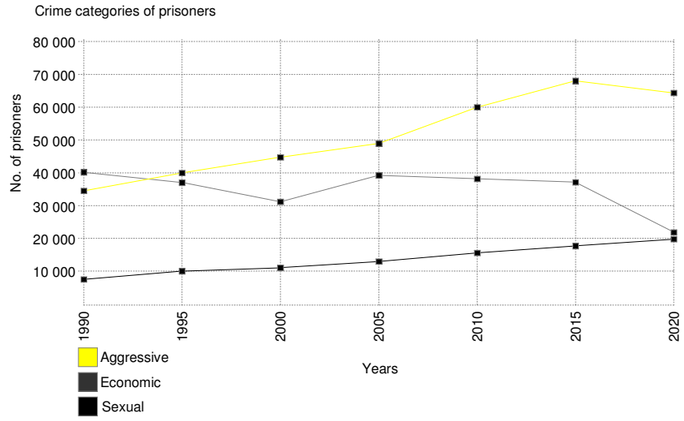
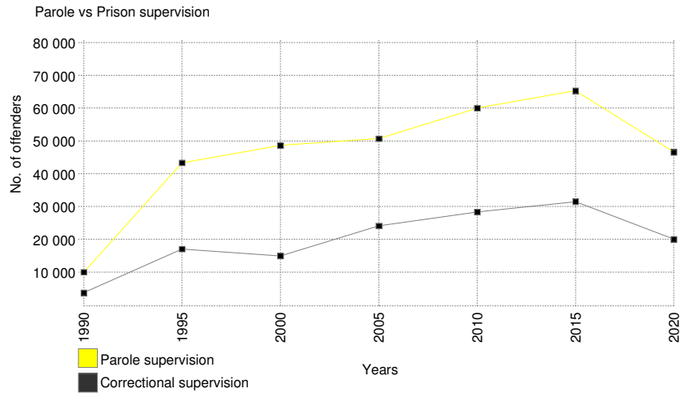


Figure 2.25 Incarceration processes (Author 2021)

Chapter 2
Conclusion





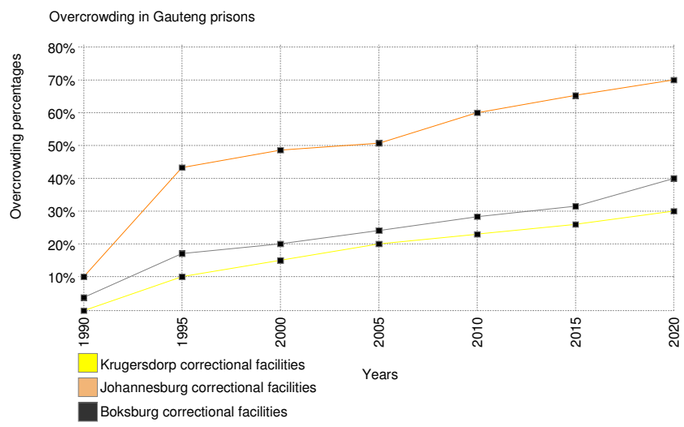


Figure 2.26 Prison stats SA (Author 2021)

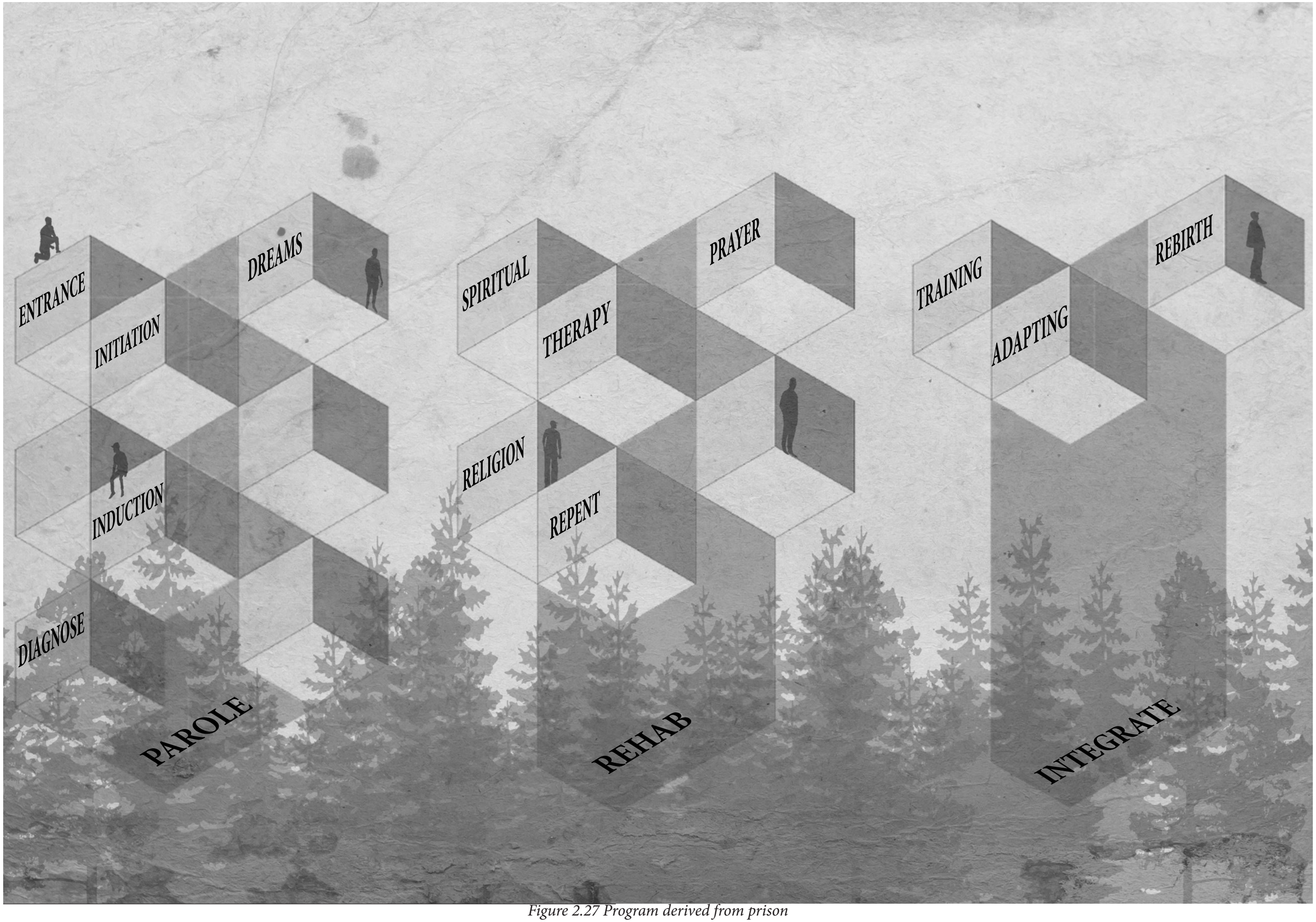


Figure 2.27 Program derived from prison overcrowding diagram (Author 2021)

CHAPTER 3

Site

This chapter documents site and relevant areas around site.



Figure 3.0 Site photo 1 (Author 2021)

Chapter 3
Mapping

Prison population split
(Gauteng, Kwa Zulu Natal, Western Cape)

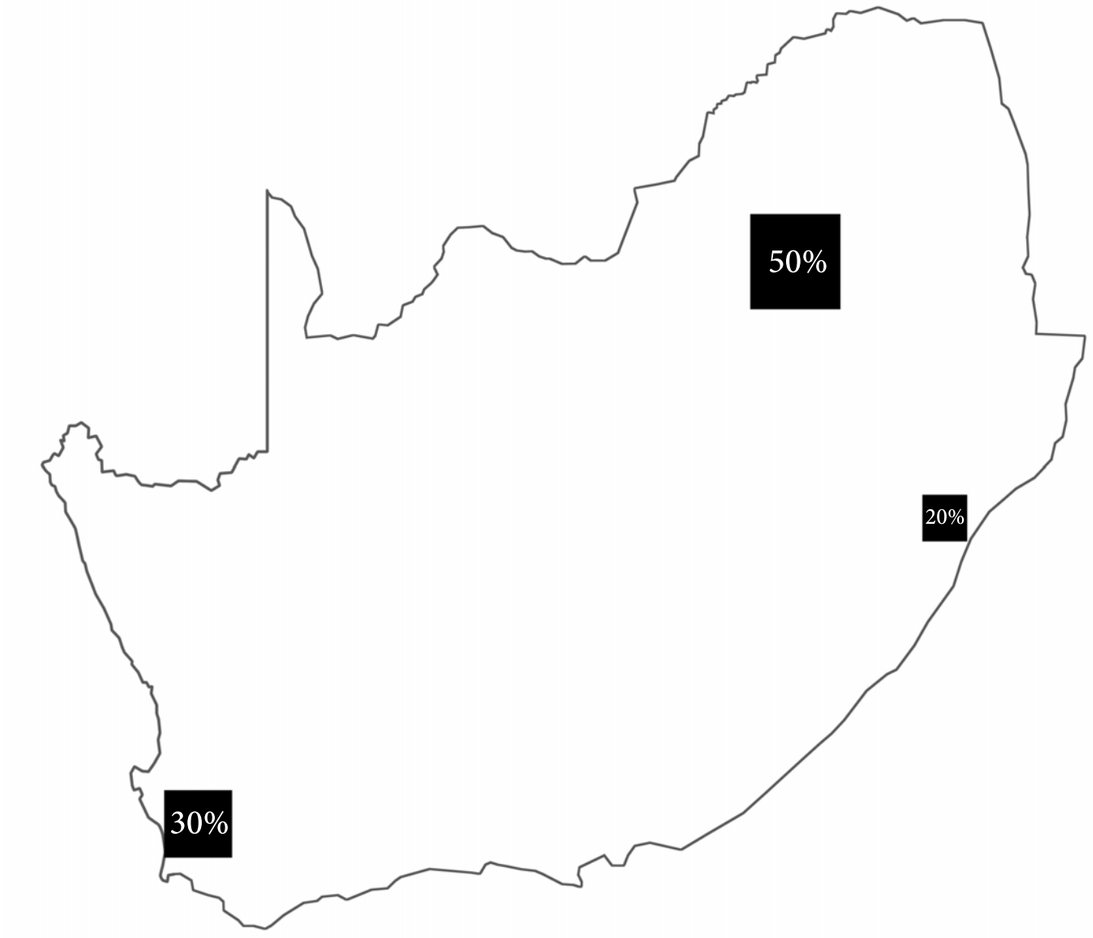


Figure 3.1 SA prison map (Author 2021)

Gauteng prisons
(In relation to Krugersdorp)

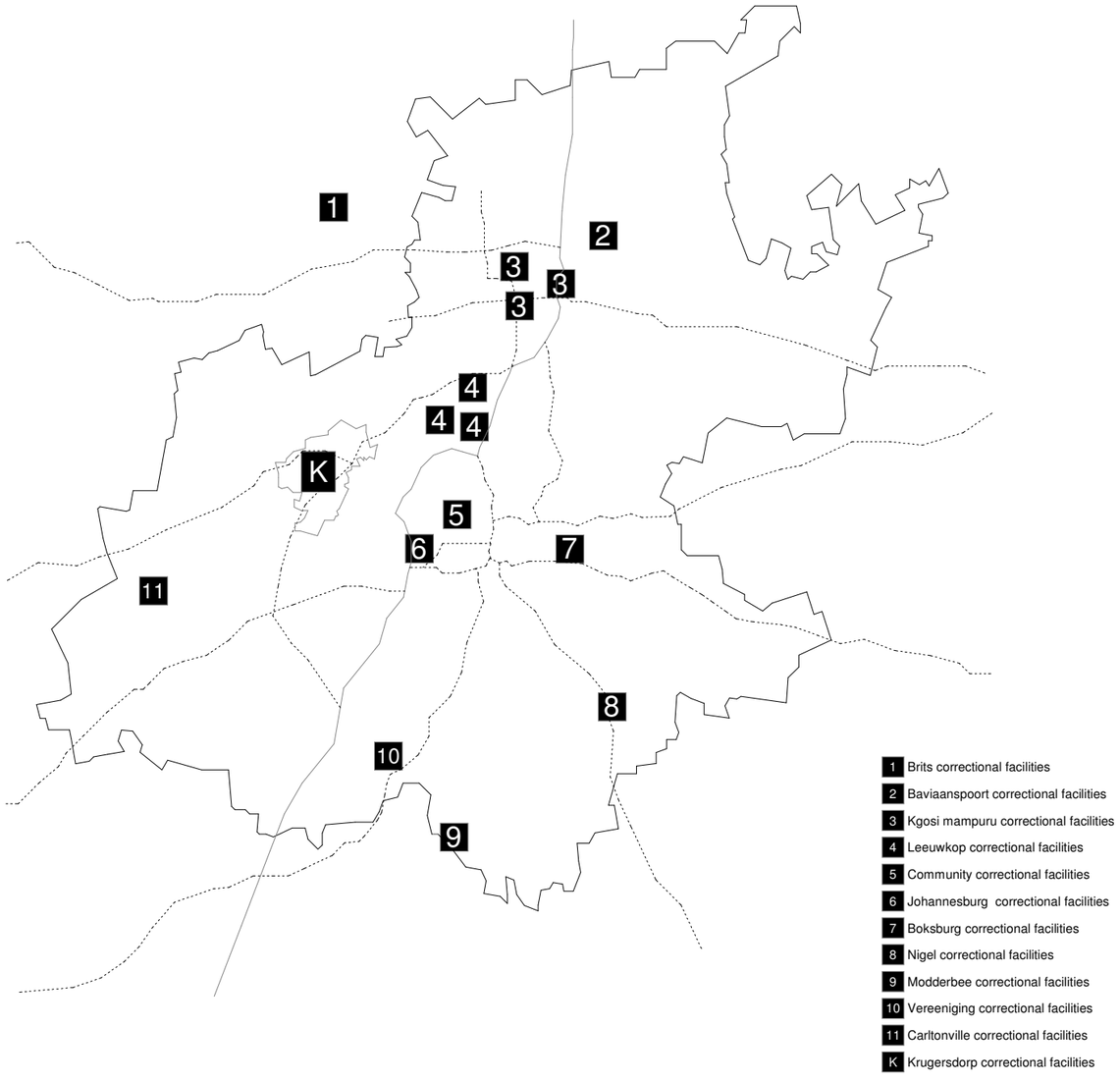


Figure 3.2 Gauteng prison map (Author 2021)

Chapter 3
Krugersdorp Correctional Facilities

Figure 3.3 Krugersdorp Correctional Facilities satellite map (Google maps 2021)

Chapter 3
Mapping

A Krugersdorp mapping exercise identifying landscape, traffic routes and water ways



Figure 3.4 Krugersdorp Overall (Author 2021)

Chapter 3
Water Mapping

Site map identifying water ways and water masses in relation to traffic routes.



Figure 3.5 Krugersdorp Waterway (Author 2021)

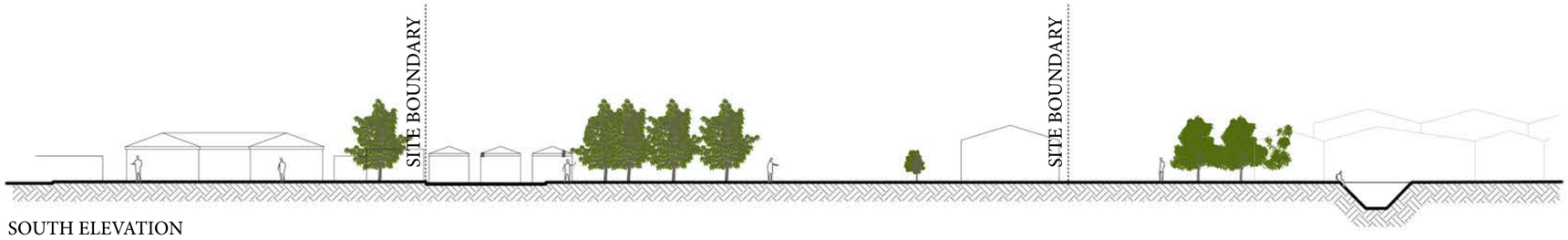
Chapter 3
Mapping

Site map identifying landscape in relation to plots/farms and train routes.

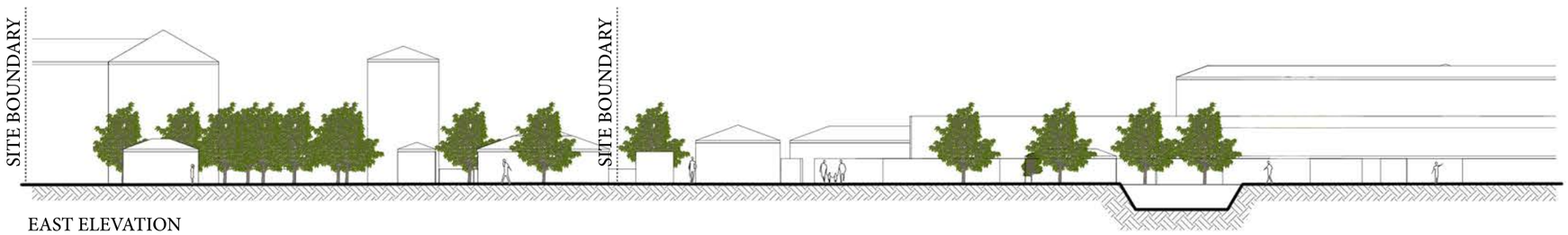


Figure 3.6 Krugersdorp Landscape (Author 2021)

Chapter 3
Site sections



SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION

Figure 3.7 Site sectional drawing (Author 2021)

Chapter 3
Site photos

Site photos facing north, west and east





North





East





West

Figure 3.8 Krugersdorp Site photos collage
(Author 2021)

Site photos (immediate context)



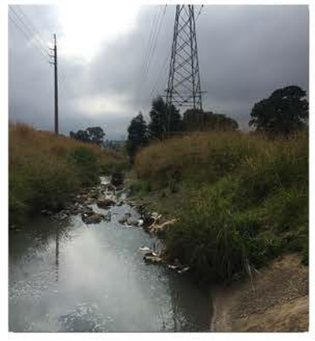








Figure 3.9 Krugersdorp Site context collage
(Author 2021)

Chapter 3

Funeral parlours and cemeteries mapping

A map identifying funeral parlours, cemeteries and morgues around proposed site.



Figure 3.10Krugersdorp Site map funeral (Author 2021)

Chapter 3

Spiritual institutions mapping

A map identifying churches and other places of worship around proposed site.



Figure 3.11 Krugersdorp Site map spiritual (Author 2021)

Chapter 3

Law institutions mapping

A map identifying courts, police stations and prisons around proposed site.



Figure 3.12 Krugersdorp Site map law (Author 2021)

Chapter 3

Medical institutions mapping

A map identifying clinics, hospitals, pharmacies and surgery's around proposed site.



Figure 3.13 Krugersdorp Site map medical (Author 2021)

Chapter 3

Overall mapping

A map identifying funeral, law, spiritual and law institutions around proposed site.



Figure 3.14 Krugersdorp Site map overall (Author 2021)

Chapter 3

Sport & Recreation Mapping

A map identifying sports and recreational activities around proposed site.



Figure 3.21 Krugersdorp Sports and Recreation map (Author 2021)

Chapter 3

Transport Network

A map identifying the transport network around proposed site.



Figure 3.22 Krugersdorp Transport network map (Author 2021)

Chapter 3

Detention

A map identifying places of detention around proposed site.



Figure 3.23 Krugersdorp Detention map (Author 2021)

Chapter 3

Significance

A map identifying places of significance around proposed site.

LEGEND

1 Mental hospital
2 Paardekral monument
3 Cemetry
4 Stadium
5 Corronation park
6 Minedump
7 Refugee center
8
9
10

200m 200m

Figure 3.24 Krugersdorp Significance map (Author 2021)

Chapter 3

Land use

A map identifying land use(cbd/suburb) around proposed site.

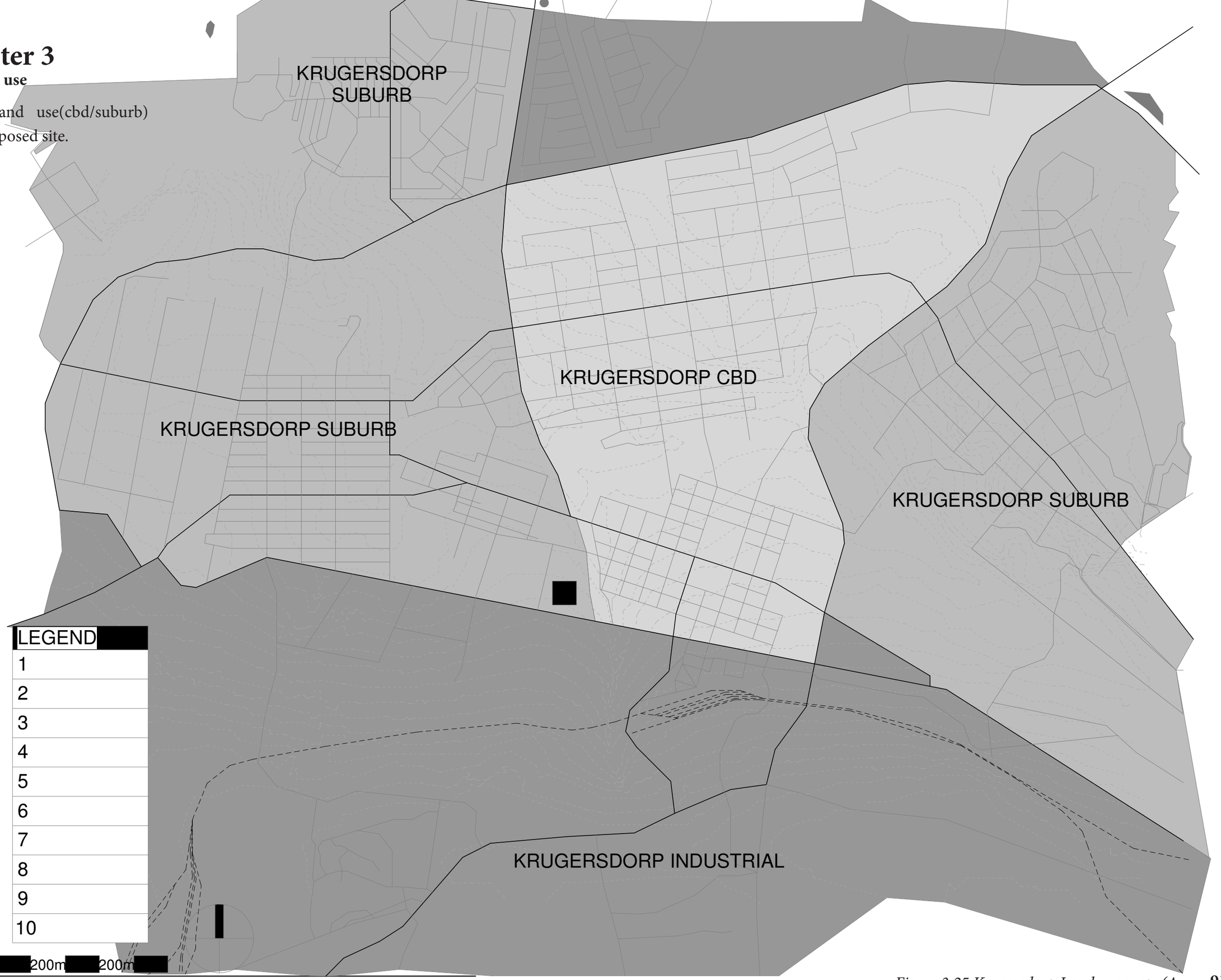


Figure 3.25 Krugersdorp Land use map (Author 2021)

Chapter 3

Churches

A map identifying Churches around proposed site.

LEGEND

1

2

3

4

5

6

7

8

9

10

200m 200m

Figure 3.26 Krugersdorp Churches map (Author 2021)

Chapter 3

Christian churches

A map identifying Christian based institutions around proposed site.



Figure 3.27 Krugersdorp Christian Churches map (Author 2021)

Chapter 3

Muslim churches

A map identifying Muslim based institutions around proposed site.



Figure 3.28 Krugersdorp Muslim Churches map (Author 2021)



Krugersdorp Correctional Facility Warder



Witwatersrand University Student



Warder introduction

I was a prison warder for 18 years, im currently a state attorney at the Johannesburg court, this is my third year here.

Question 1

What inspired you to work for Krugersdorp Correctional Facilities?

Answer 1

I wasn't inspired to at the prison, it was a job that was available to me at the time. After a couple of months into the job a began enjoying it

Question 2

What were the daily risks in being a prison warder?

Answer 2

Physical violence was the number one risk as it occurred almost daily followed by contagious illnesses. Depending on the individual you might find some experiences traumatic but i was numb to this all because of my background having been traumatic.

Question 3

What does one need in order to qualify to be a prison warder, is training necessary?

Answer 3

All you need is a matric, once qualified the department will train you accordingly.

Question 4

What is the procedure one goes through once sentenced

Answer 4

One is first registered into the prison, given uniform and then briefed on prison rules, once briefed one will be allocated a prison block according to length of sentence.

Figure 3.15 Warder interview diagram (Author 2021)



Figure 3.16 Correctional officer (Hope Prison ministry 2016)

The warder is rather desensitized to the harsh life in prison, mainly due to his up bringing in the township, therefore his answers came off rather blunt. He portrayed prison as a loud and busy place with minimum extramural activities available to the majority of prisoners. Krugersdorp correctional is described as a medium security prison, it operates decently enough in comparison to other prisons around the province, however overcrowding is still a stand out issue among other issues mentioned in thesis.

Chapter 3

Context history_Burgershoop cemetery

Burgershoop cemetery is across the road from the prison. It is the site of variety of graves, such as concentration camp graves, war graves and mine workers graves.



Figure 3.17 Krugersdorp Concentration Camp Cemetery (JA 2008)

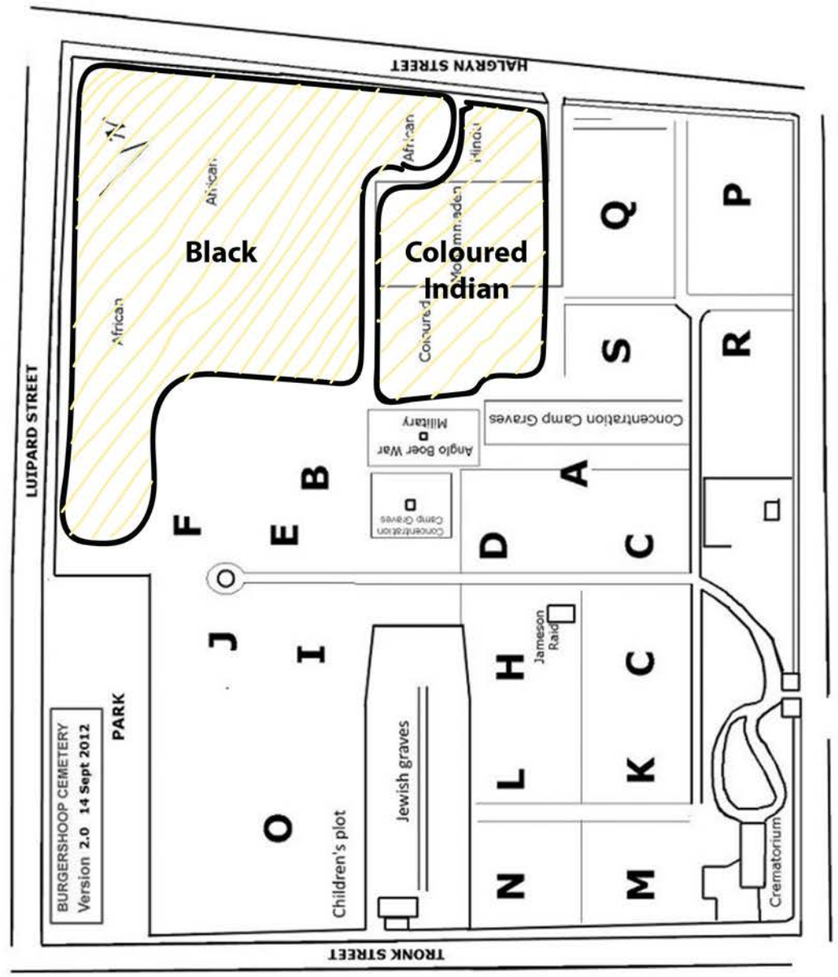


Figure 3.18 Burgershoop cemetary plan (Author 2021)

Chapter 3

Context history_Stormwater drain

The waterway alongside the site is a potential subject for landscape architecture refurbishment. The proposed project may assist in refurbishing the waterway.



Figure 3.16. Waterway photo (Author 2021)

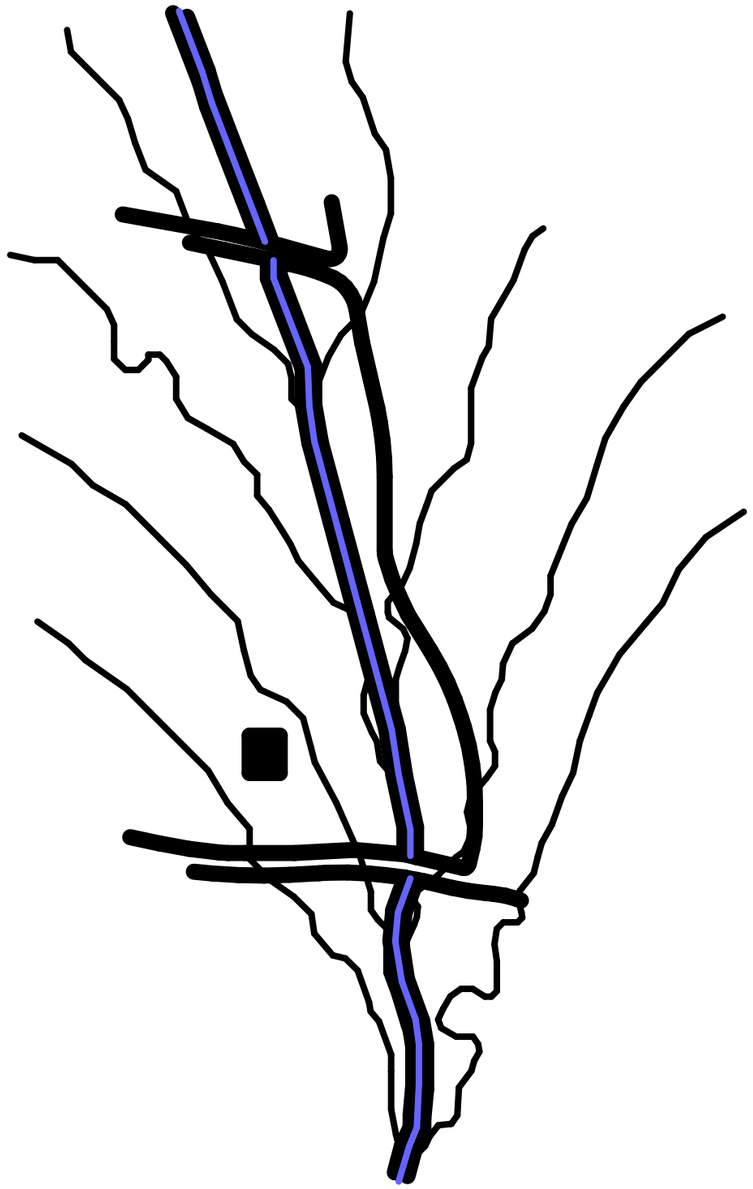


Figure 3.19 Waterway diagram (Author 2021)

Chapter 3

Context history_Krugersdorp Correctional

A photograph of a prison block at Krugersdorp Correctional

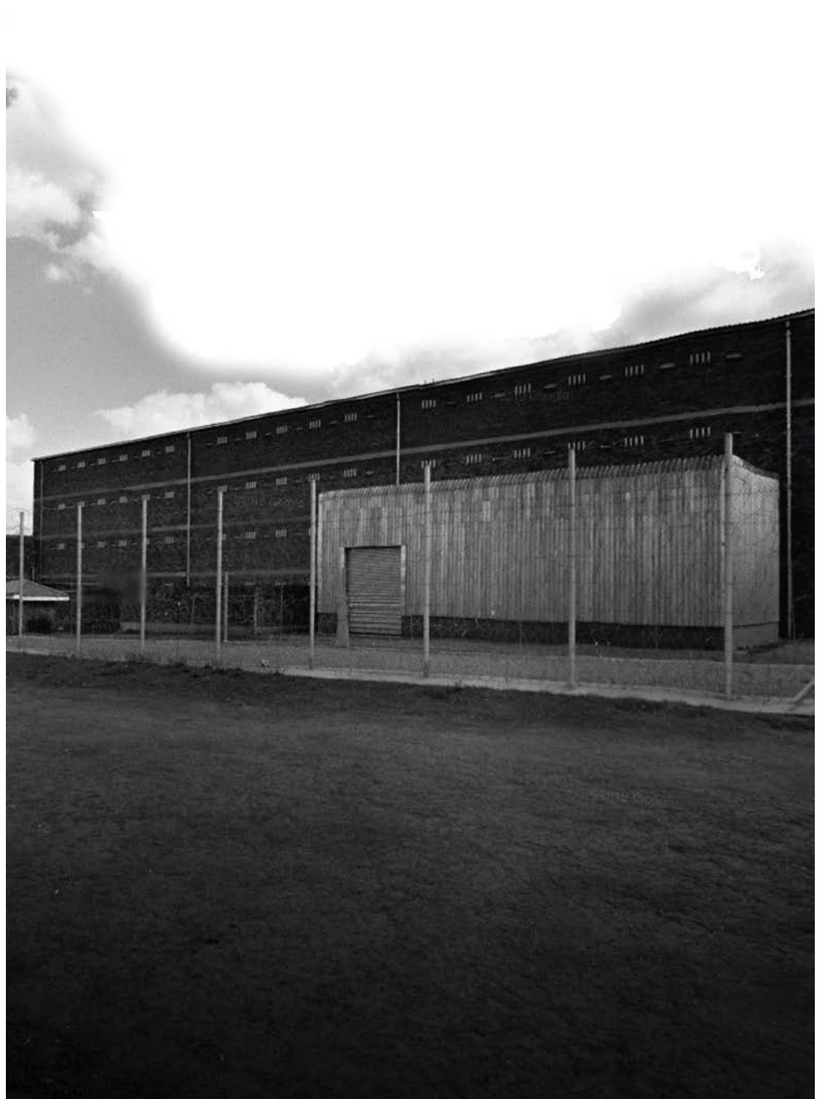


Figure 3.16 Waterway photo (Author 2021)

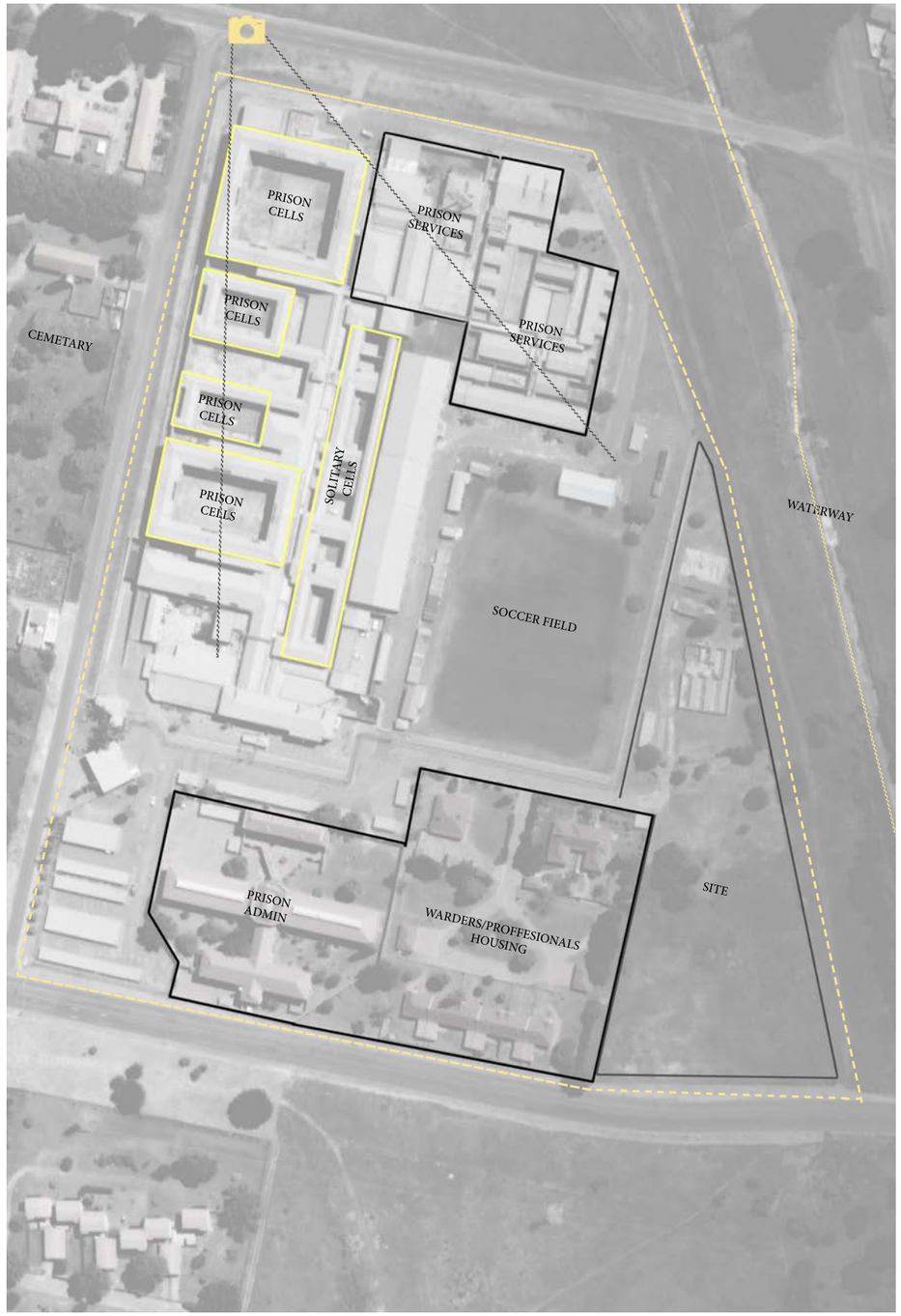


Figure 3.20 Satellite site context (Author 2021)

CHAPTER 4

Charette Design

This chapter is an exploration of form and material using rehabilitation ideologies Inspired by the spiritual activities in and around mine-dump on site



Figure 4.0 Sand play therapy (Welcome images.uk 2017)

Chapter 4

Charette design_Sand play therapy

Magaret Lowenfield discovered sand play therapy around 1929 after putting toys together along with sand to allow her patience to play with. She then realised it was an effective method of diagnosing patience as this allows the patience to express themselves. Mine-dump sand around the site along with the quest for rehabilitation proposed by the brief makes sand play therapy a logical solution to find form in architecture.



Figure 4.1 Mine-dump Contours (Author 2021)

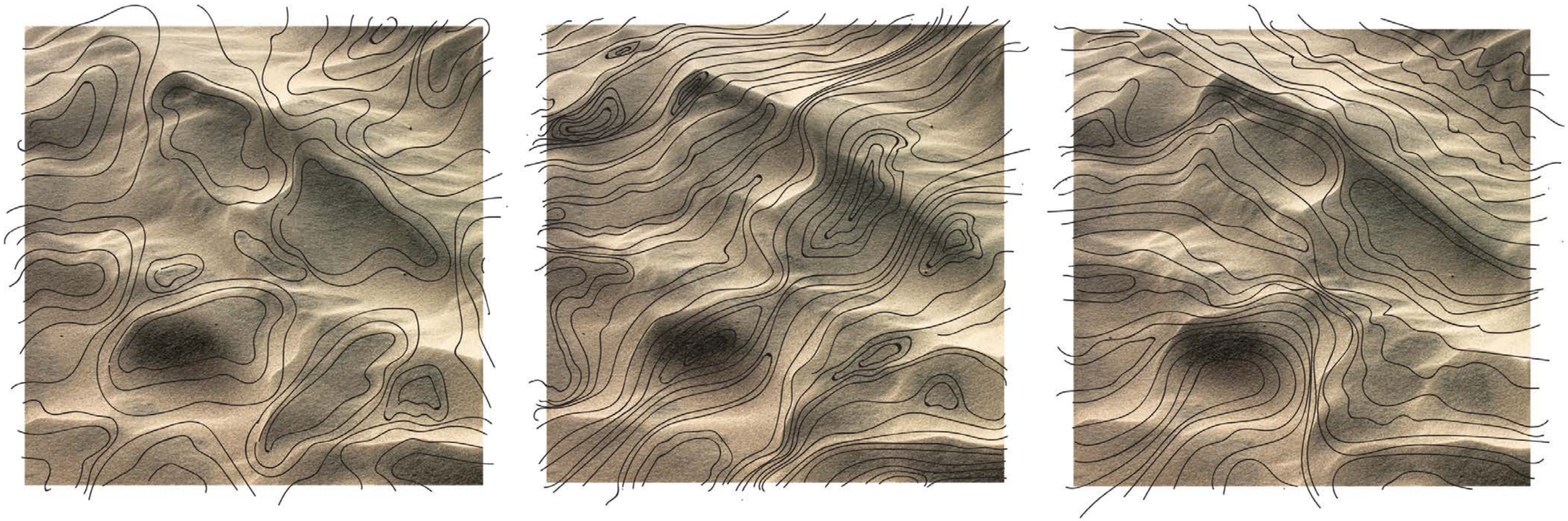
Krugersdorp Mine-dump Satellite Image



Figure 4.2 Mine-dump Contours on image (Author 2021)

Chapter 4

Sand forms_Convex vs Concave



Sand forms_Exploration 1

Sand forms_Exploration 2

Sand forms_Exploration 3

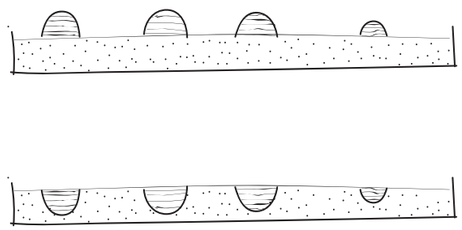
Figure 4.3 Sand Contours on image (Author 2021)

Chapter 4

Charette_Experiment 1

Rocks were submerged into the sand and later on removed to identify the patterns and land-forms the rock leave in the sand.

Sand drawings



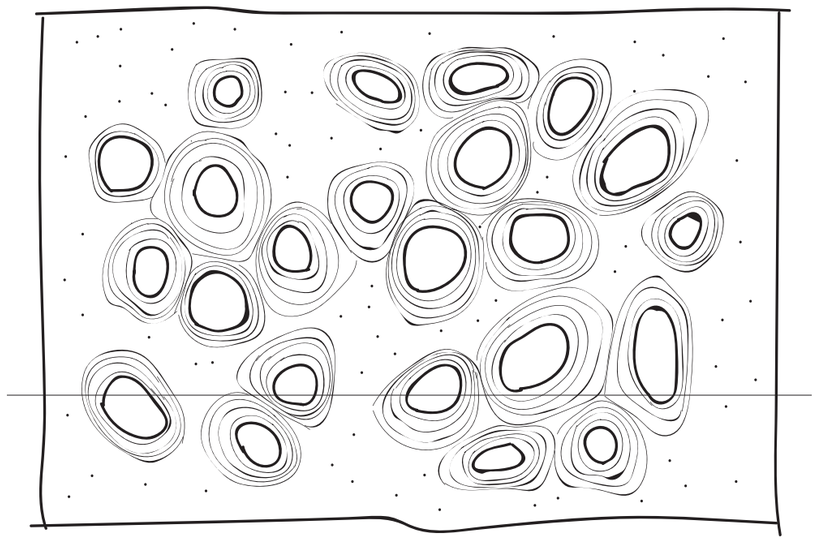


Figure 4.4 Sand rocks drawing (Author 2021)

Sand images





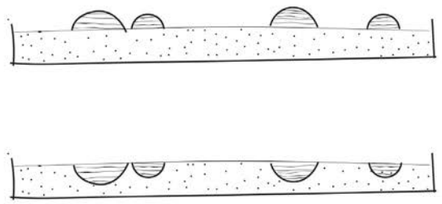
Figure 4.5 Sand rocks image (Author 2021)

Chapter 4

Charette_Experiment 2

Rocks were submerged into wet sand and later on removed to identify the patterns and landforms the rock leave in the sand.

Sand drawings



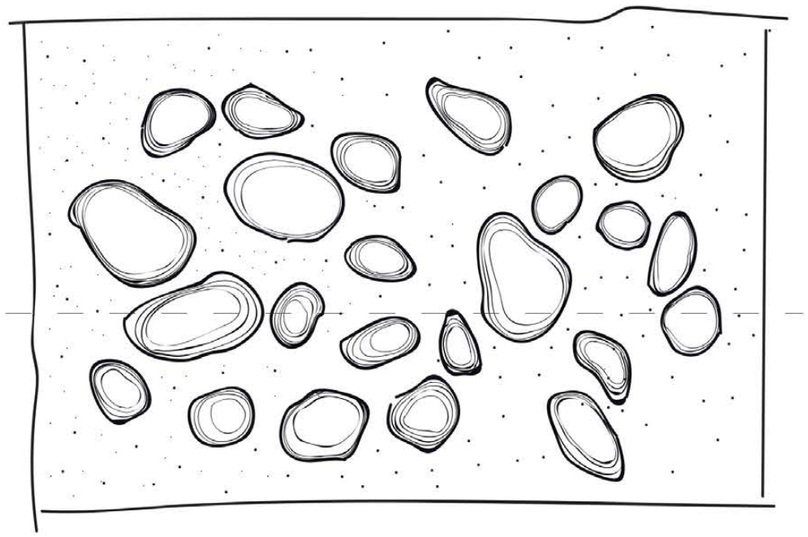


Figure 4.6 Wet sand and rocks drawing (Author 2021)

Sand images





Figure 4.7 Wet sand and rocks image (Author 2021)

Chapter 4

Charette_Experiment 3

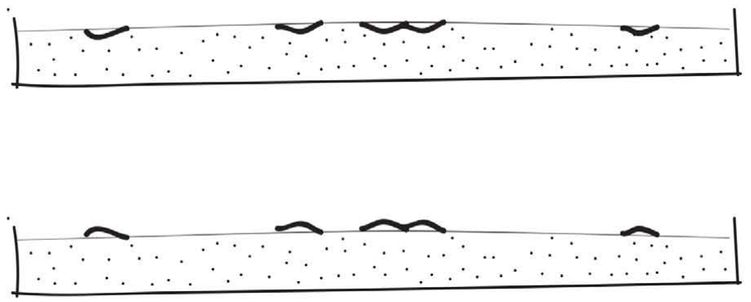
Water was sprinkled over sand and to identify the patterns and landforms the water droplets leave in the sand.

Sand images



Figure 4.8 Sand and droplets image (Author 2021)

Sand drawings



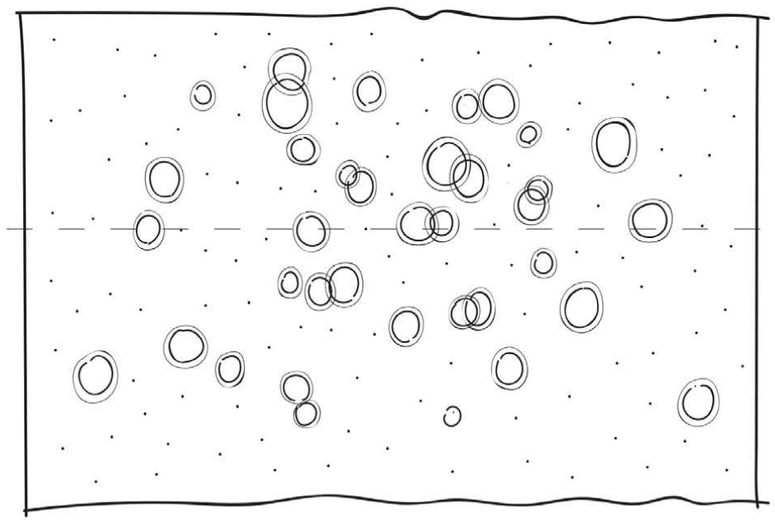


Figure 4.9 Sand and droplets drawing (Author 2021)

Chapter 4

Charette_Experiment 4

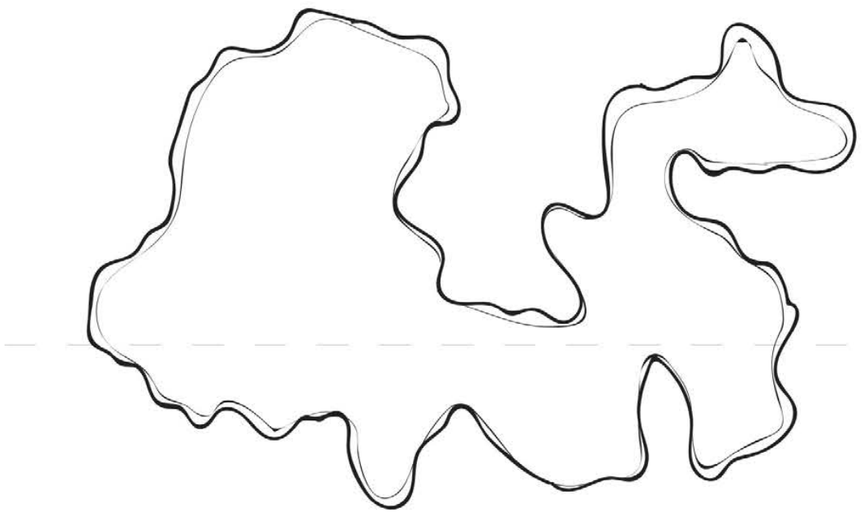
Water was poured over sand and then drained via holes in the base of the sandbox to identify the patterns and landforms left in the sand.

Sand images



Figure 4.10 Sand, water and drainage image (Author 2021)

Sand drawings



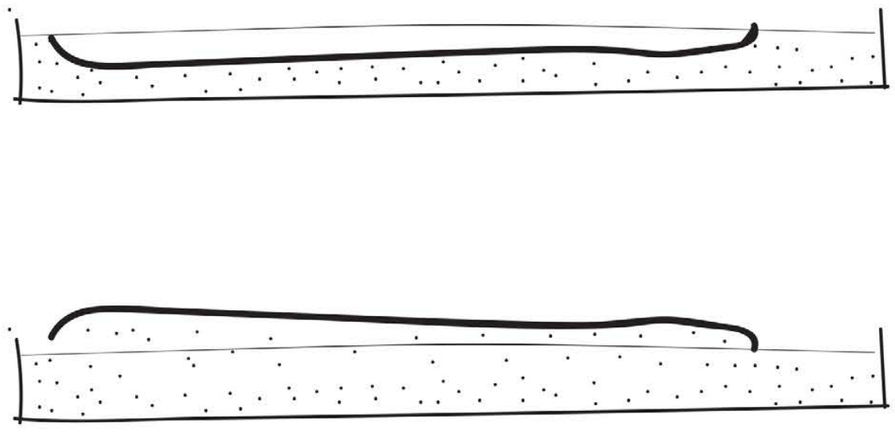


Figure 4.11 Sand, water and drainage drawing (Author 2021)

Chapter 4

Charette_Experiment 5

Drawings exploring different sand forms in plan and 3d.The drawings represent the spaces/land forms created by inverting drawings from previous experiments to create convex and concave forms, ultimately creating optical illusions.

Sand drawings

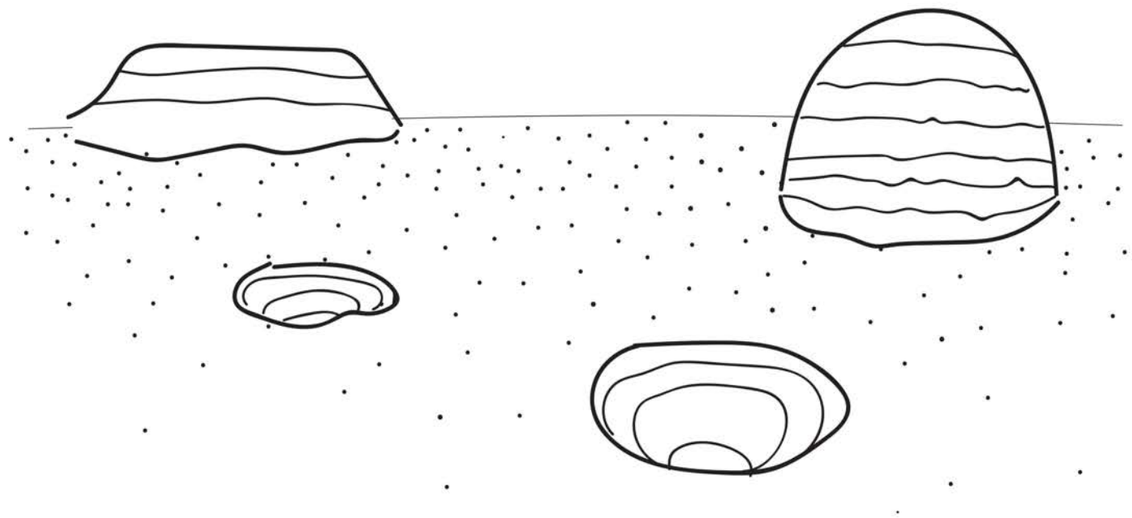
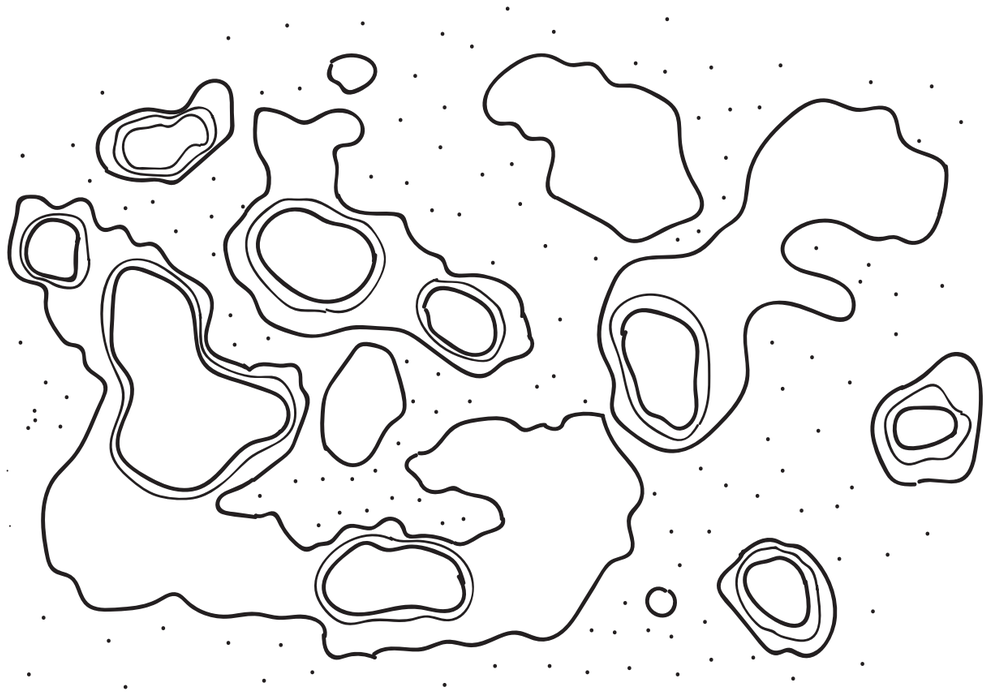


Figure 4.12 Sand forms drawing (Author 2021)

Sand drawings



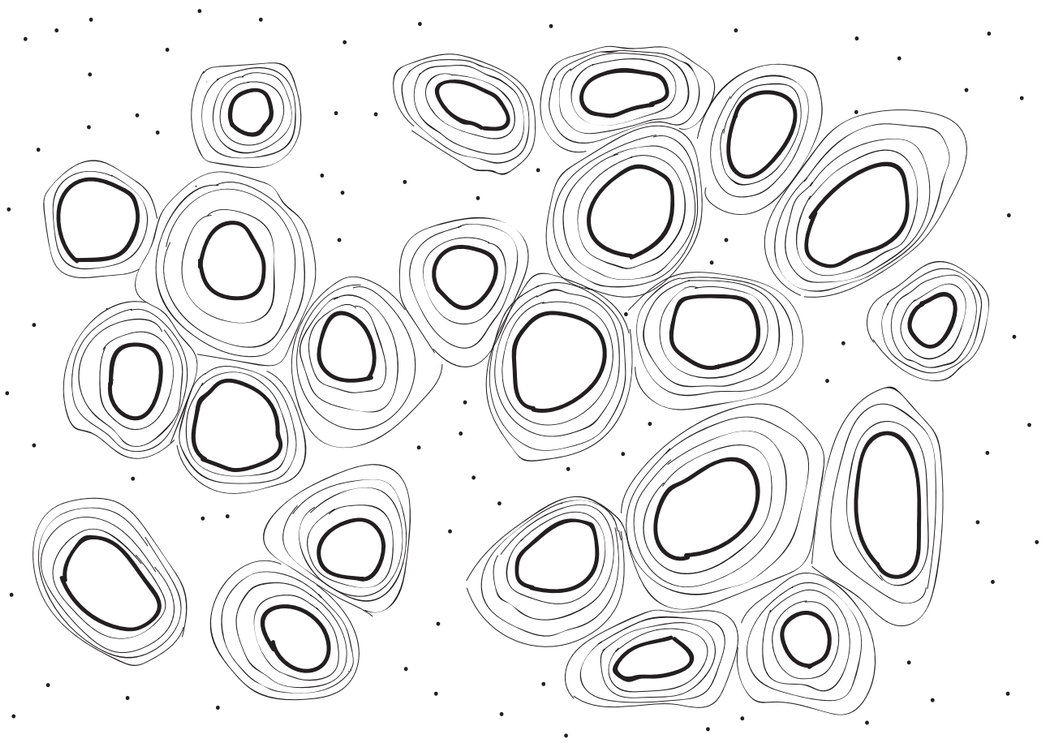


Figure 4.13 Sand forms plan drawing (Author 2021)

Chapter 4

Charette_Minedump landforms

The Mine-dump south of the proposed site hosts a number of activities including worship. Upon arrival a gospel choir recording a music video was present, using the mine-dump as an inspirational backdrop. The images showcase existing rocks and landforms on the site of the mine-dump.

Mine-dump rocks



Figure 4.14 Existing rocks image (Author 2021)

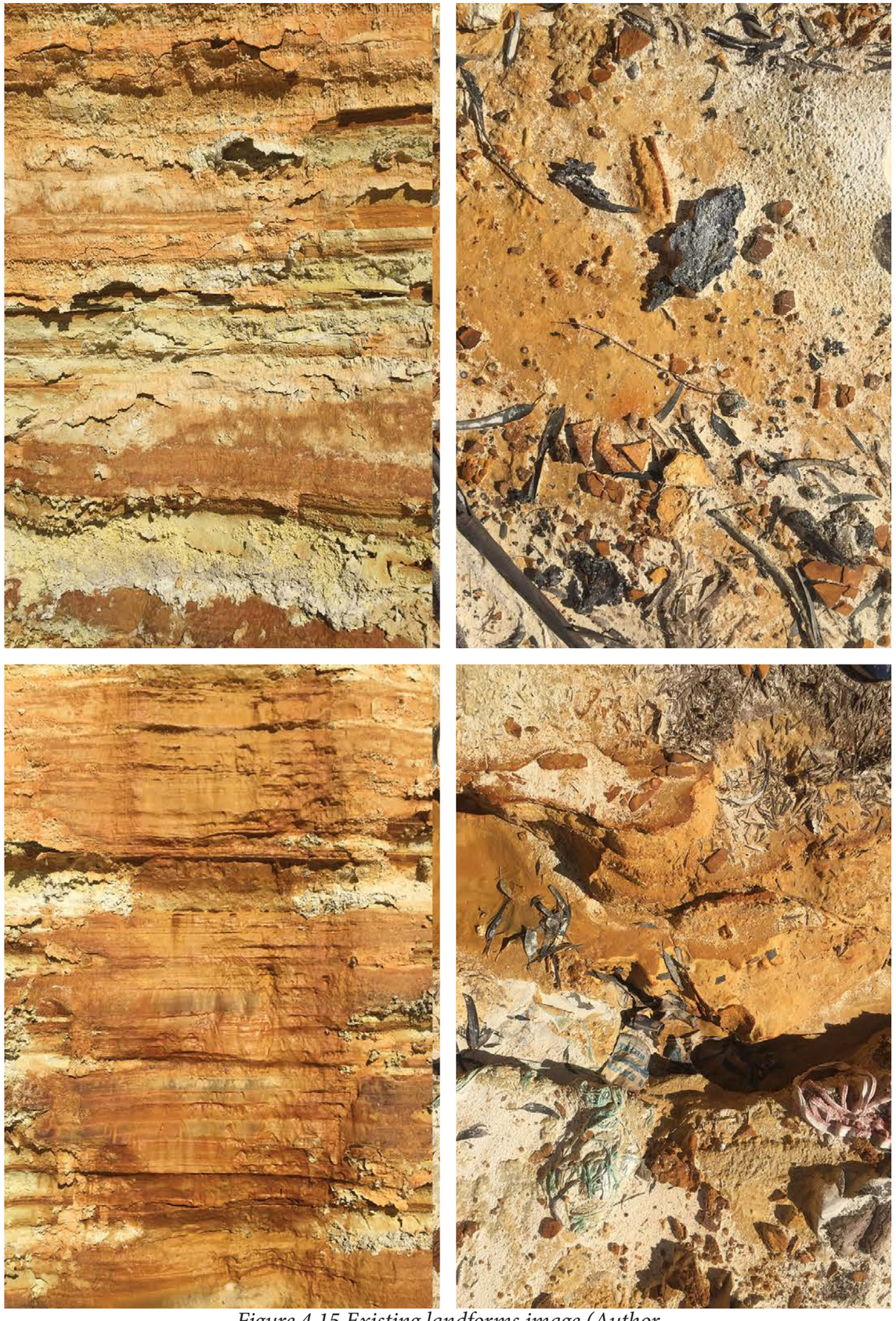


Figure 4.15 Existing landforms image (Author 2021)

Chapter 4

Charette_Experiment 6

The images show the 4 soil types found on the site of the mine-dump. The different soils are shown together and separately.

Soil types



Figure 4.16 Soil layers image (Author 2021)

Soil types

Soil 1



Soil 2



Soil 3



Soil 4



Figure 4.17 Soil types image (Author 2021)

Chapter 4

Charette_Experiment 7

The images show the visual effects created after the 4 different soil types had been mixed.

Soil types mixed



Figure 4.18 Soil mixture image (Author 2021)

Minedump rocks mixed

Mine-dump rocks drawings

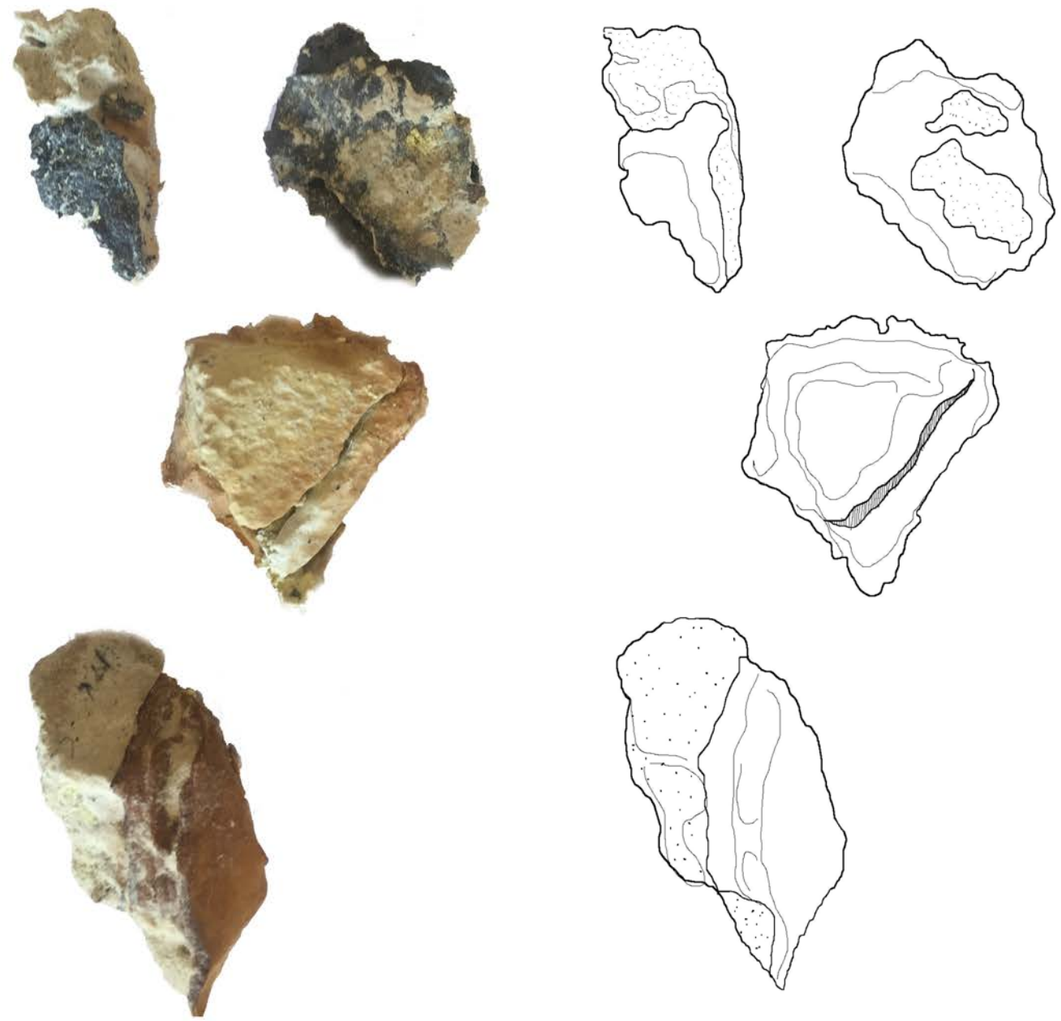


Figure 4.19 Rocks image & drawings (Author 2021)

Chapter 4
Concept Design_Charette

The images show the 4 soil types mixed and bonded together using bonding liquid along with an existing solid mass. The plastic allows the mixture to dry independently within the mixture being drained by the soil. Rock forms are developed from the mixture similar to the rocks found on the site. The longer the rocks dry the lighter the colors become creating a visual measurement of time.

Soil and bonding liquid mixture



Figure 4.20 Soil bonding image (Author 2021)

Dried mixture (New rocks)





Figure 4.21 Artifacts image (Author 2021)

Chapter 4
Conclusion

The sand therapy charette assisted in discovering the therapeutic use of sand as well as natural looking forms ie, convex and concave forms due to excavation or natural land formation.

CHAPTER 5

Design development

This chapter explores design development and typology inspired by the site, ideologies and images in previous chapters

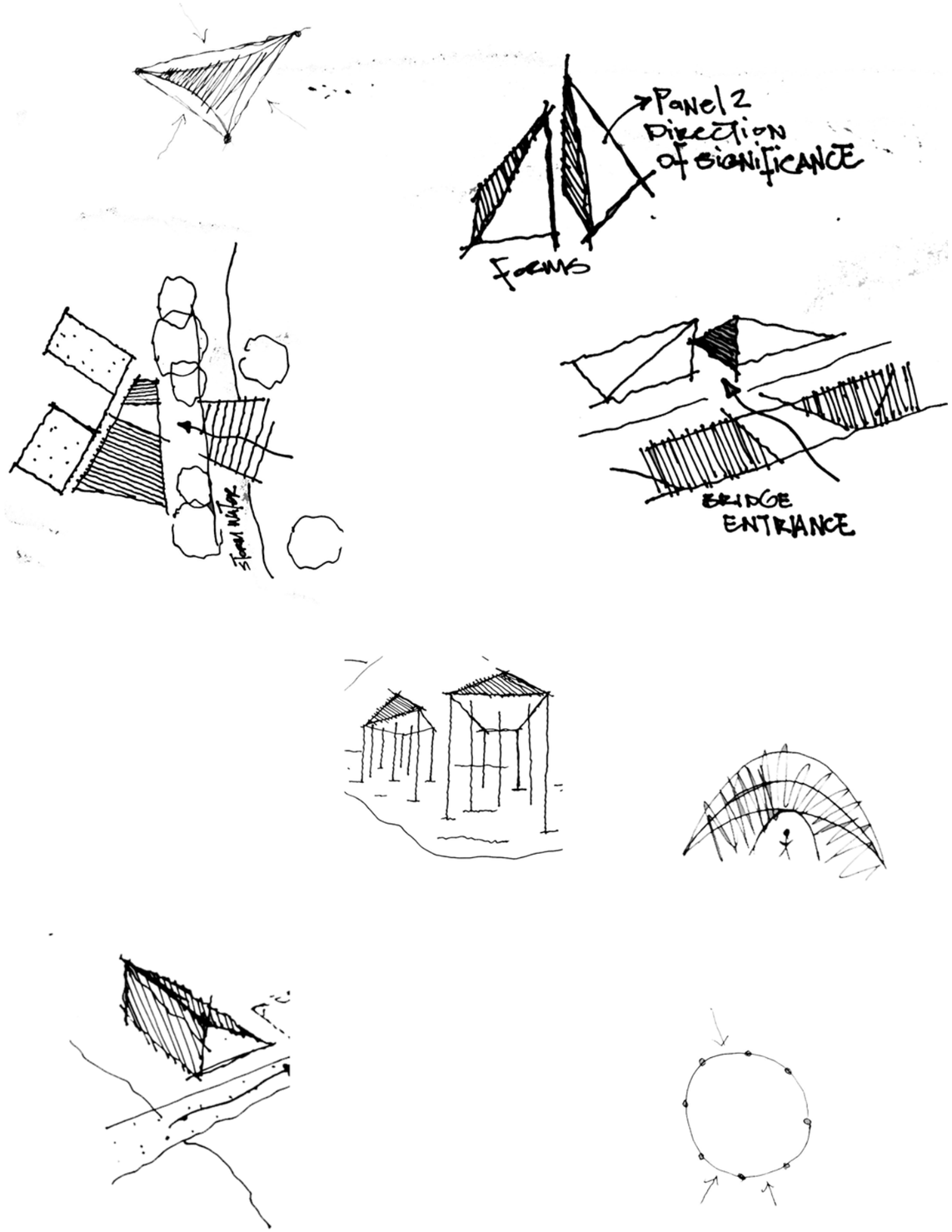
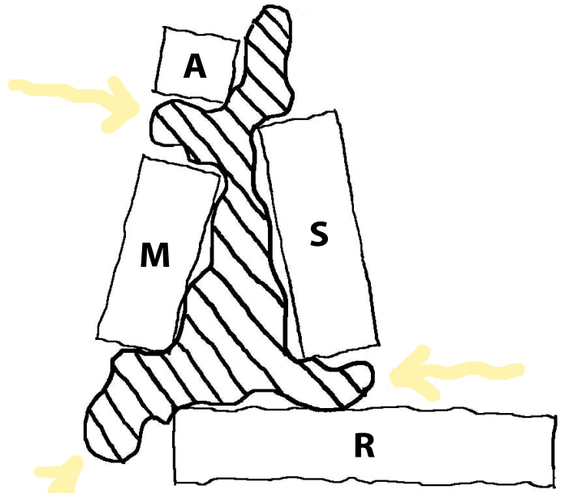


Figure 5.0 Early doodles (Author 2021)

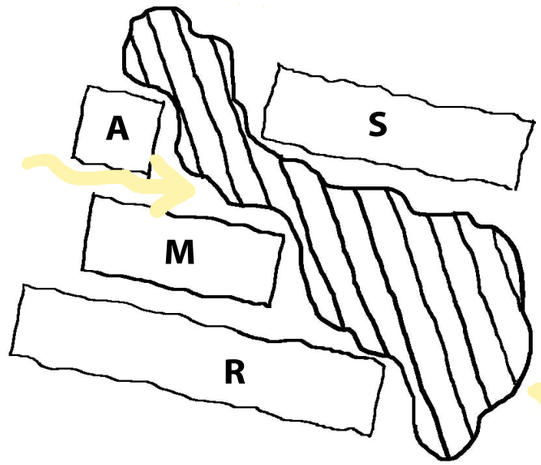
Chapter 5

Design development_Layouts

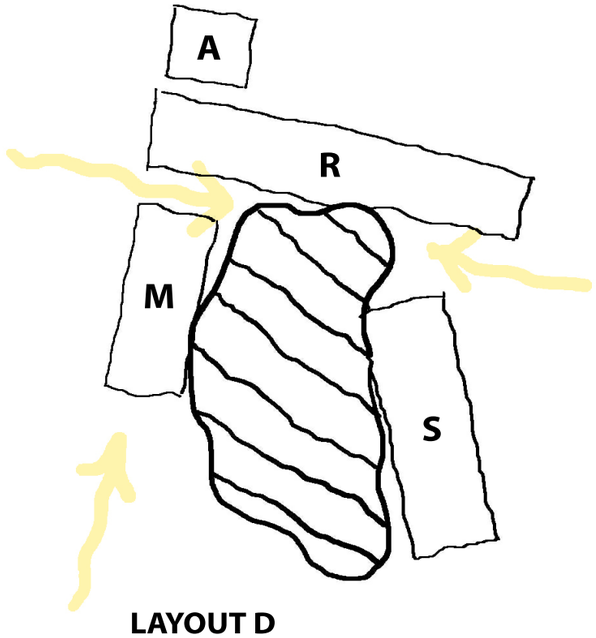
Sketches of initial layout ideas (June 2021)



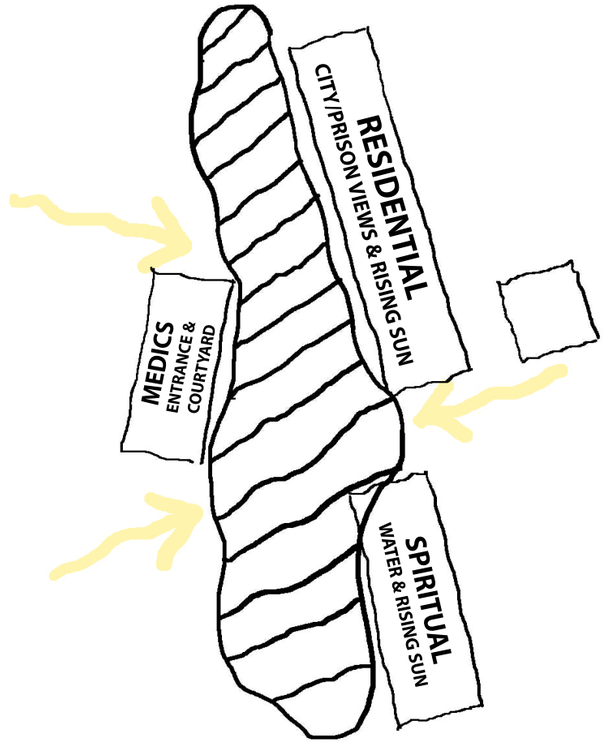
PREFERRED
LAYOUT A



LAYOUT B



LAYOUT D



LAYOUT C

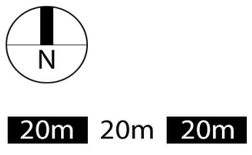
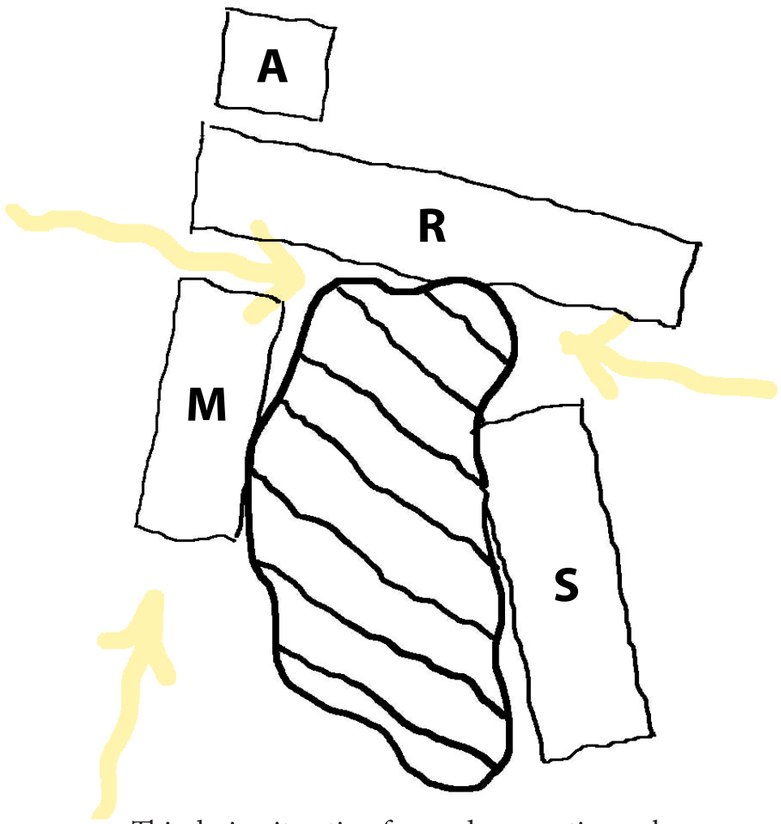


Figure 5.1 Layout sketches (Author 2021)

Chapter 5
Design development_Layouts

Building courtyard open to Luipaard street with 2 alternative public entrances (July 2021)



This design iteration focused on creating public spaces through the positioning of the different programs, while connecting to prison, park and street.

Figure 5.2 Layout D sketches (Author 2021)

Massing exercise around water feature (July 2021)

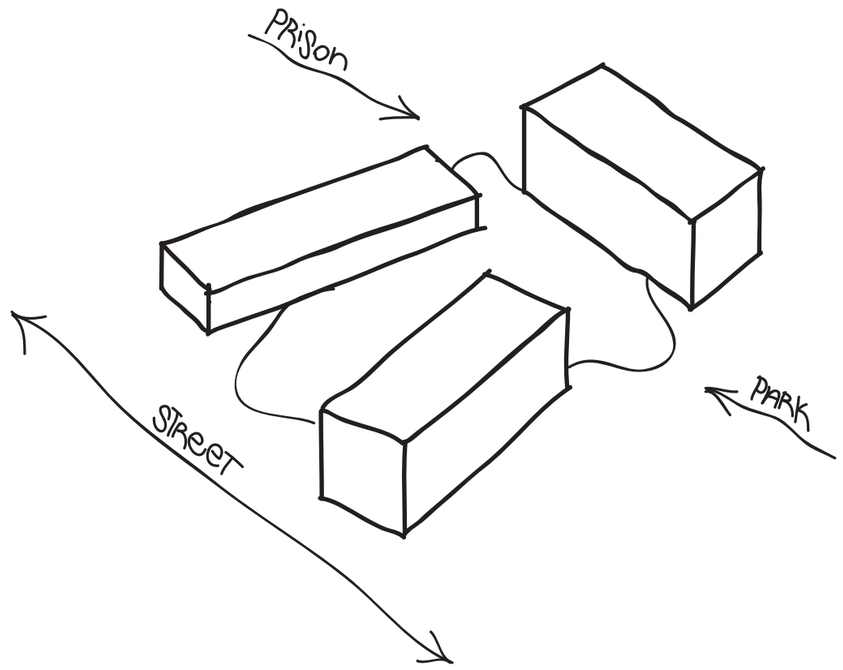
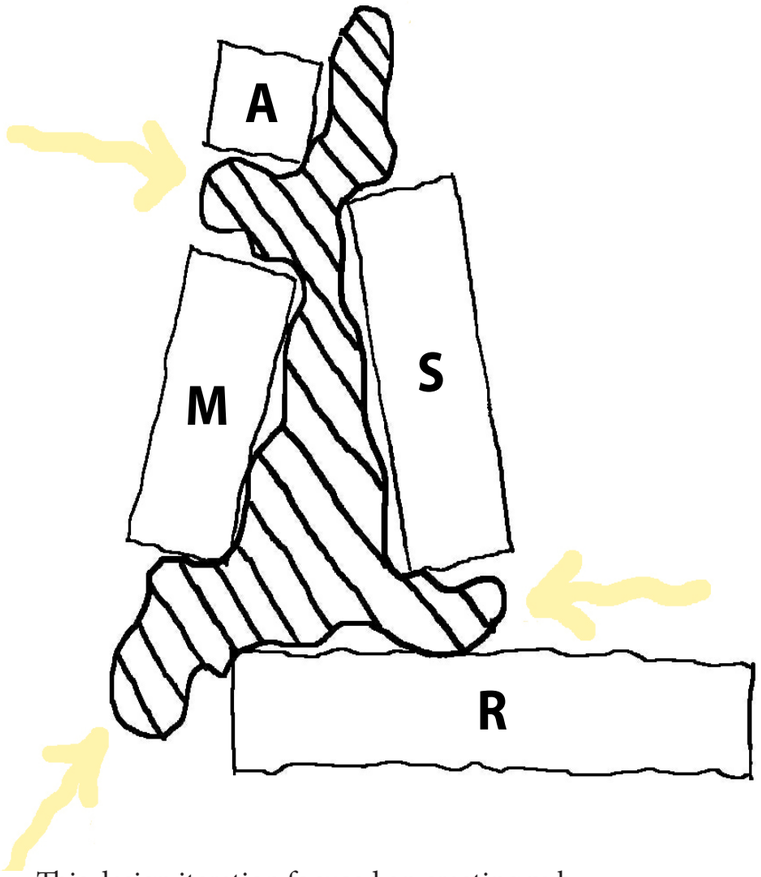


Figure 5.3 Layout mass sketches (Author 2021)

Chapter 5

Design development_Layouts

Building encloses courtyard with access at every junction (July 2021)



This design iteration focused on creating public spaces specifically for the building users by laying out the programme around the public space

Figure 5.4 Layout A sketches (Author 2021)

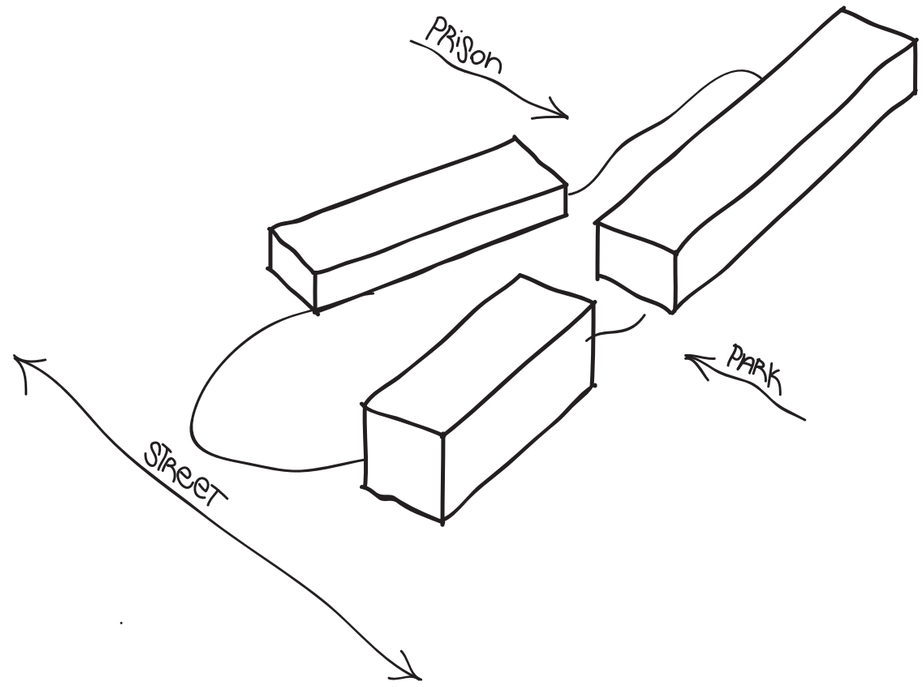
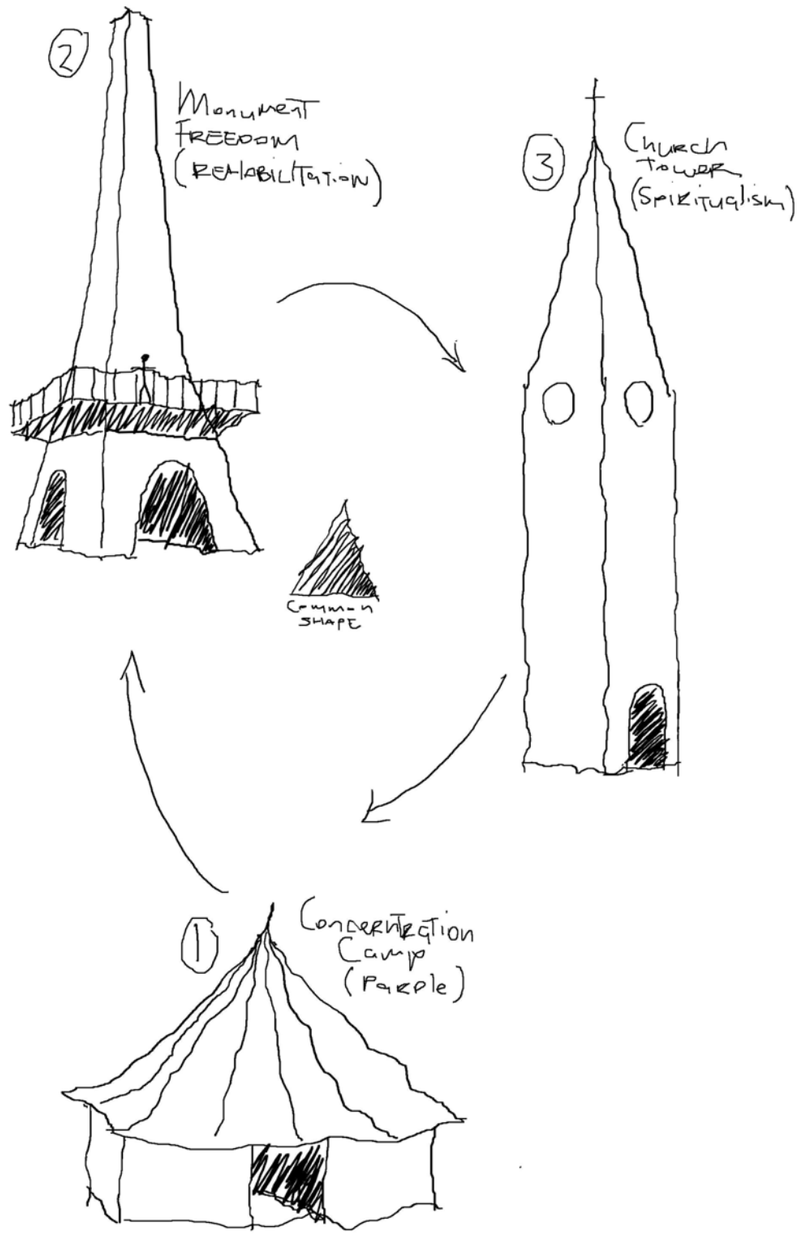


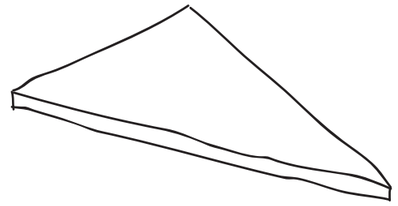
Figure 5.5 Layout mass sketches (Author 2021)

Chapter 5
Design development_Layouts



The triangle is derived from the forms in the three different typologies considered. It has been identified as the common form.

Figure 5.21 Concept sketches (Author 2021)



This design iteration focused on combining the programs into 1 mass to ensure a fully secure building. A building of this nature would have to be secure in its function and on an architectural level.

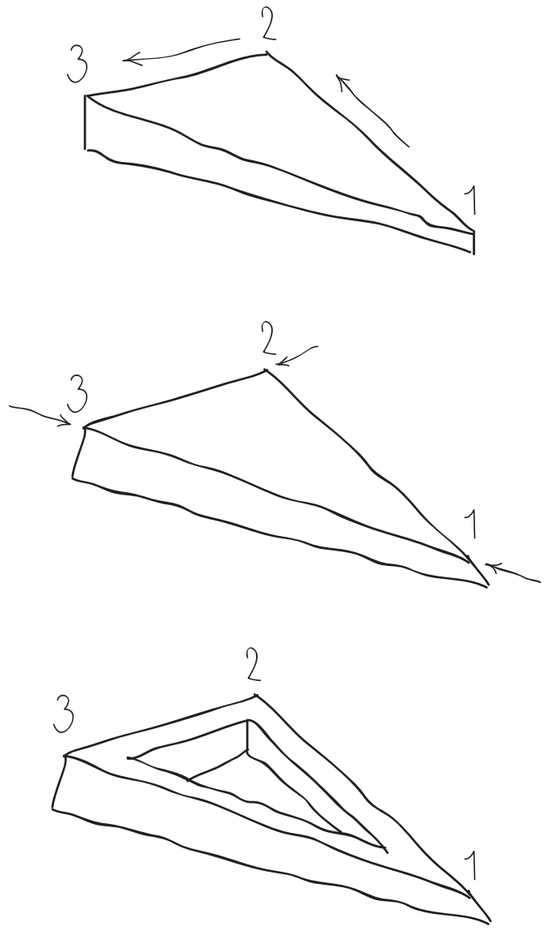
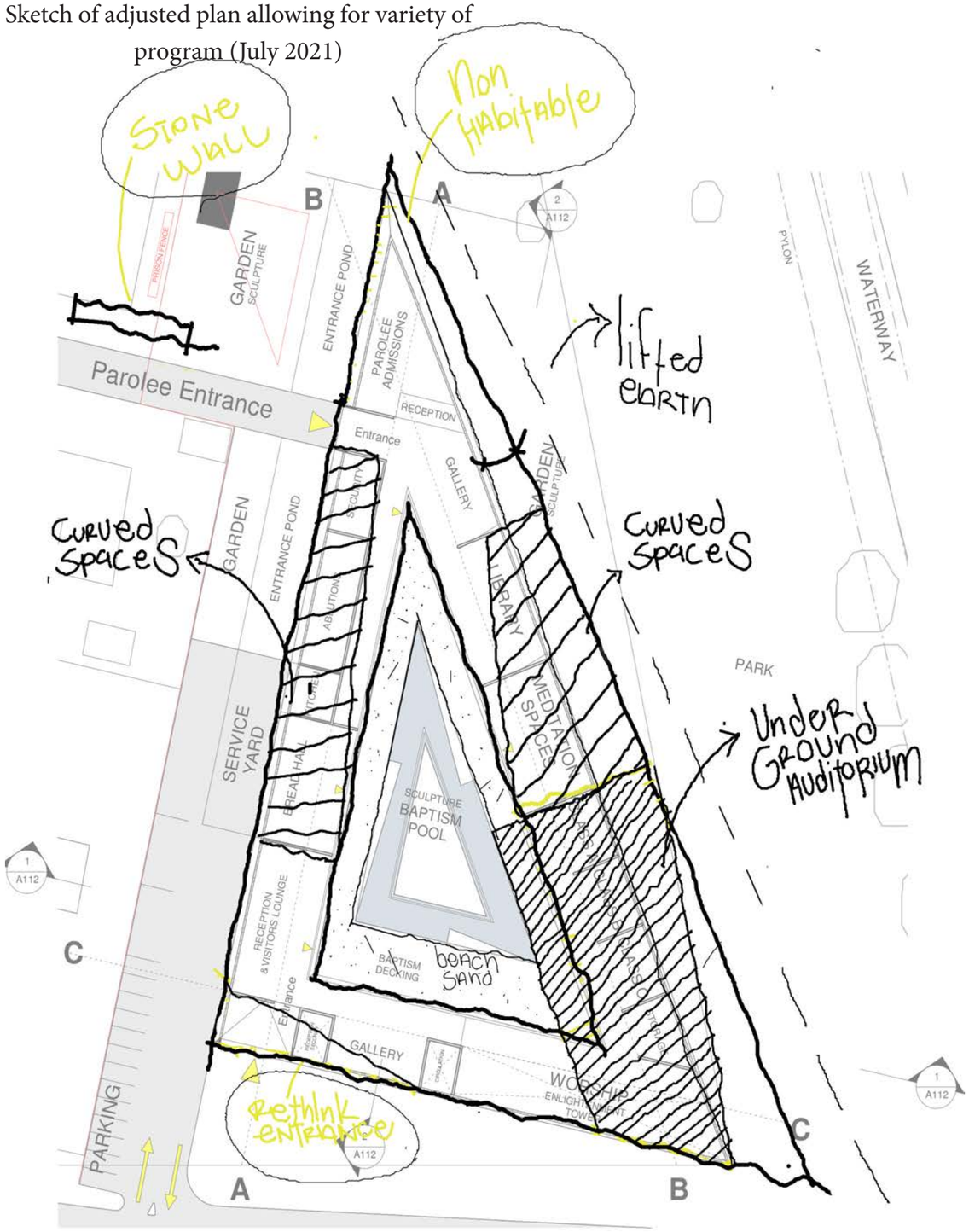


Figure 5.22 Mass concept sketches (Author 2021)

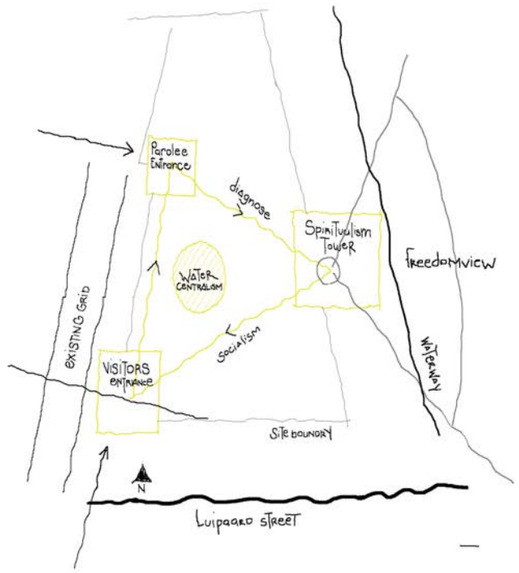
Chapter 5

Design development_Layouts

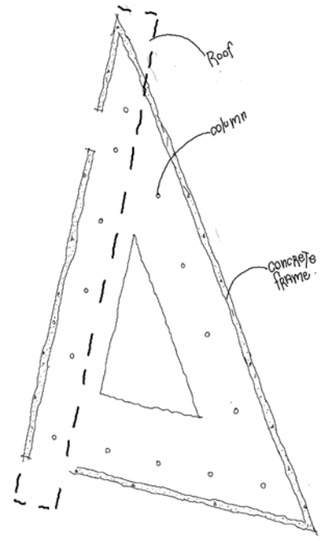
Sketch of adjusted plan allowing for variety of program (July 2021)

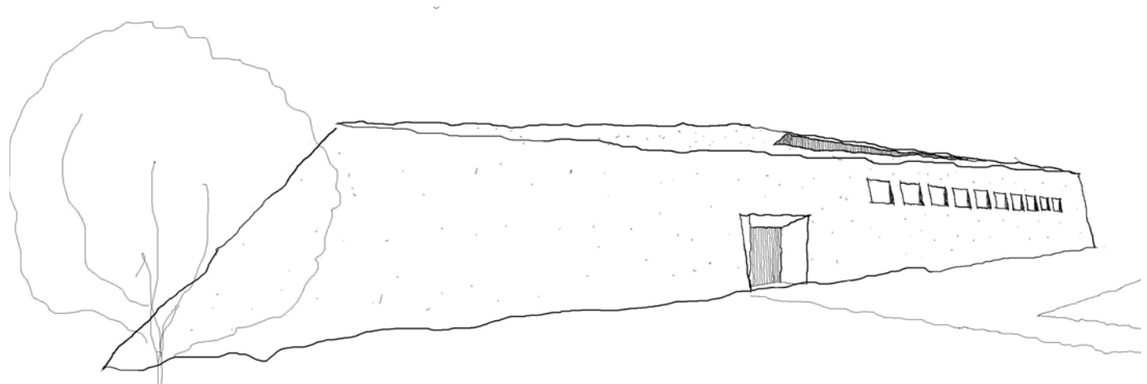


Site strategy (Sept 2021)



Concrete frame (Sept 2021)





Parole entrance sketch (Sept 2021)

Figure 5.6 Adjusted sketches (Author 2021)

Figure 5.7 Parole 3d sketch (Author 2021)

Chapter 5

Design development_Layouts

Initial sketch section (Sept 2021)

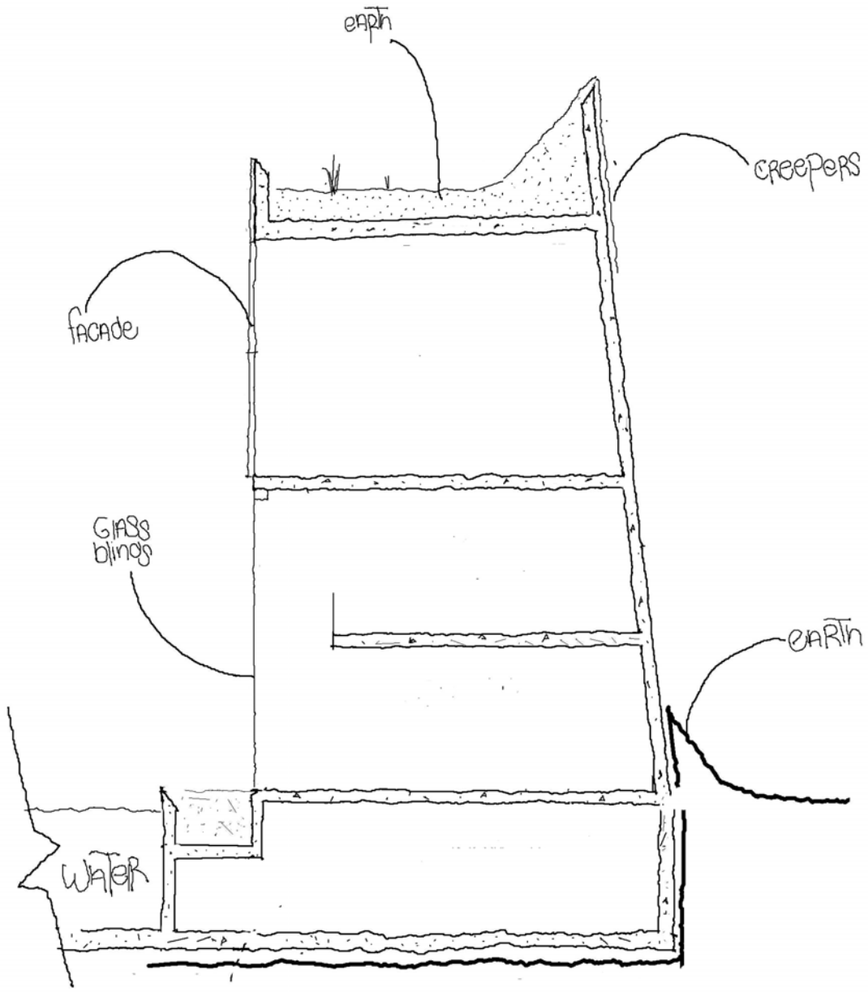


Figure 5.8 sketch section (Author 2021)

Inner courtyard sketch (Sept 2021)

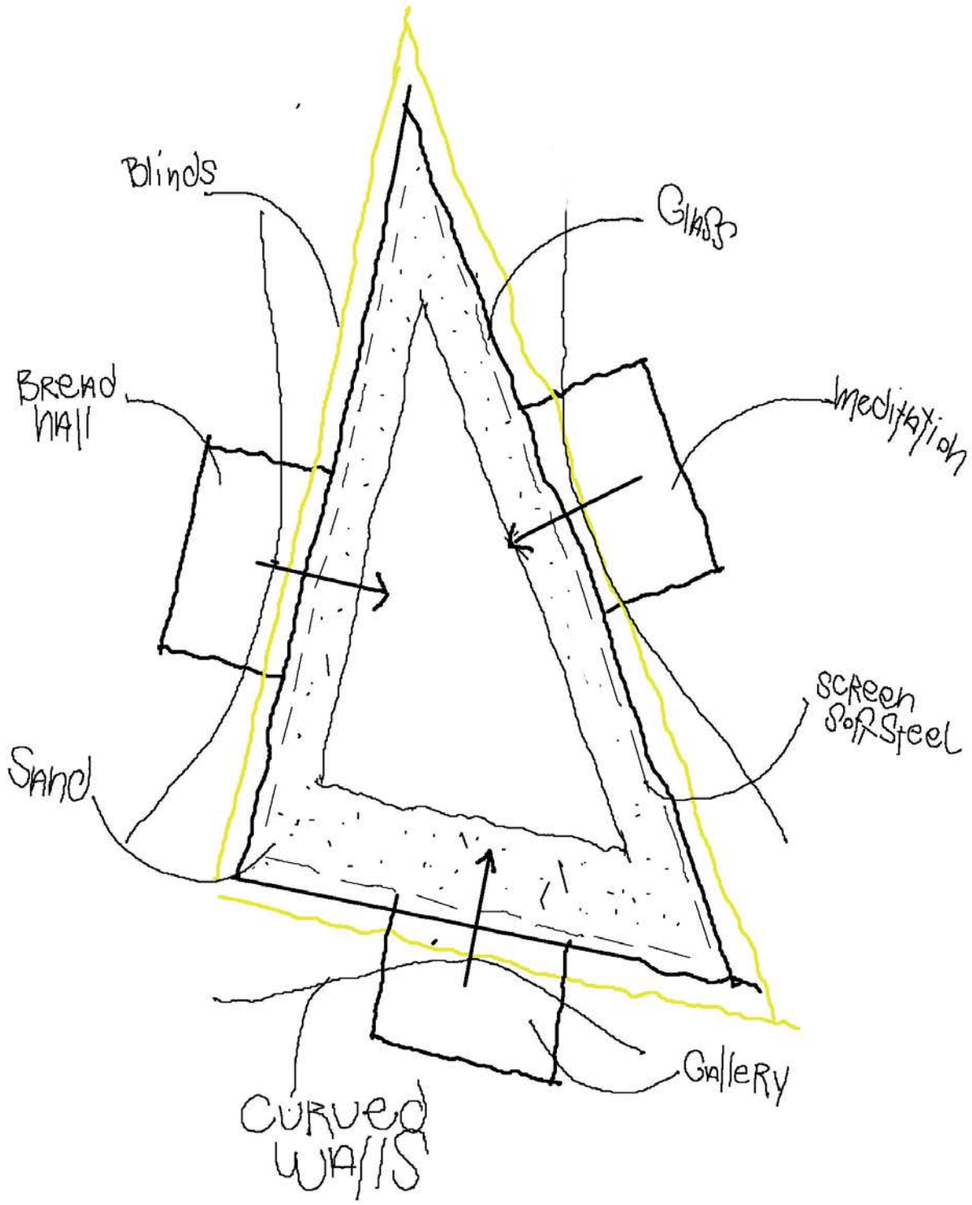


Figure 5.9 Courtyard plan sketch (Author 2021)

Chapter 5
Design development_Site



Figure 5.10 site (Author 2021)

Design development_Zoning

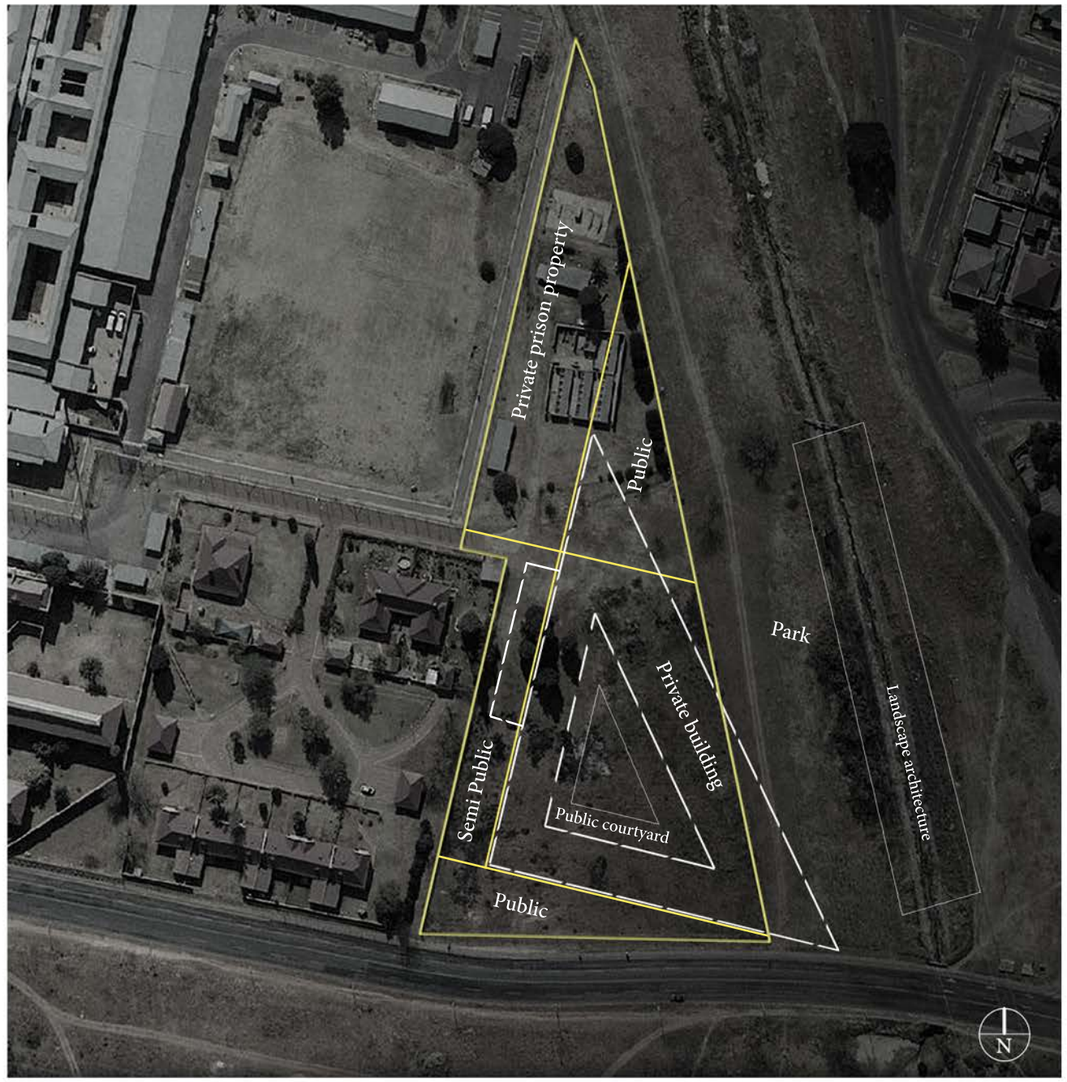


Figure 5.11 Zoning (Author 2021)

Chapter 5
Design development_Site

Building water system and context

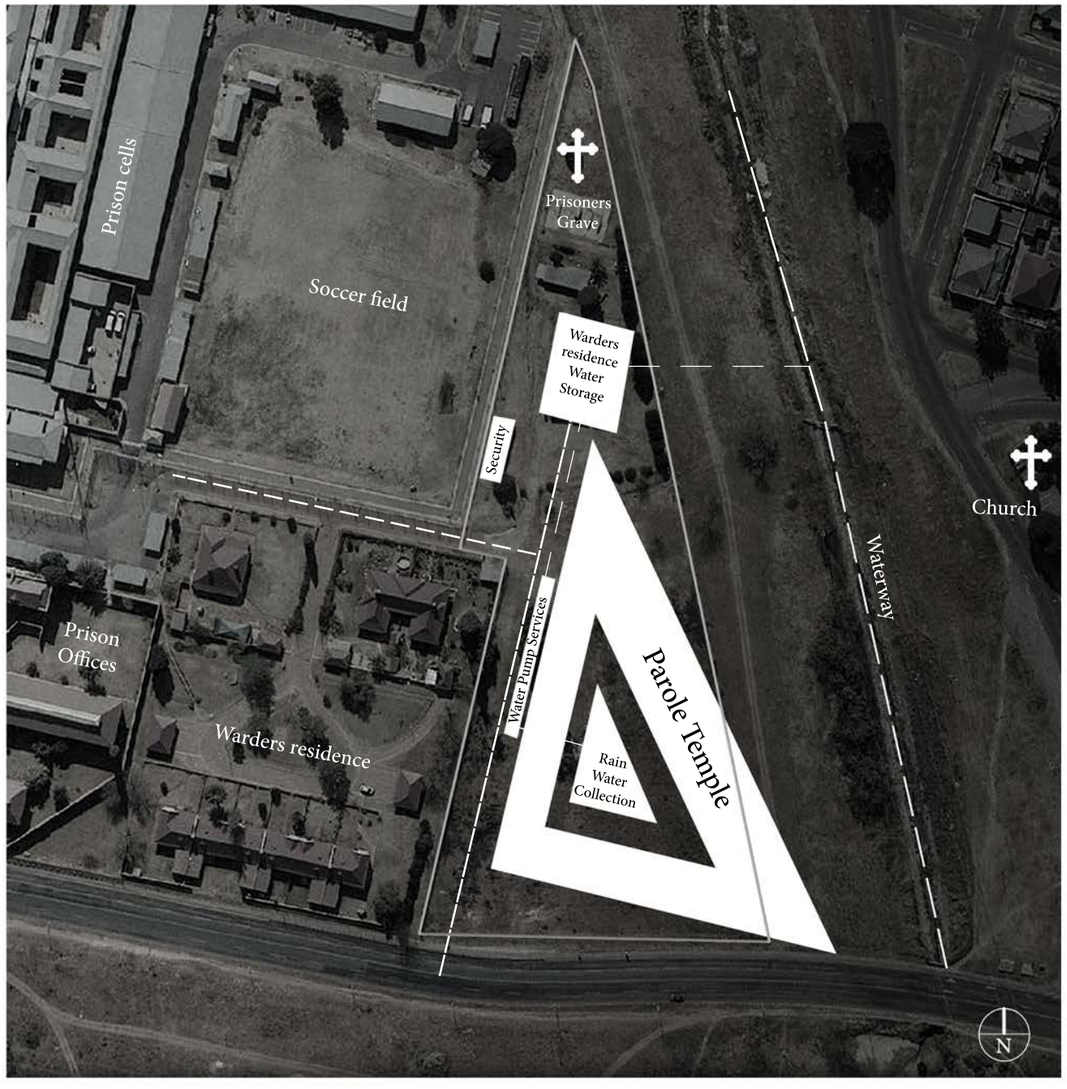


Figure 5.12 building water system & context (Author 2021)

Building circulation

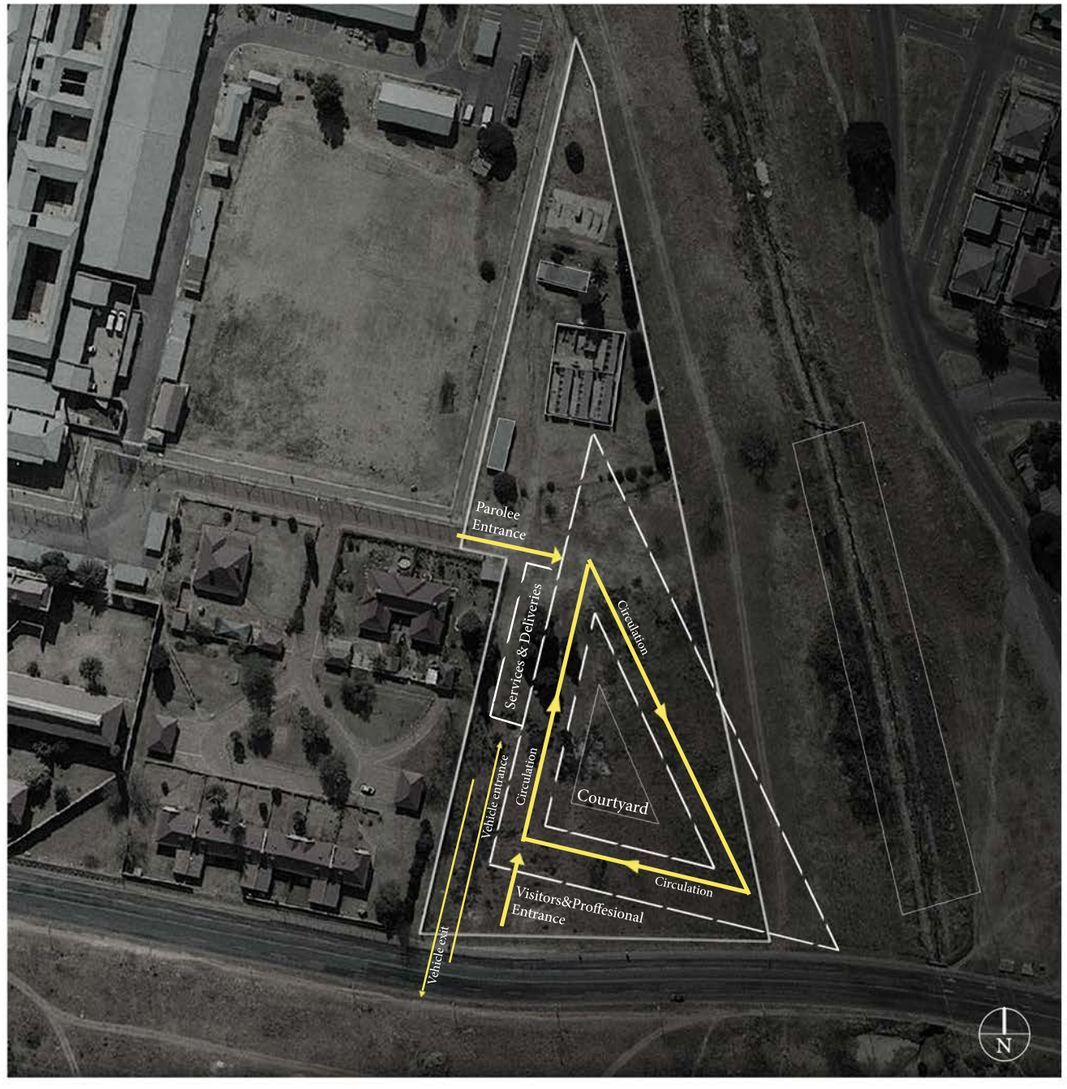


Figure 5.13 Circulation (Author 2021)

Chapter 5
Design development_Site

Conceptual zoning



Figure 5.14 Conceptual zoning (Author 2021)

Luipaard street & parolee link

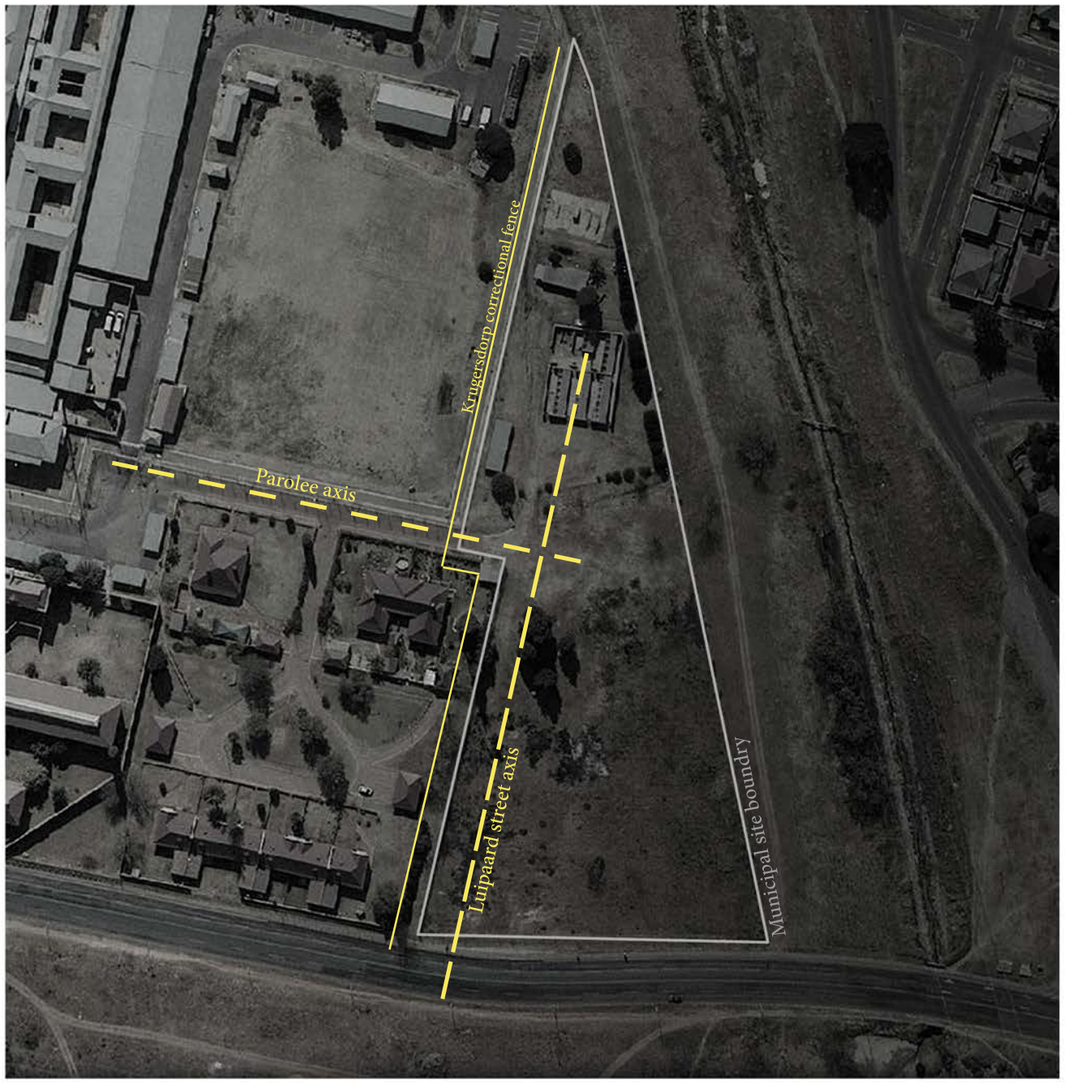


Figure 5.15 Circulation (Author 2021)

Chapter 5
Design development_Site

Building entrances

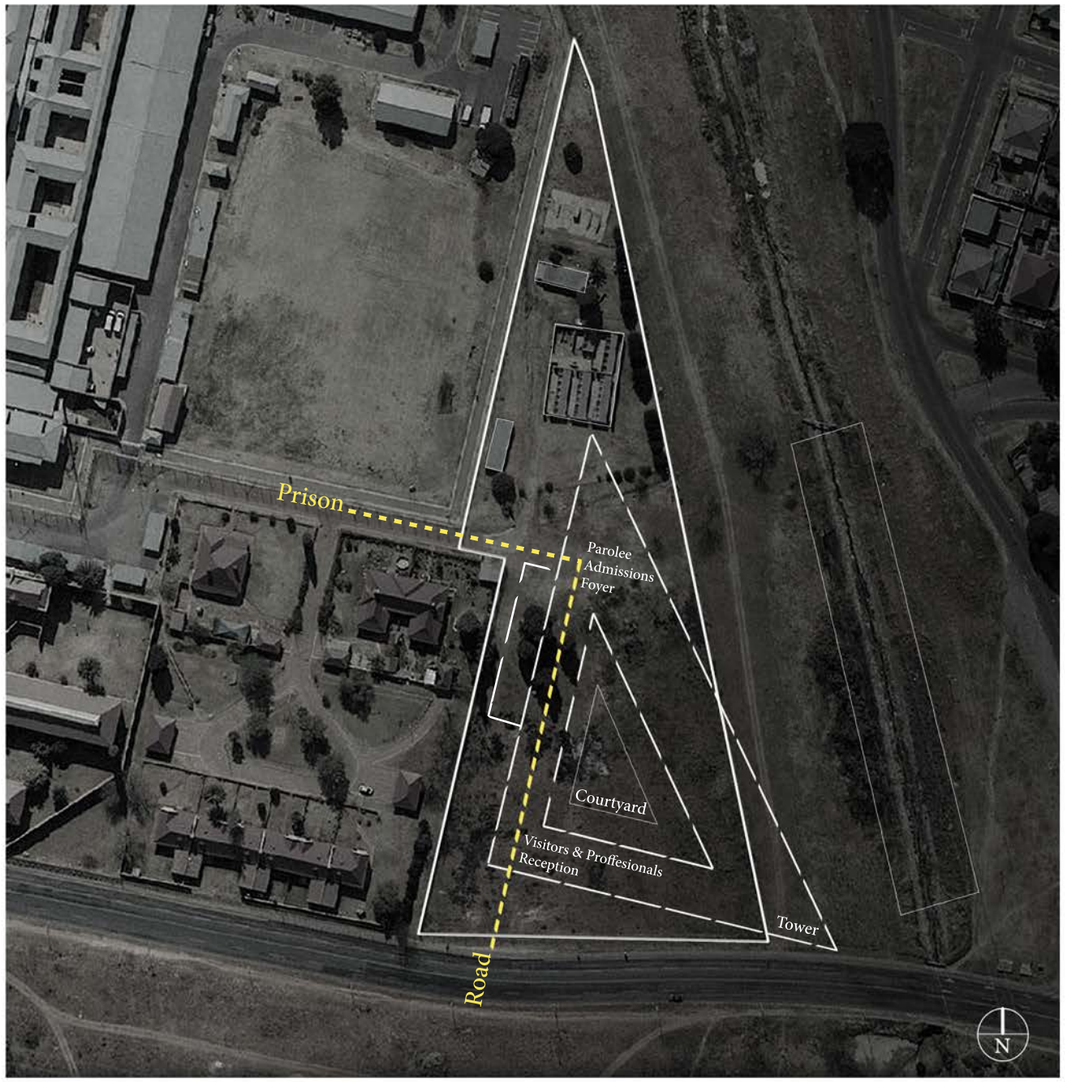


Figure 5.16 Entrances (Author 2021)

Building water system

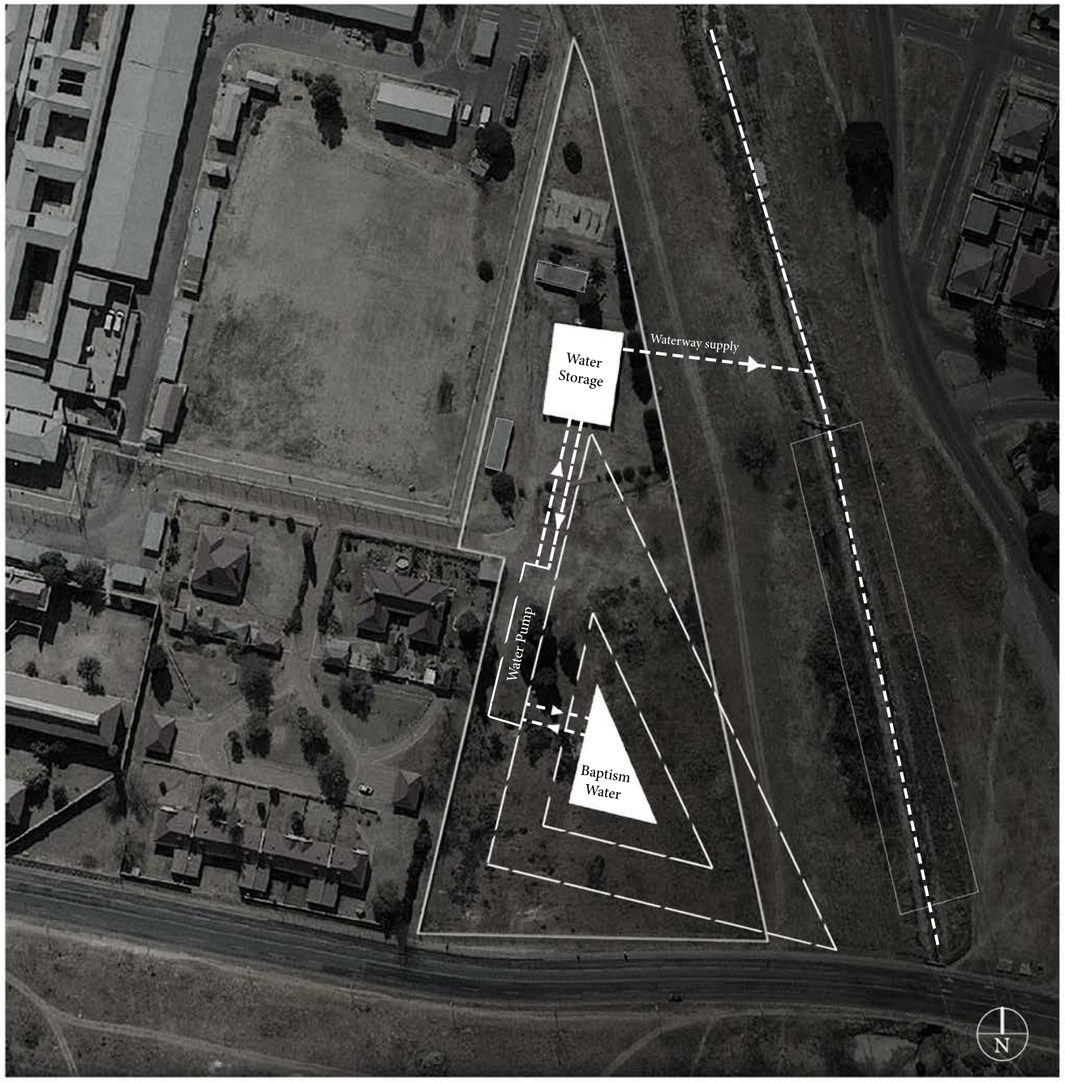


Figure 5.17 Building water system (Author 2021)

Chapter 5

Daylighting_ Johannesburg 12am October

Ground floor daylighting

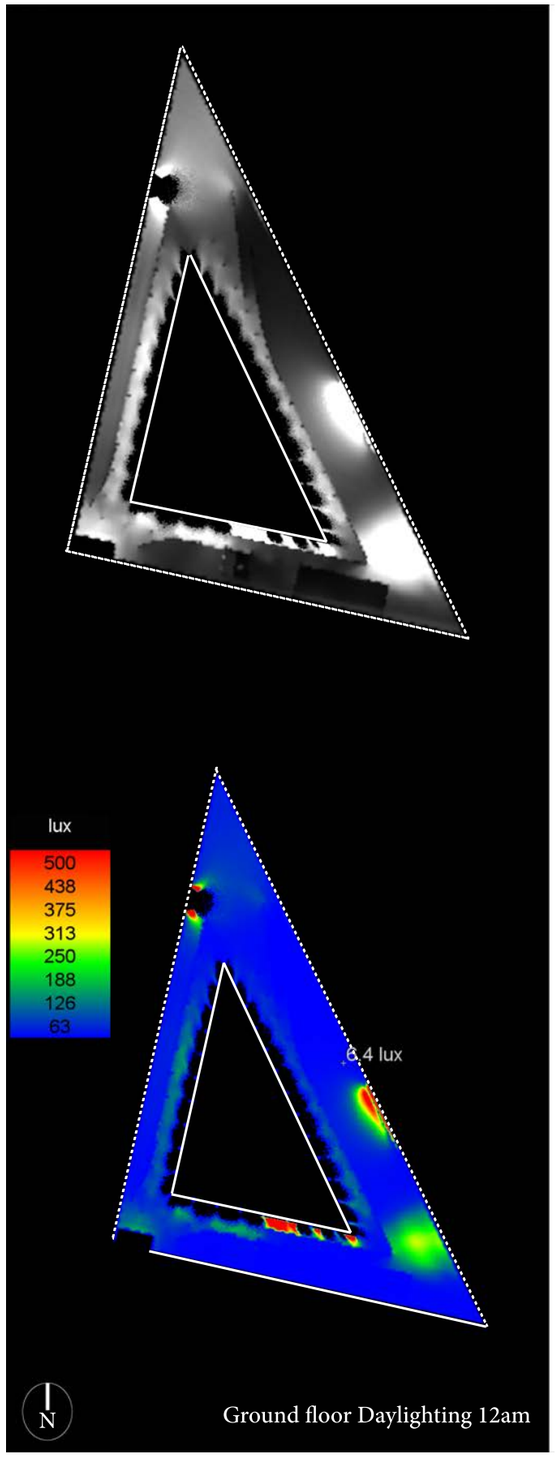


Figure 5.18 Daylighting 1 (Author 2021)

First floor daylighting

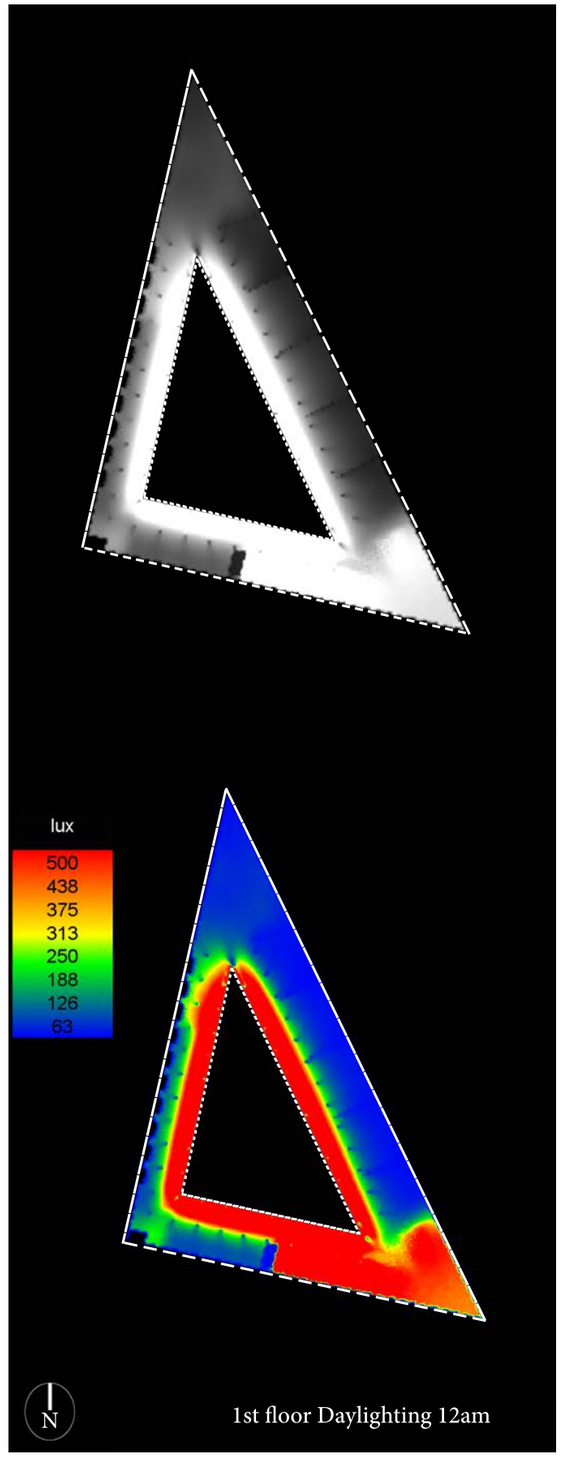


Figure 5.19 Daylighting 2 (Author 2021)

Chapter 5
Daylighting_ Johannesburg 12am October

Second floor daylighting

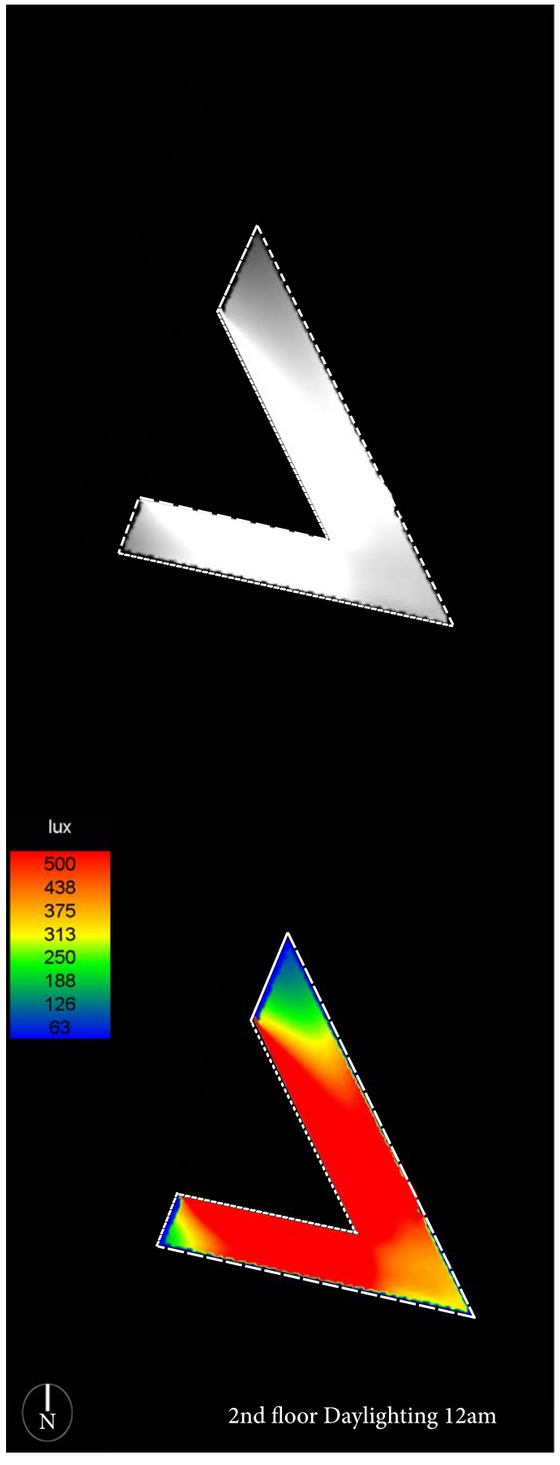


Figure 5.20 Daylighting 3 (Author 2021)

CHAPTER 6
Technical Systems

This chapter explores the tectonic development of the building using ideologies gathered from previous chapters

Technical Systems
Materials Palette

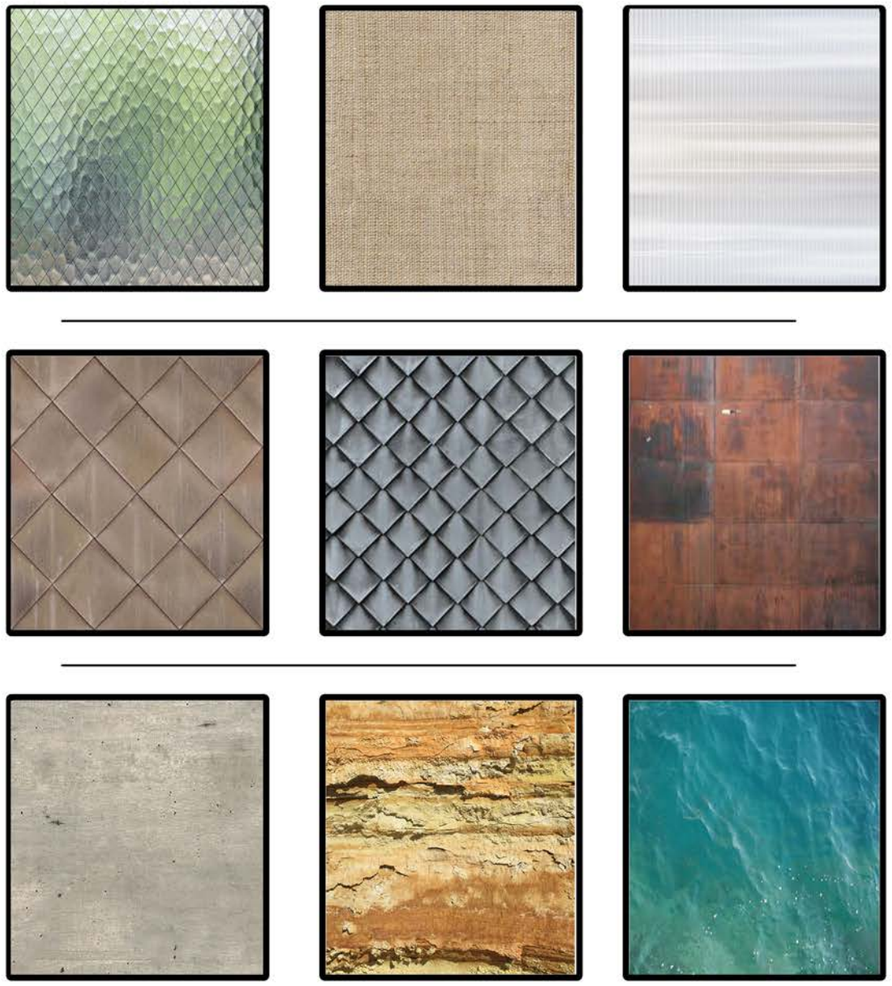
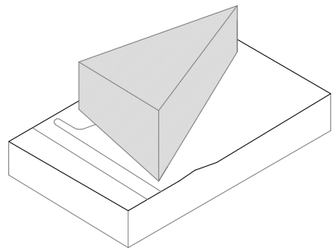
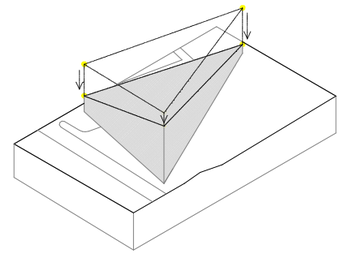
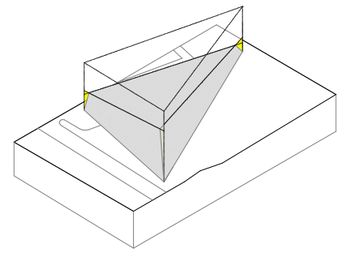


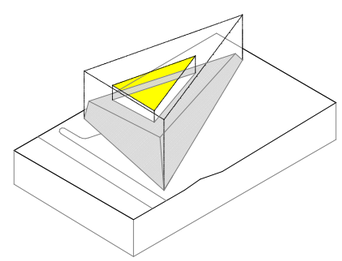
Figure 6.0 Material palette (Author 2021)

Massing development
Form manipulation









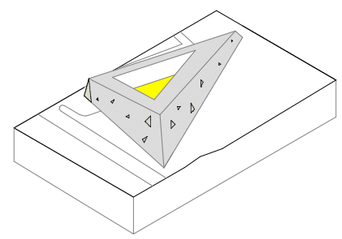


Figure 6.1 Mass manipulation (Author 2021)

Walls

The mine dump situated south of the proposed site is host to religious activities such as praise and worship. Mine dumps/landforms often have an interesting blend of colours due to the decaying of certain fossils. Mine dumps/landforms are synonyms with Joburg's landscape due to Joburgs rich mining history. The colours of the mine dump can be represented architecturally through walls as a celebration of this history. For flexibility in application and aesthetic quality a broken mosaic style will be applied to walls to represent colours in the mine-dump



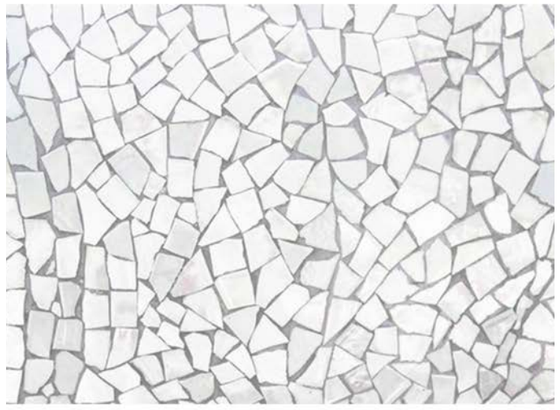




Figure 6.3 mine-dump mosaic (Author 2021)

Roofs

In Krugersdorp buildings of the same function often share roof types and colors .Maroon corrugated sheeting is often used for state owned buildings. In response to the proposed site context (Krugersdorp correctional facilities) The building envelope will resemble the maroon roofs in context .In pursuit of contemporary architecture the maroon roofs will be interpreted through shades of maroon in diamond shaped zinc shingles





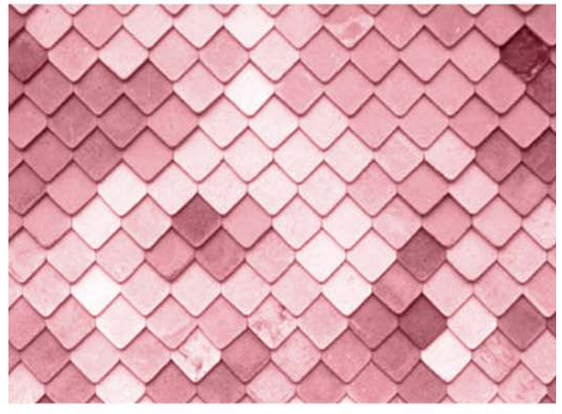


Figure 6.4 roof and envelope material (Author 2021)

Windows

The triangular form developed through the design development process is further explored through the interior courtyard facade . The triangular glass panels in the facade can be angled differently in order to achieve “intricate” reflections of the water in the courtyard thus visually enhancing the water mass in the courtyard and the contents of the building





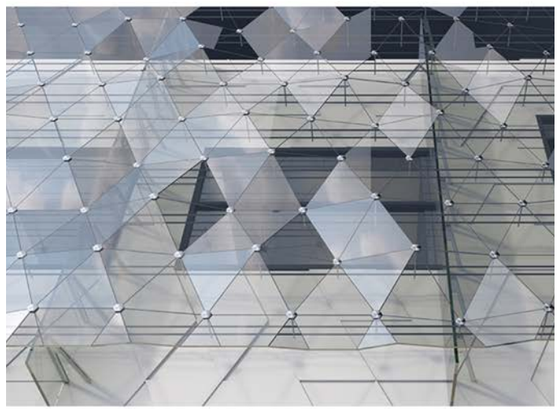


Figure 6.5 courtyard glass (Author 2021)

Floors

The construction of the floor surfaces draws its inspiration from sand therapy and baptism. Water in architecture can be used to produce tranquil garden spaces. In the case of the proposed building the main water feature will function as a baptism pool as well as a water feature in the courtyard garden. The sand in the courtyard is derived from the cherette exercise which explores forms through sand play. Sand therapy is a popular exercise used for relaxation and meditation. In sand play therapy doctors can explore a patience thoughts and emotion thus positively contributing to the rehabilitation process.







Figure 6.6 courtyard glass (Author 2021)

Technical Systems
Program incorporated

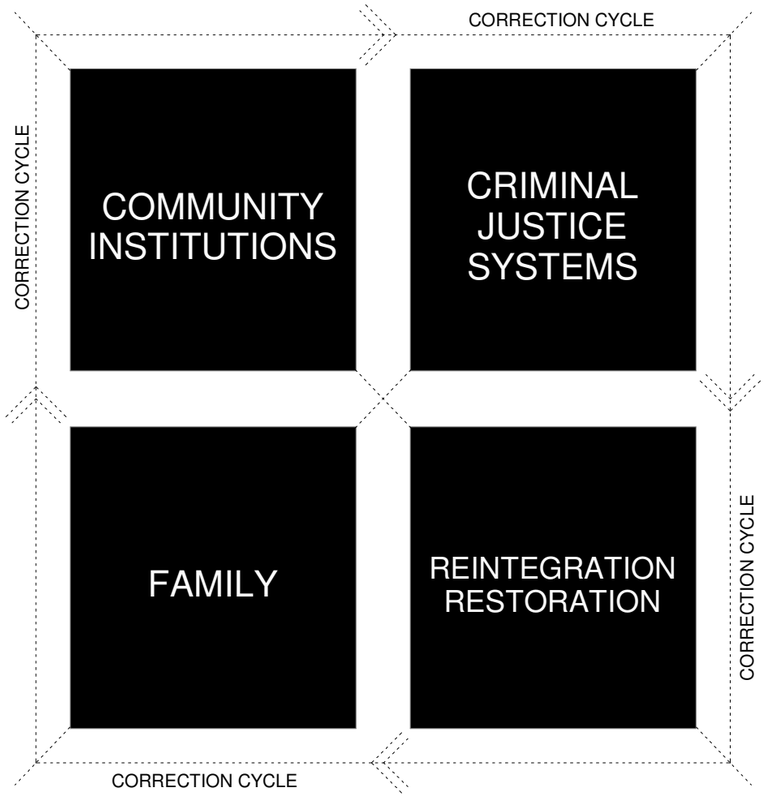


Figure 6.7 Program diagram (Author 2021)

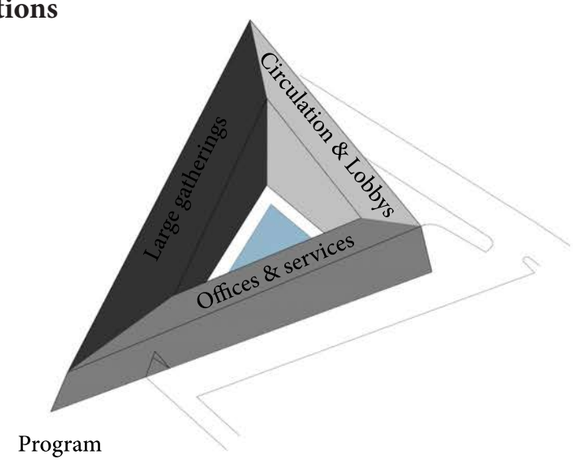
ONE THIRD TEMPLE (OTT)	Cnr Luipaard Street & Munsie Ave Krugersdorp			**OTT**
Building population	Minimum	Ideal	Capacity	
No of parolees per quarter (3 Months)	40	50	70	
No of staff members	10	20	30	
No of security personel	10	15	20	
APPROX. AREA			**9162m2**	

PROGRAMME (Persons)	**Area m2**	**Quantity**	**Total area m2**	**Notes**
RESIDENTIAL (Parolees 70)			**2192**	The residential third of the building housing inmates
Entrance foyer visitors center & administration	200	1	200	Entrance foyer dealing with parolee administration and visitors
Common room & gallery	50	4	200	Common room (lounge) & Gallery for art therapy & recreation
Study & studio	50	4	200	Study & studio for parolees to work & study
Gardens (rainwater harvesting)	50	2	100	Recreational garden with rain water harvesting systems
Gym (open to inmates)	200	1	200	Gymnasium (attached to prison grounds) for inmates & parolees
Therapy/Meditation spaces	50	2	100	Meditation & therapy spaces for parolees
Dormitories (Single room)	12	10	120	Private private for medium to high risk parolees
Dormitories (Sharing room)	25	30	750	Sharing rooms for low to medium risk parolees
Security	12	2	24	Security for parolees & residential third
Kitchen	25	4	100	Kitchens for parolees & security
Laundry	12	4	48	Laundry for parlees
Ablutions	25	4	100	Ablutions for residential third
Service yard	50	1	50	Service area for residential third
RESIDENTIAL (Staff 10)			**424**	Extended residential third of the building housing overnight staff
Foyer offices & administration)	50	1	50	Foyer dealing with staff & building administration
Dormitories (Single room)	25	10	250	Private rooms for overnight staff
Security	12	1	12	Security room for staff
Kitchen	50	1	50	Kitchen for staff
Laundry	12	1	12	Laundry for staff
Ablutions	25	2	50	Ablutions for staff
Service yard	50	1	50	Service yard for staff
MEDICAL (Intensive care parolees 10)			**871**	The medical third of the building dealing with counseling and housing ill parolees
Foyer & administration	50	1	50	Foyer dealing with intensive care parolees administration
Common room & gallery	25	1	25	Common room (lounge) & Gallery for art therapy & recreation
Counseling room	16	4	64	Counseling rooms for parolees
Offices	16	2	32	Offices for intensive care parolees staff
Wards (open to ill inmates)	25	4	100	Intensive care & quarintine units for mentally or physically ill parolees
Gardens (rainwater harvesting)	50	1	50	Recreational garden with rain water harvesting systems
Wellness center (open to public 20)	250	1	250	Wellness center with juice bar and spa for exiting parolees and public
Therapy/Meditation spaces	50	1	50	Meditation & therapy spaces for intensive care parolees
Security	25	1	25	Security for parolees & medical third
Kitchen	25	1	25	Kitchens for intensive care parolees & security
Ablutions	25	4	100	Ablutions for medical third
Service yard	50	2	100	Service area for medical third
SPIRITUAL (Parolees 70)			**1275**	The spiritual third in the building dealing with integration and religious practice
Foyer	50	1	50	Entrance foyer dealing with church administration and visiting inmates
Board room	25	1	25	Boardroom for staff and parolees
Common room & gallery	25	1	25	Common room (lounge) & Gallery for staff
Library	100	1	100	Library for parolees
Auditorium (100)	200	1	200	Auditorium for parolees and staff
Church (Open to inmates & public 150)	300	1	300	Church for parolees, visiting inmates and external congregrations
Santuary Gardens	200	1	200	Gardens for parolees and external congregations
Dinning hall (100)	200	1	200	Dinning hall for parolees
Kitchen	50	1	50	Kitchen for parolees
Ablutions	25	2	50	Ablutions for spiritual third
Water Purification system	25	1	25	water purification systems equipment in service yard
Service yard	50	1	50	Service area for spiritual third
EXTERIOR (100)			**4400**	The exterior part of building dealing with access and landscaping
Parking	16	150	2400	Visitors and staff parking
Landscape	1000	1	1000	Landscaping around site
Storm water drain rejuvination	1000	1	1000	Area dealing with storm water & drain
TOTAL m2	4858	274	**9162**	

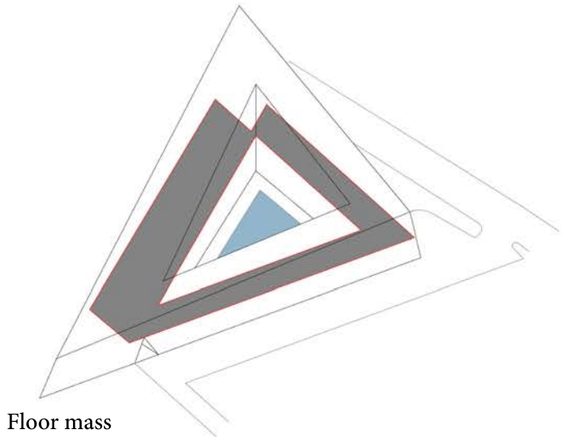
Figure 6.8 Program sheet (Author 2021)

Technical Systems

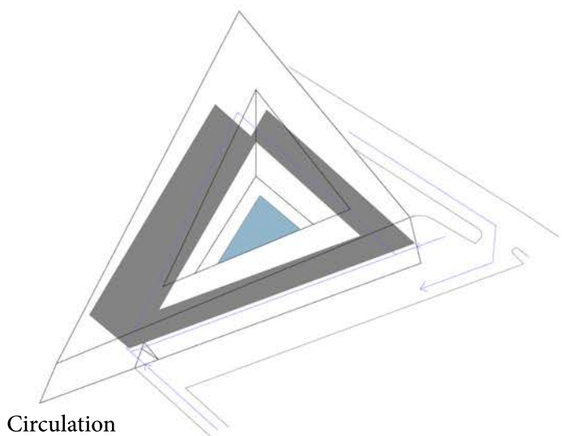
axo explorations



Program



Floor mass



Circulation

Figure 6.9 axo exploration (Author 2021)







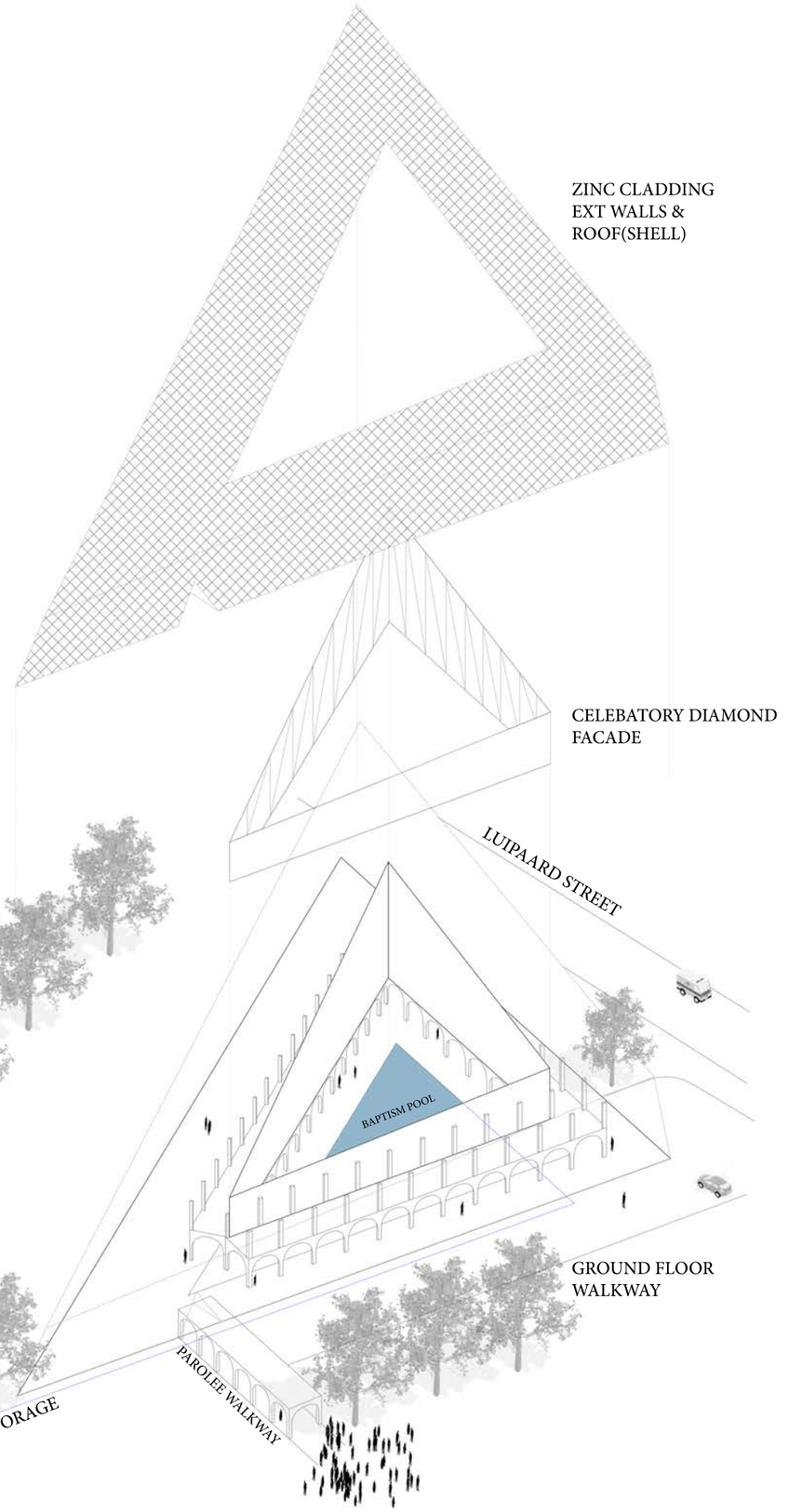
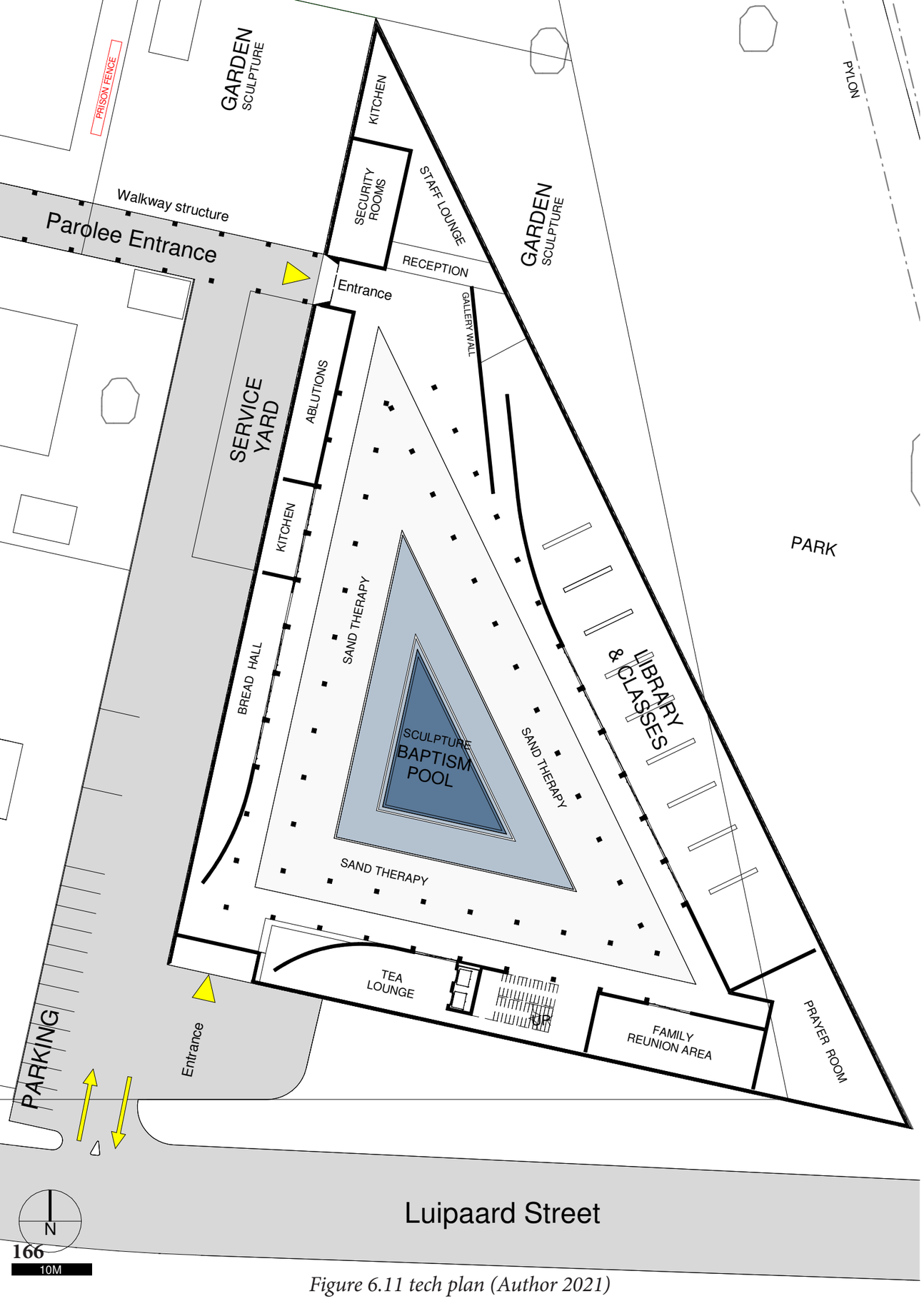


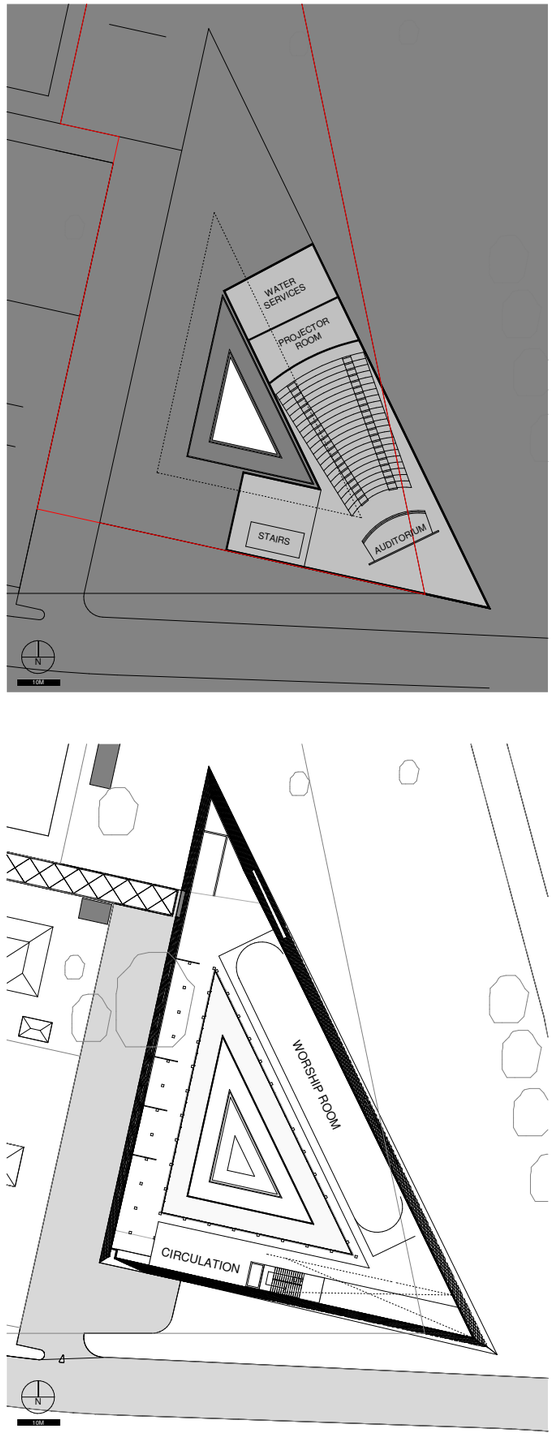
Figure 6.10 axo full exploration (Author 2021)

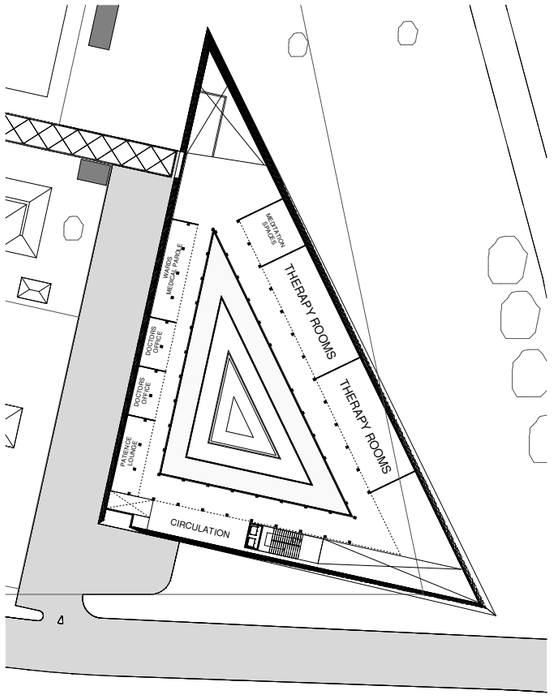


PYLON

PARK

Figure 6.11 tech plan (Author 2021)





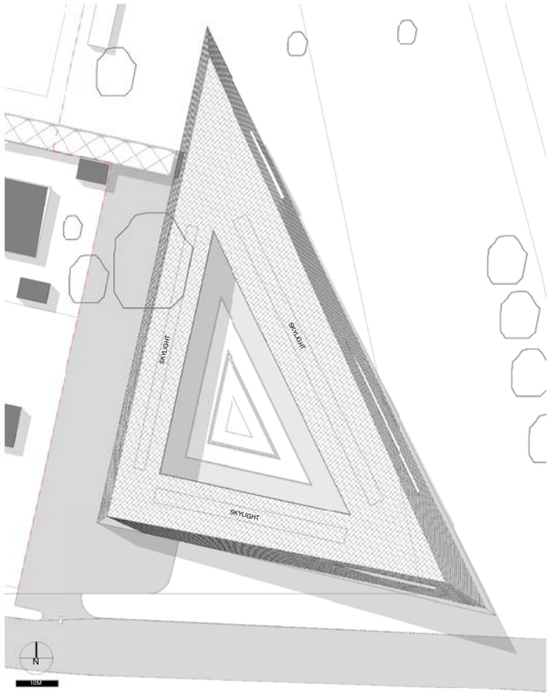


Figure 6.12 tech plans (Author 2021)

Technical Systems

Perspectives

The triangular form developed through the design development process is further explored through the interior courtyard facade . The triangular glass panels in the facade can be angled differently in order to achieve "intricate" reflections of the water in the courtyard thus visually enhancing the water mass in the courtyard and the contents of the building

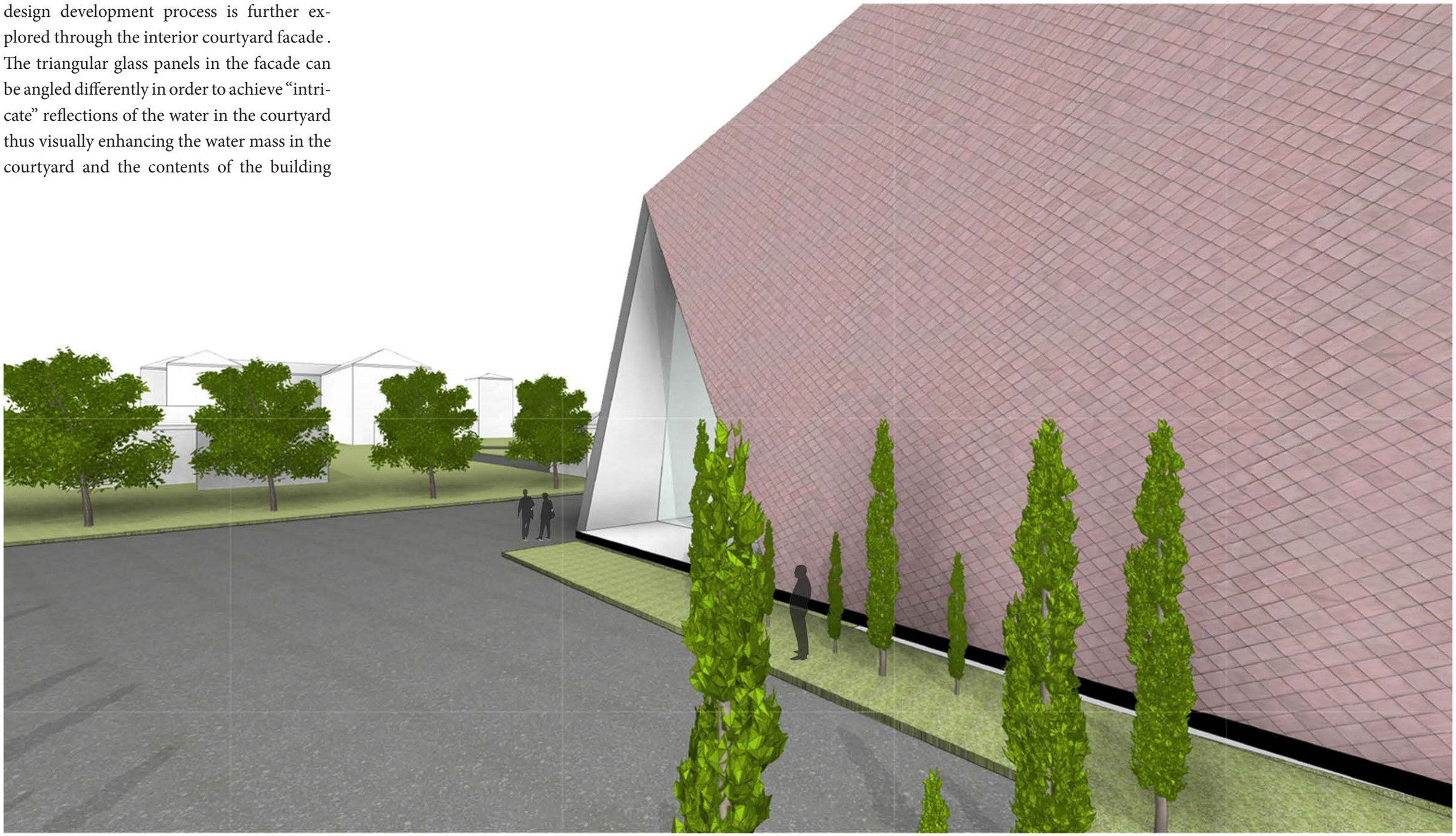


Figure 6.13 Ext perspective (Author 2021)

Technical Systems

Sections

The triangular form developed through the design development process is further explored through the interior courtyard facade . The triangular glass panels in the facade can be angled differently in order to achieve “intricate” reflections of the water in the courtyard thus visually enhancing the water mass in the courtyard and the contents of the building

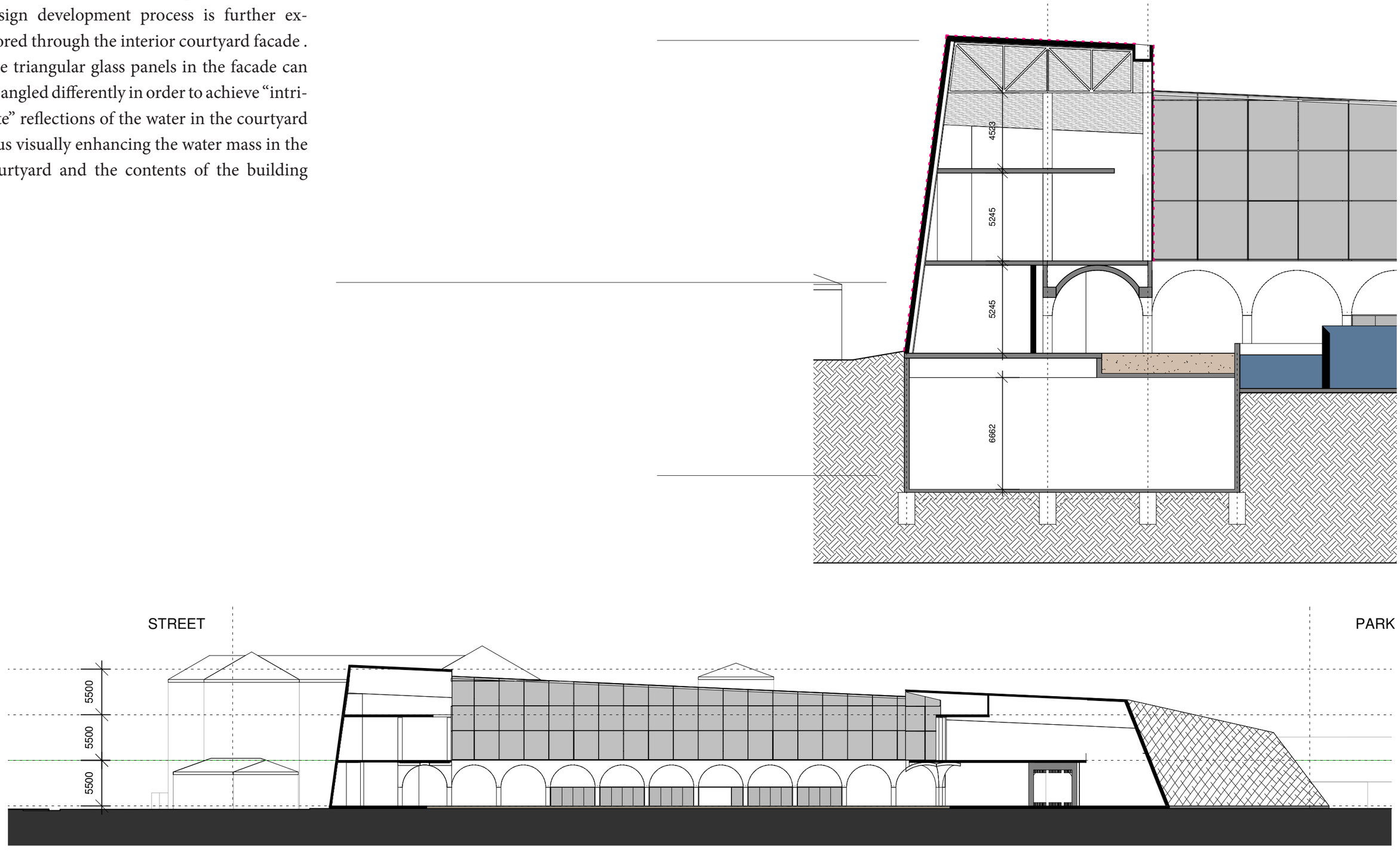


Figure 6.14 Tech sections (Author 2021)

Technical Systems

Detailed sections

Ground detail

Concrete

Roof detail

Roof corner

Detailed axo

Envelope layers

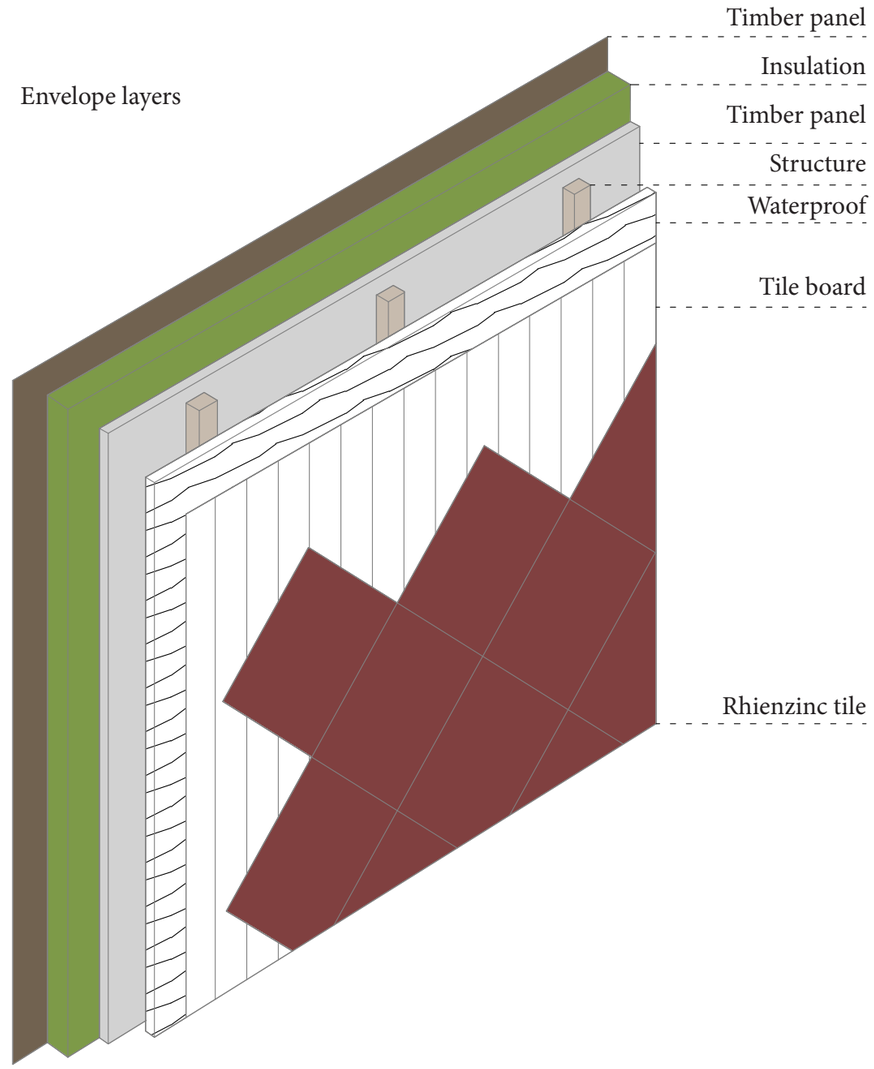


Figure 6.15 Tech detailed sections (Author 2021)

Courtyard perspective

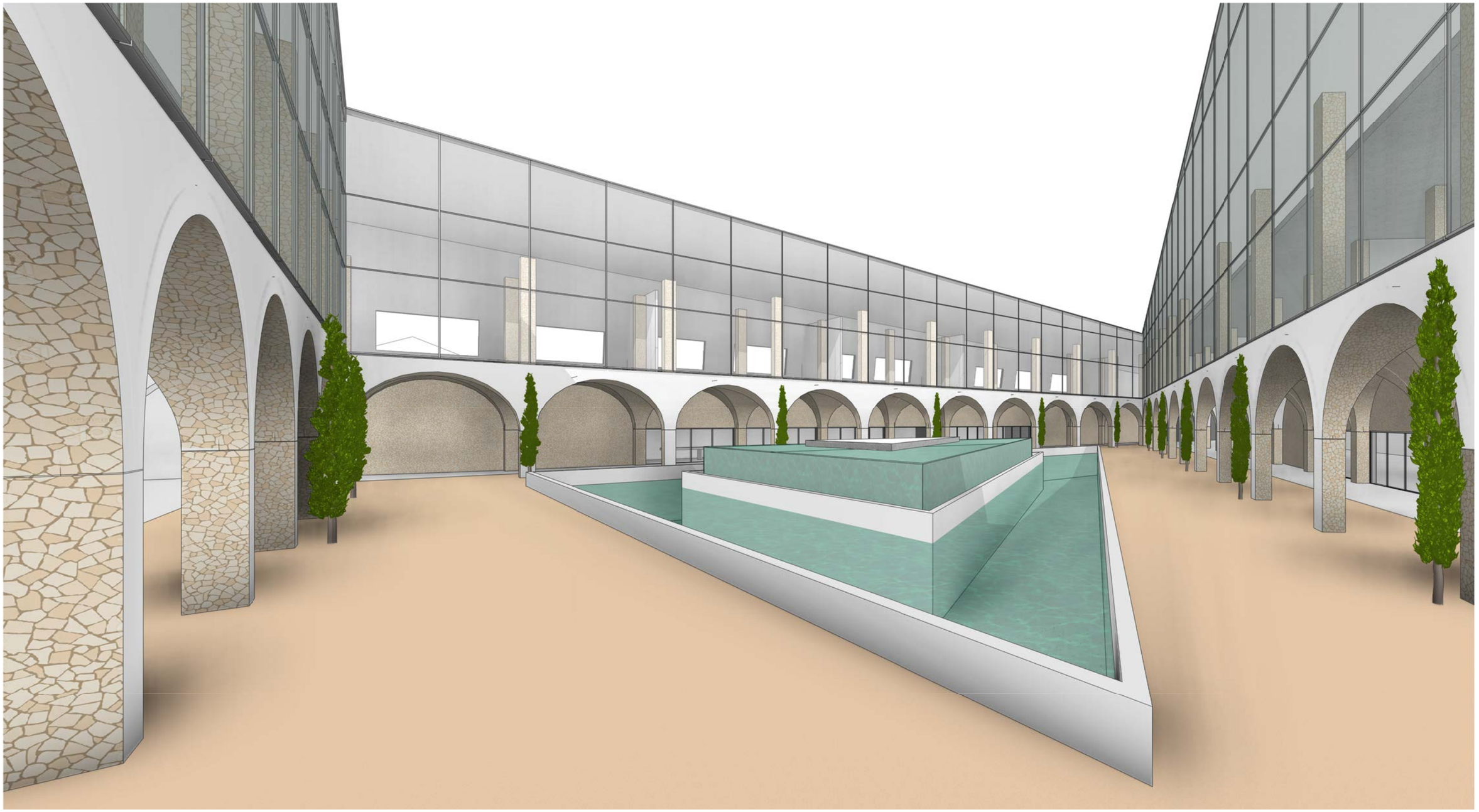


Figure 6.16 Courtyard perspective (Author 2021)

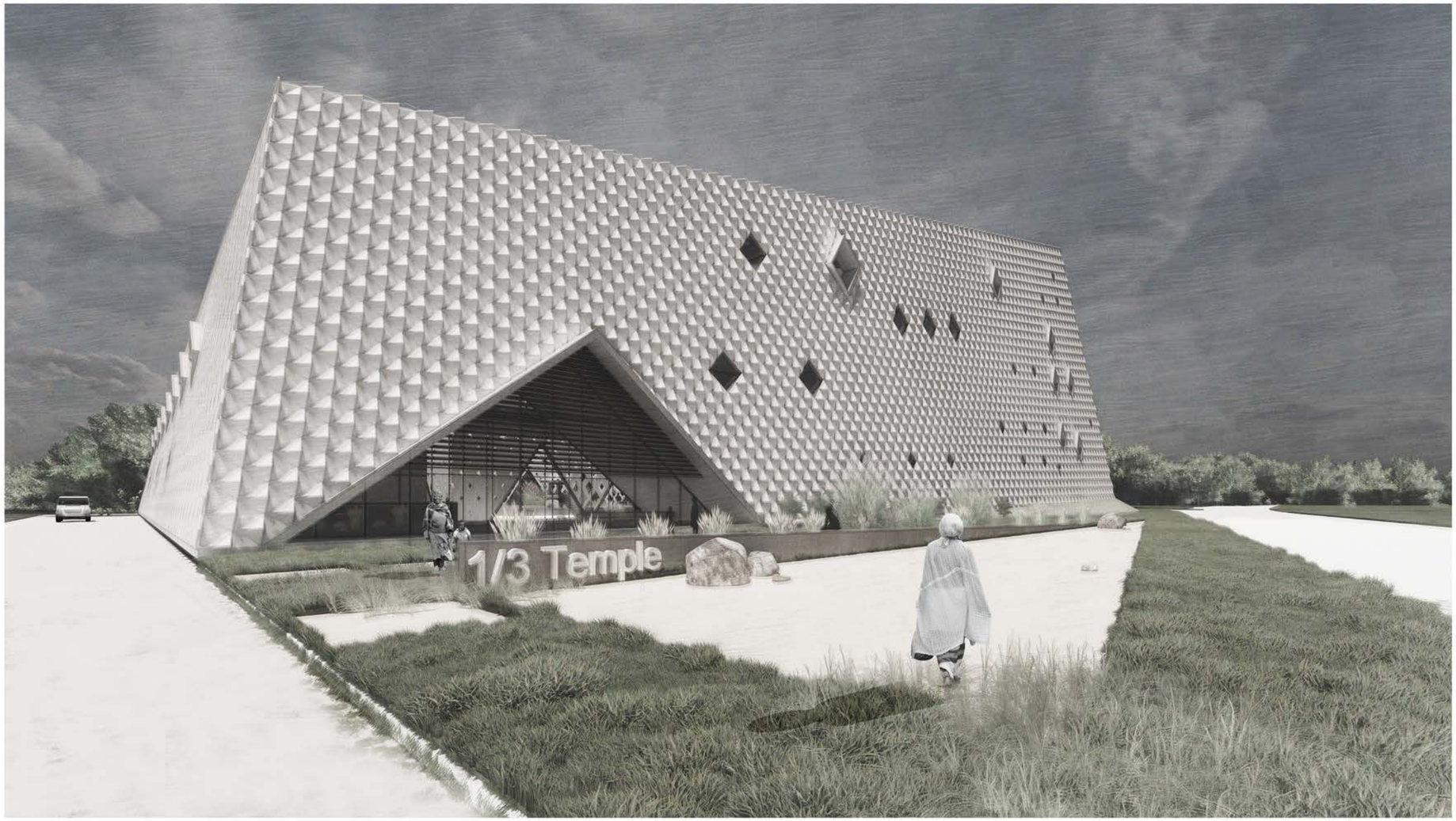
Conclusion
The end

The triangular form developed through the design development process is further explored through the interior courtyard facade . The triangular glass panels in the facade can be angled differently in order to achieve “intricate” reflections of the water in the courtyard thus visually enhancing the water mass in the courtyard and the contents of the building

Chapter 7
Final Design

The final design showcases the latest iteration of the design

Chapter 7
One Third Temple



Public entrance from Luipaard Street

Fig.7.1 Luipaard street render

Chapter 7
Site satelite photo

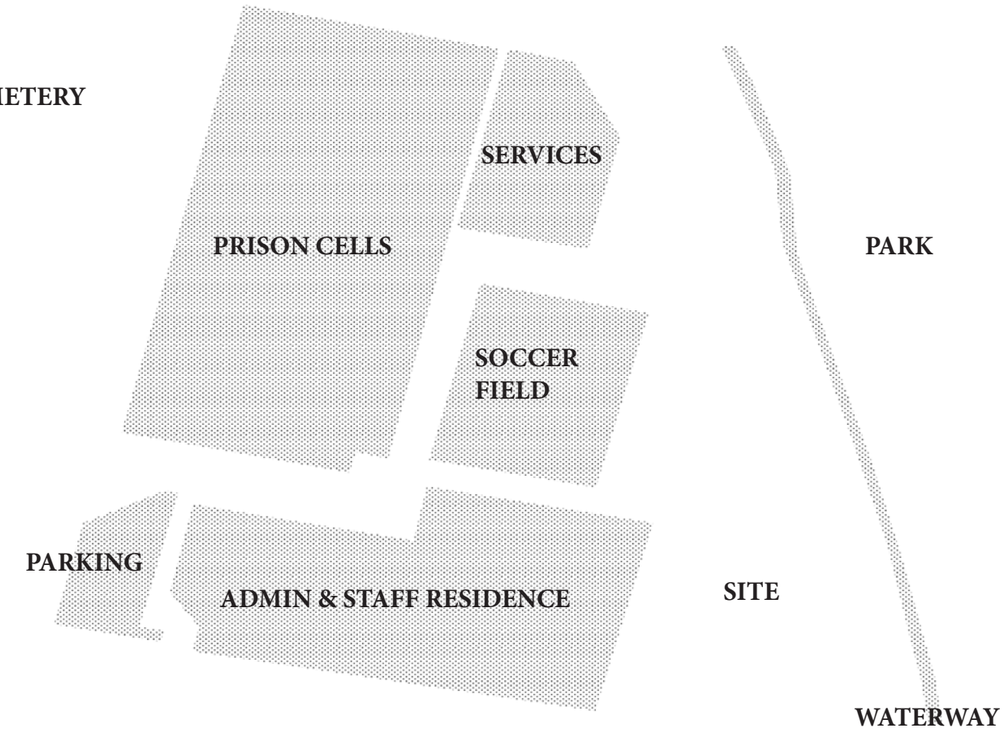


Fig.7.2 Krugersdorp Satellite (Google Maps)

Chapter 7

Site drawings

Krugersdorp correctional services makes for a good site as the immediate context provides opportunities for social integration & a visual architectural integration into the city, raising questions about the correctional services institute,which is the goal.



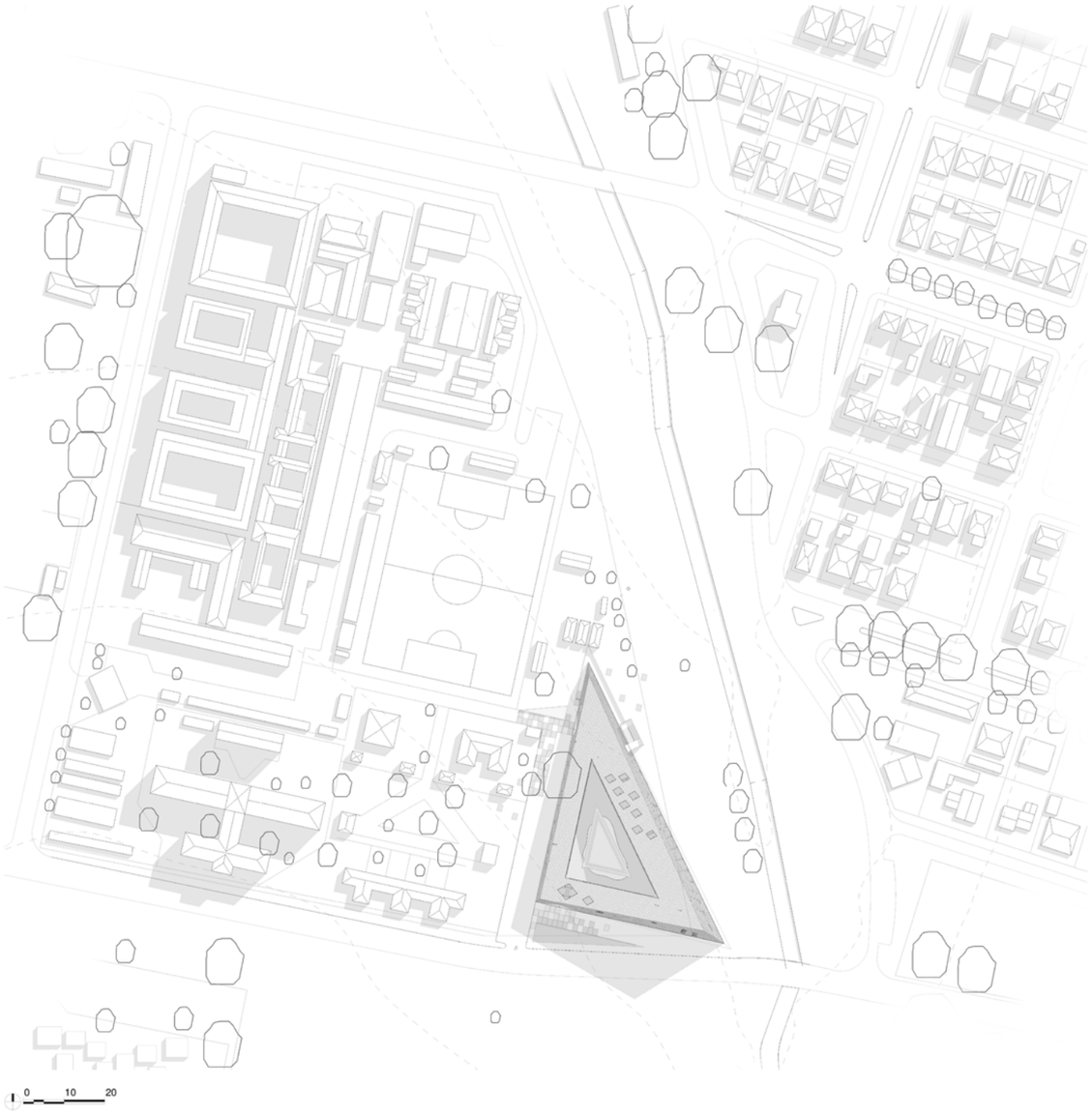


Fig.7.3 Site plan

Chapter 7
Ground Floor

This floor primarily deals with the public activities involving, staff, parolees and visitors.

Legend
1 VISITORS & STAFF RECEPTION
2 DINNING HALL
3 KITCHEN
4 PAROLEE WC & CHANGING ROOMS
5 PAROLEE RECEPTION
6 PAROLEE PROCESSING ROOM
7 STAFF OFFICES & STORAGE
8 FAMILY ROOMS
9 VISITORS & STAFF WC & CHANGING ROOMS
10 CIRCULATION LOUNGE

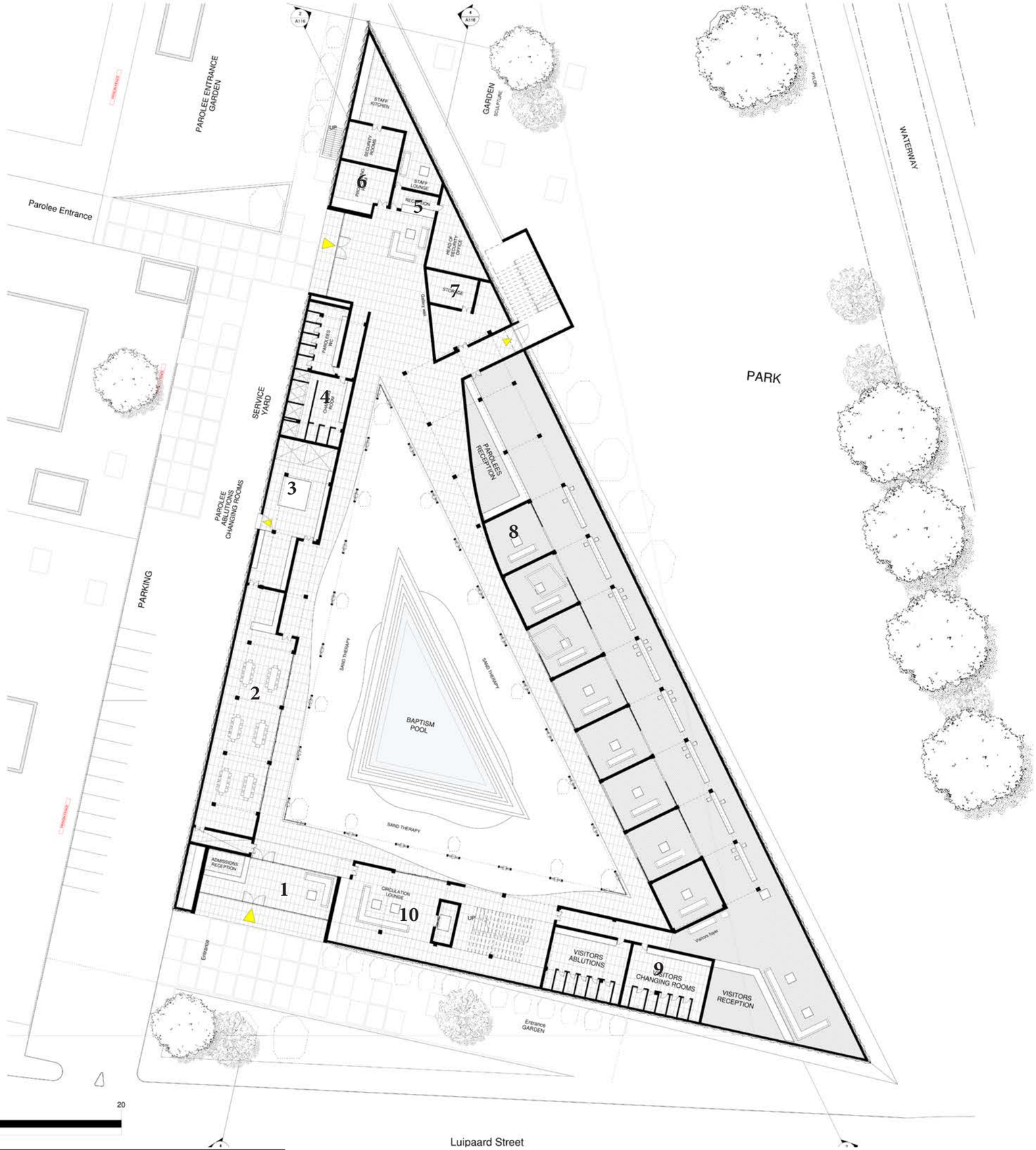


Fig.7.4 Ground Floor (Author 2021)

Chapter 7

First Floor

This floor primarily deals with the semi public activities of the building for parolee and staff use.

Legend

1 CIRCULATION LOUNGE
2 RECEPTION
3 OFFICES
4 XRAY ROOM
5 PAROLEE WARDS
6 WC & CHANGING ROOMS
7 LIBRARY
8 CLASSROOM
9 PRAYER ROOM

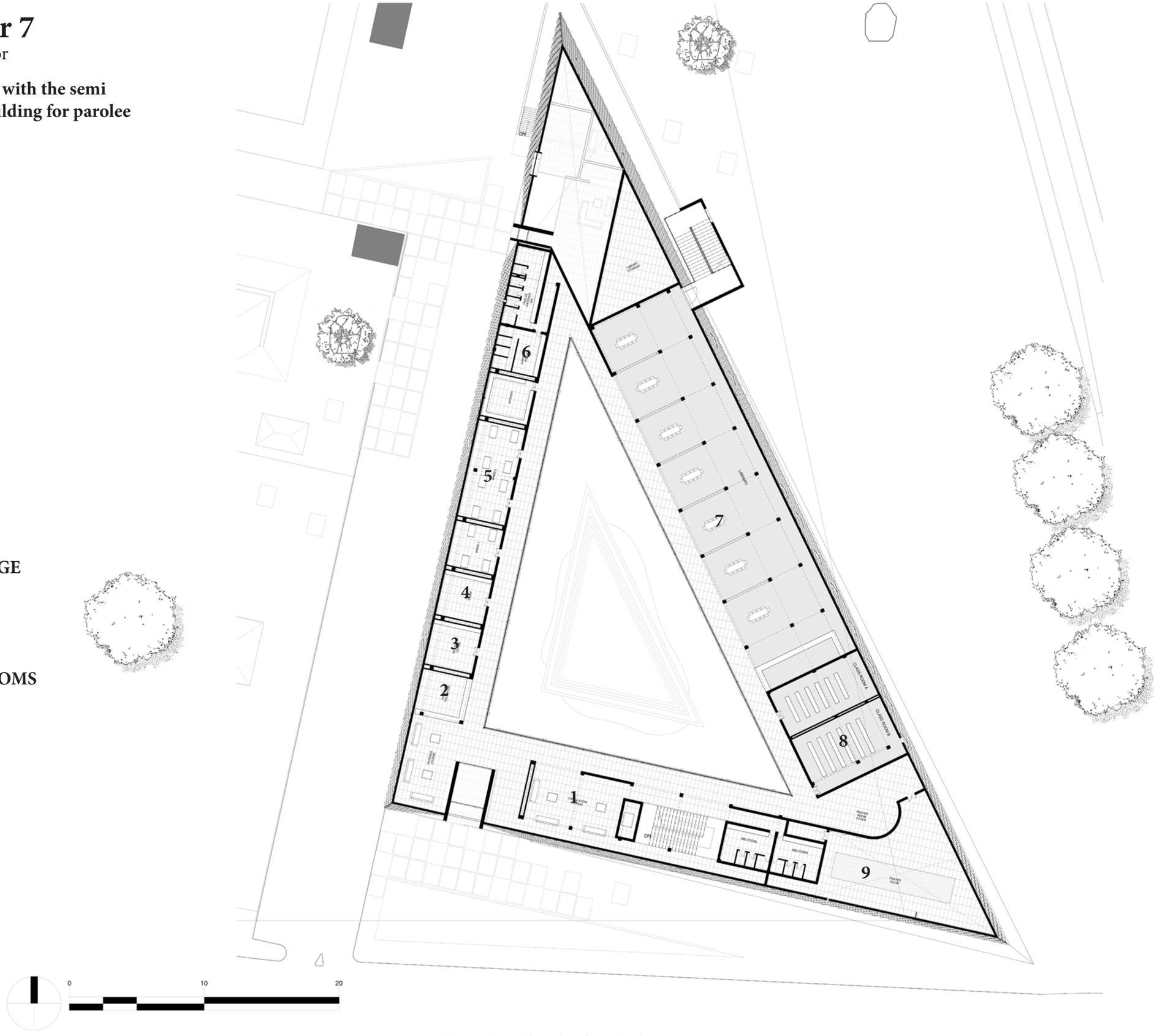


Fig.7.5 First Floor (Author 2021)

Chapter 7

Second Floor

This floor primarily deals with the semi public activities of the building mainly for parolees and staff.

Legend

1 CIRCULATION LOUNGE
2 OFFICES
3 WC
4 WORSHIP HALL
5 RITUALS ROOM

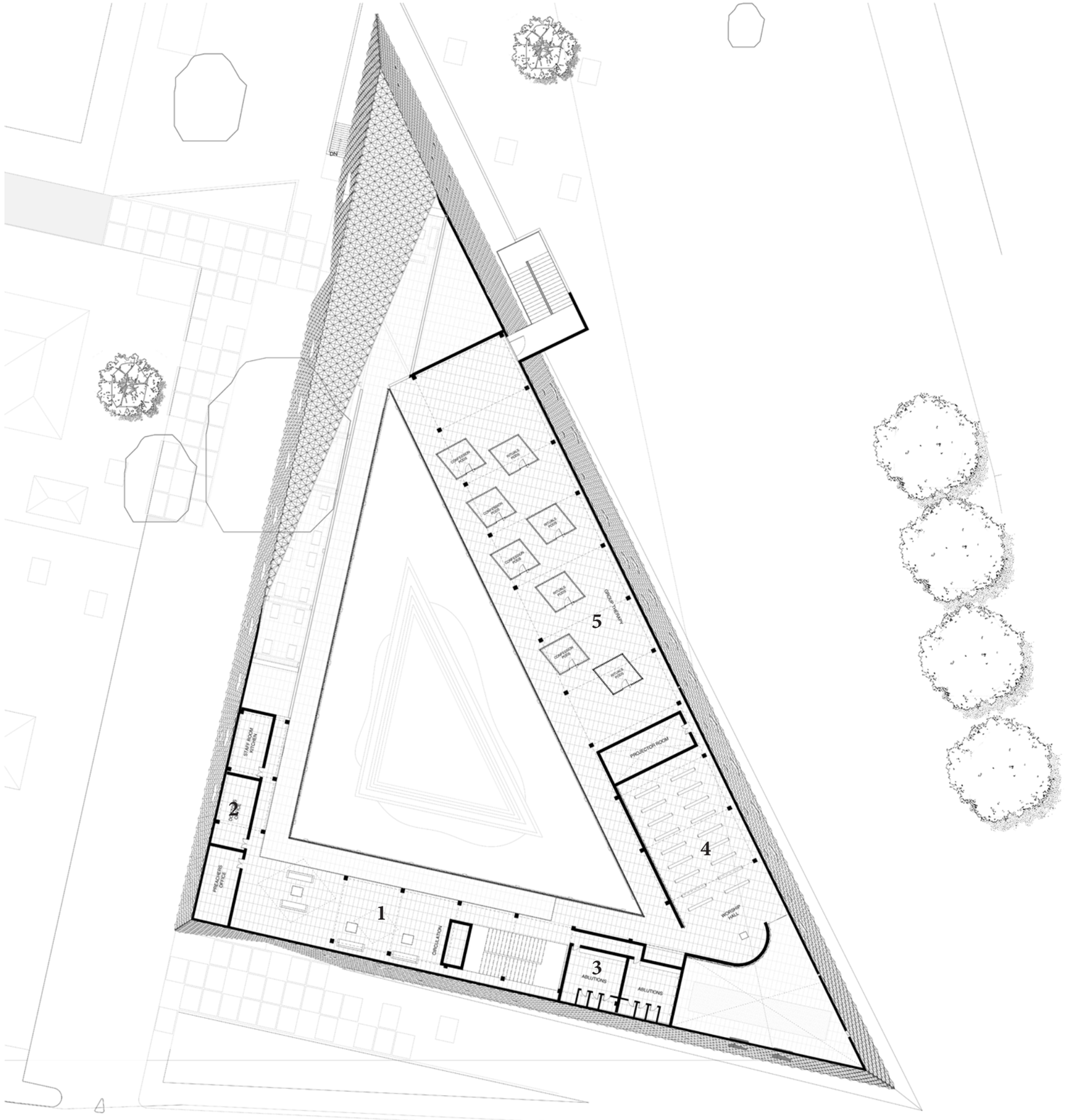
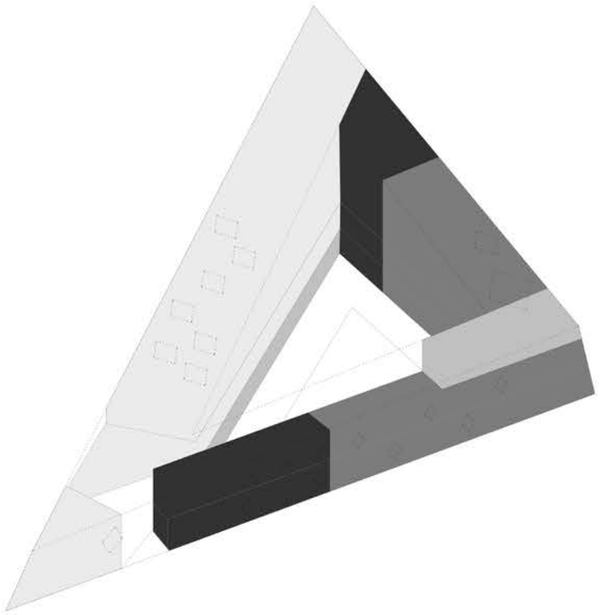


Fig.7.6Second Floor (Author 2021)

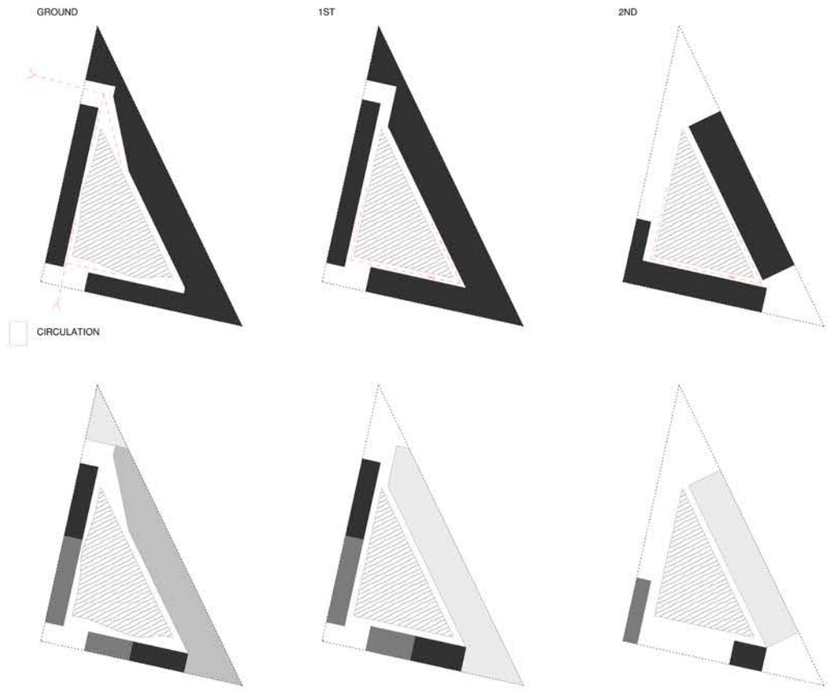
Chapter 7
Second Floor

Axonometric

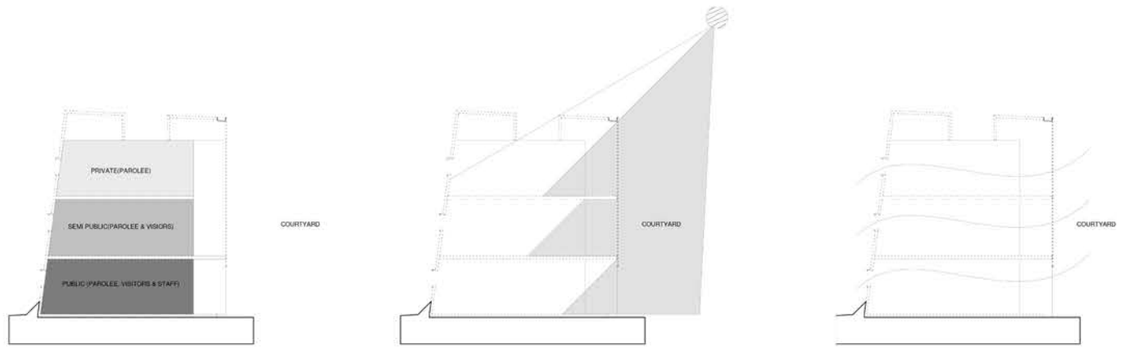




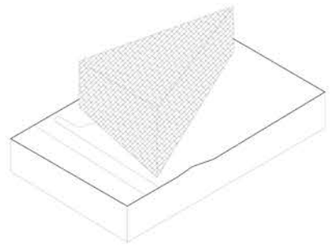
Circulation

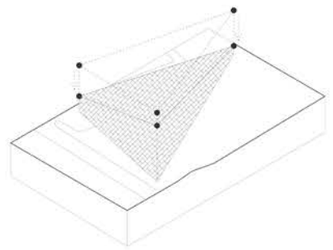


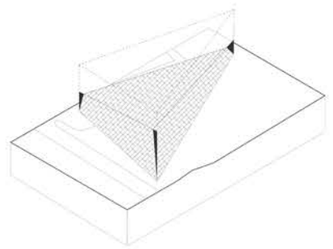
Program

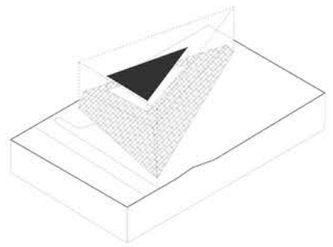


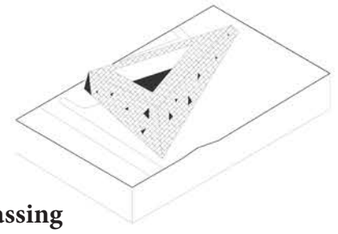
Section analysis











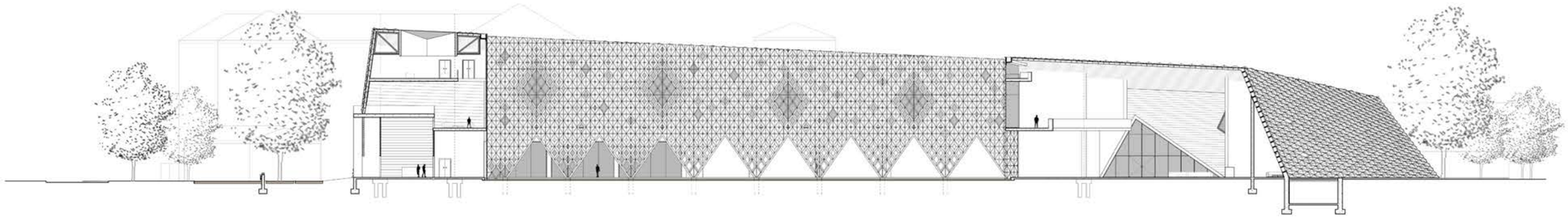
Massing

Fig.7.7 Diagrammatic analysis (Author 2021)

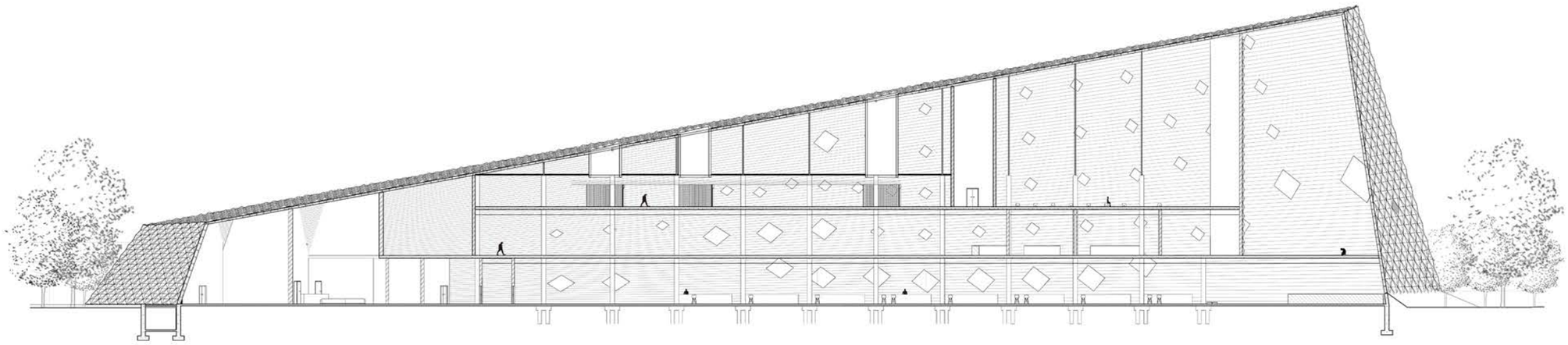
Chapter 7

Section AA & BB

Section through courtyard and large public areas of building



Section AA



Section BB

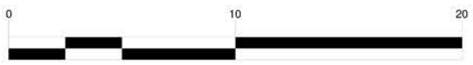
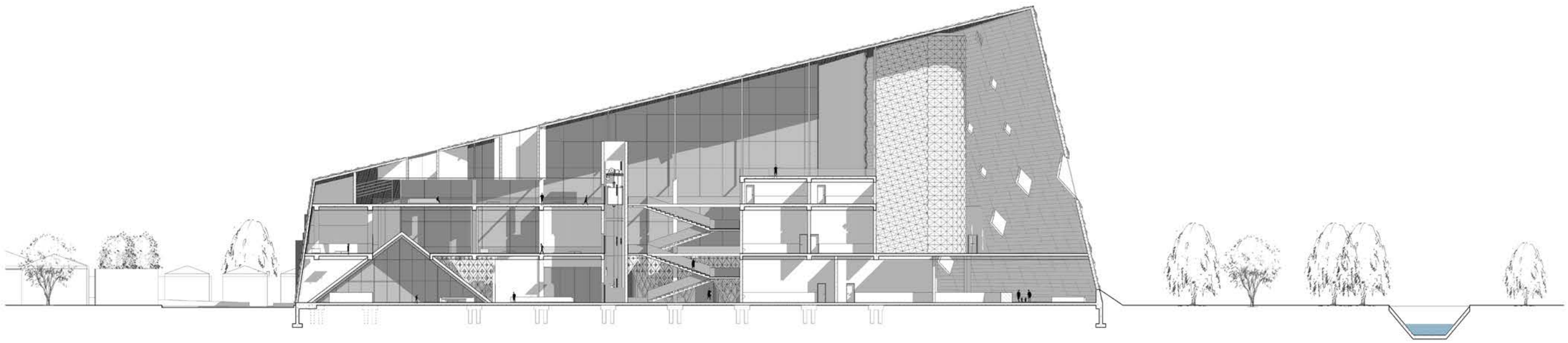


Fig.7.8 Section aa & bb (Author 2021)

Chapter 7

Section CC

This section cut through the prayer room, circulation spaces and the public entrance reception



Section CC

Fig.7.8 Section cc (Author 2021)

Chapter 7
3D Section

The 3d section cuts through the courtyard baptism pool. The section diagrammatically shows the build up and materiality of the building.

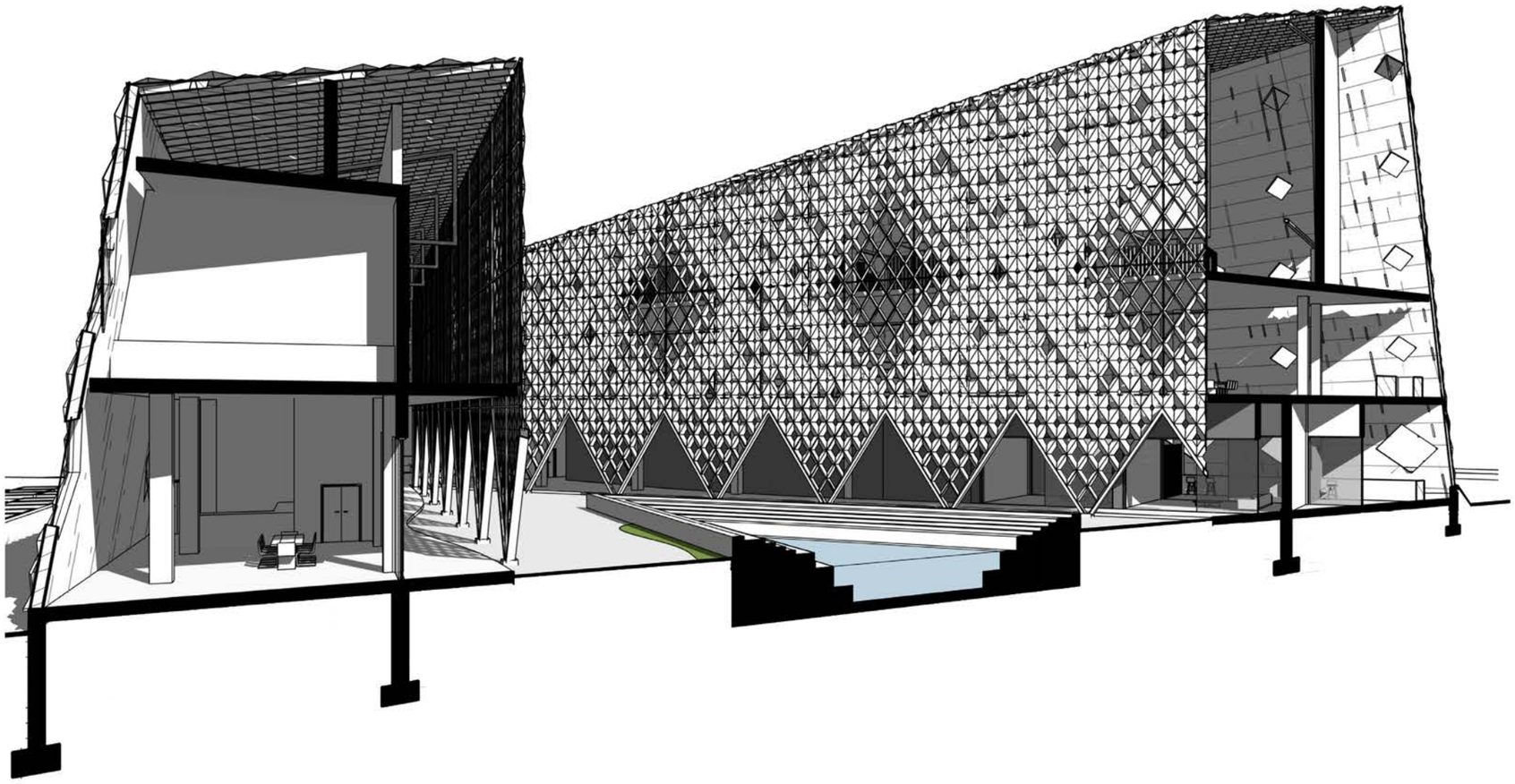


Fig.7.9 3d axo (Author 2021)

Chapter 7

East elevation

The east elevation faces the park while acting as a security barrier, at the same time encourages light into the building

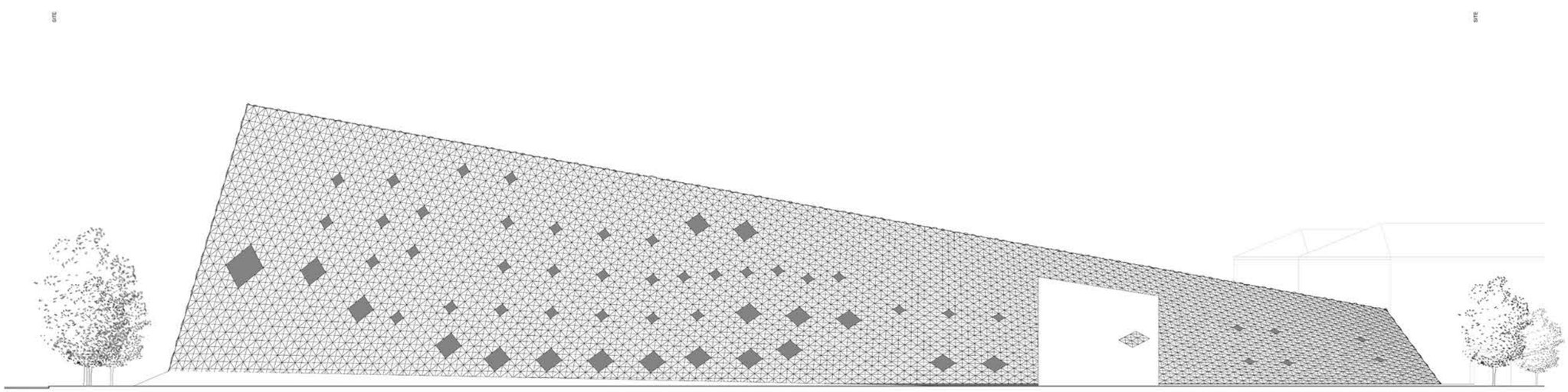




Fig.7.10 East elevation (Author 2021)

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South elevation

The south elevation faces Luipaard street and the mine dump that inspired the charette and form of the building, it also hosts the main visitors and staff entrance.

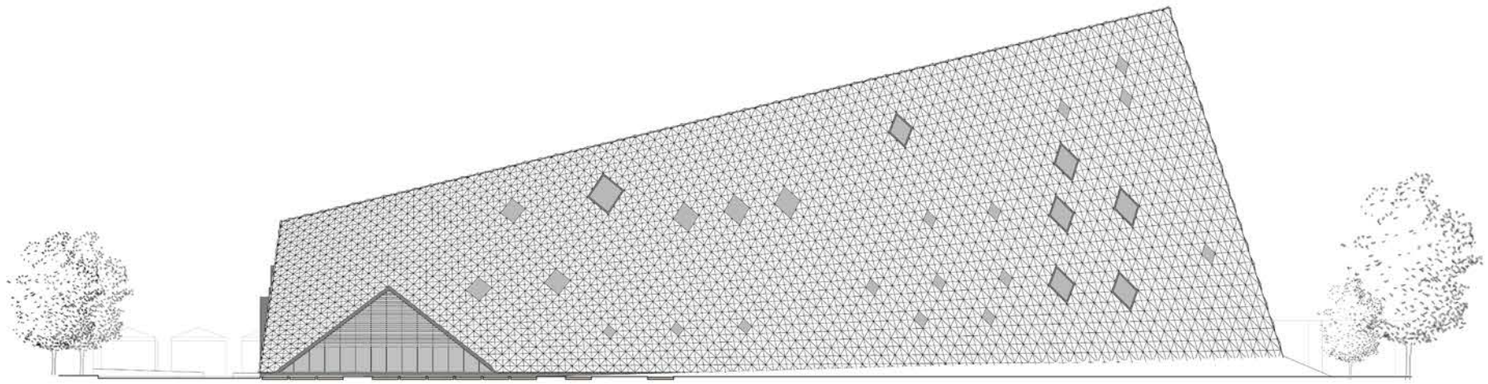




Fig.7.10 South elevation (Author 2021)

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West elevation

The west elevation faces Krugersdorp correctional facilities.

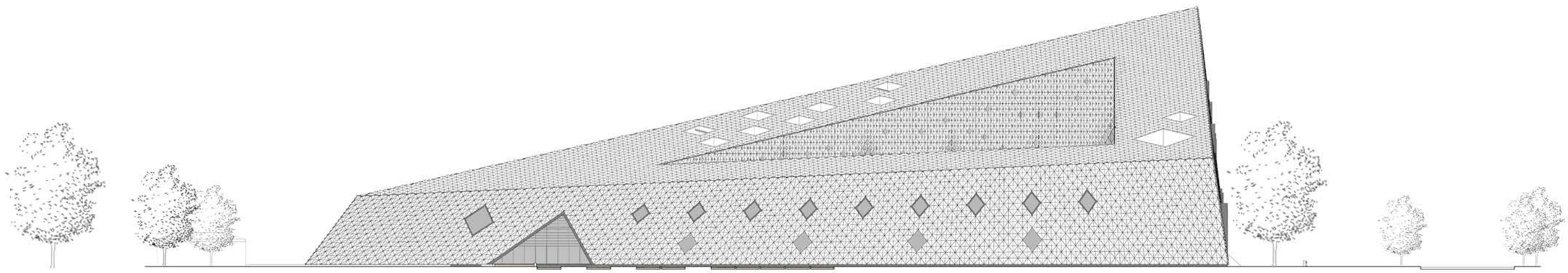


Fig.7.10 West elevation (Author 2021)

Chapter 7
Axonometric

An axonometric illustration parolees and staff populating buiding in context

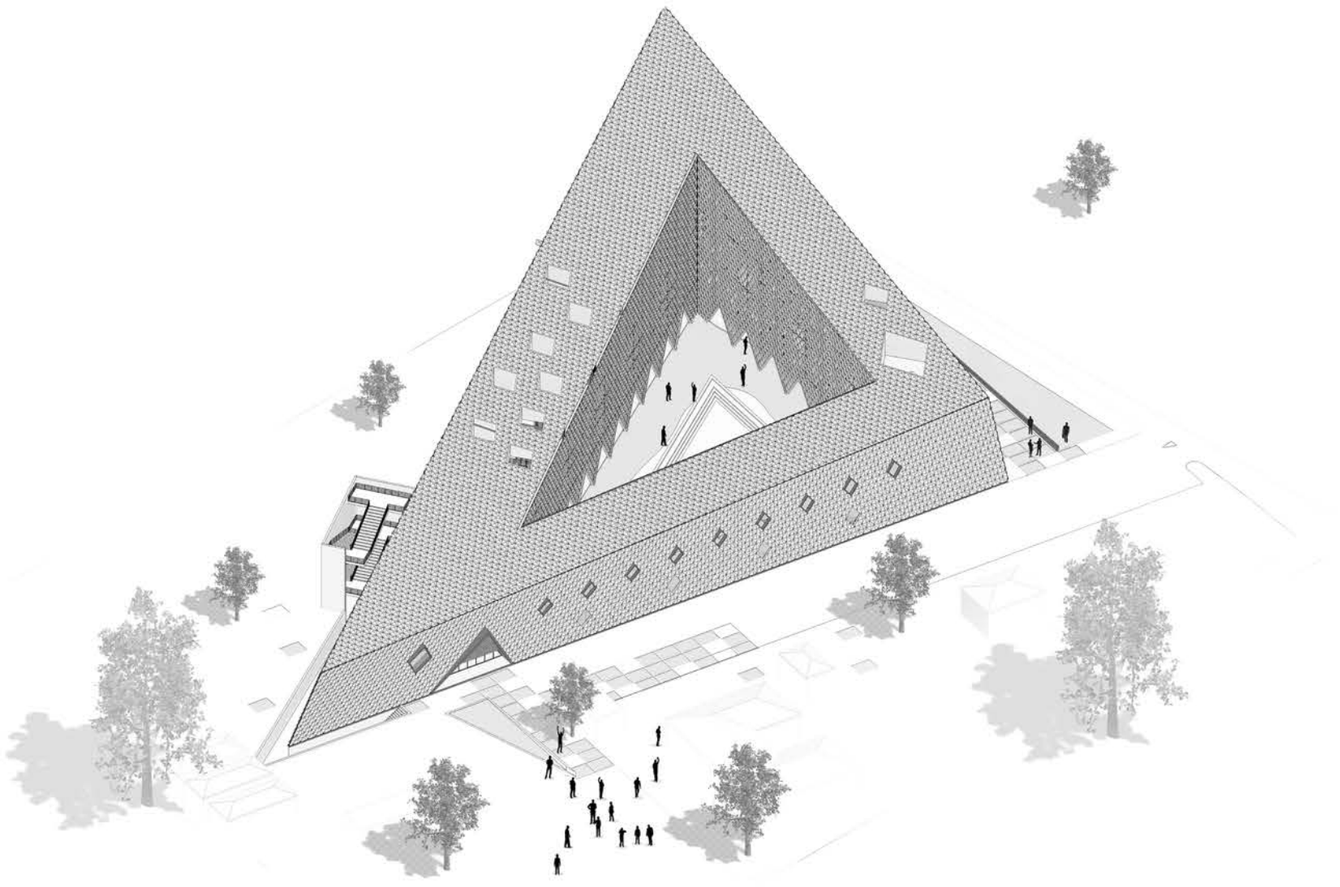
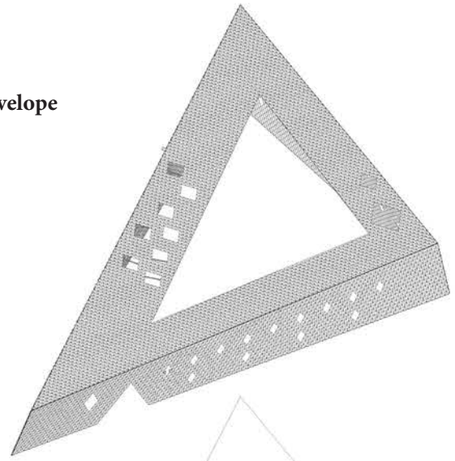


Fig.7.11 Context axo (Author 2021)

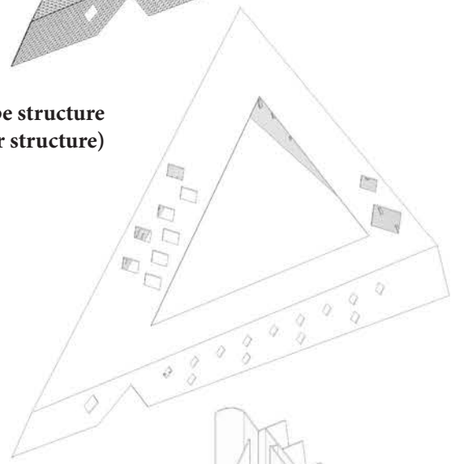
Zinc envelope



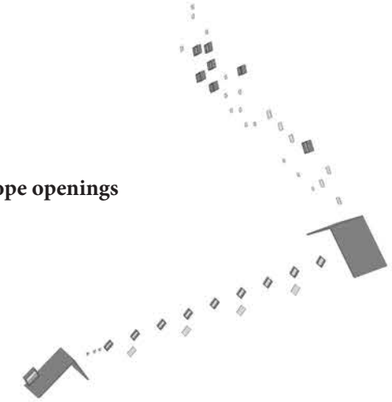
Roof openings



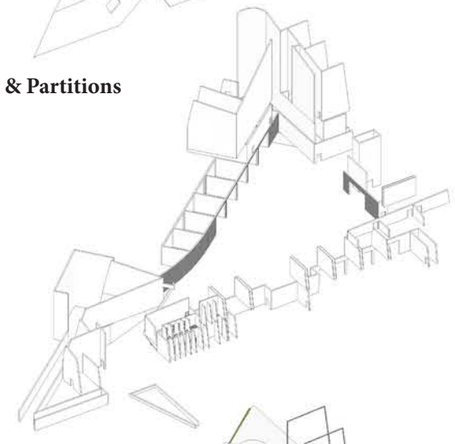
Envelope structure (Timber structure)



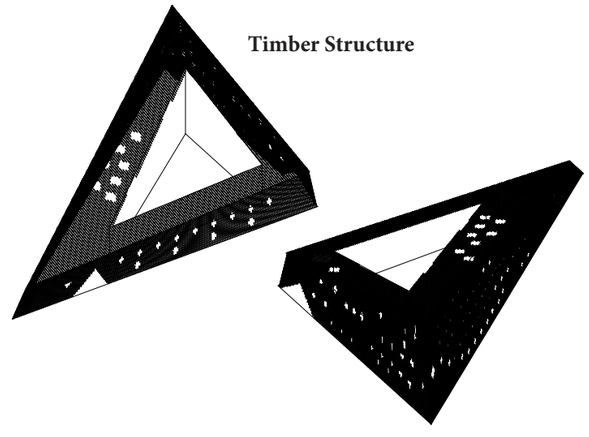
Envelope openings



Walls & Partitions



Timber Structure



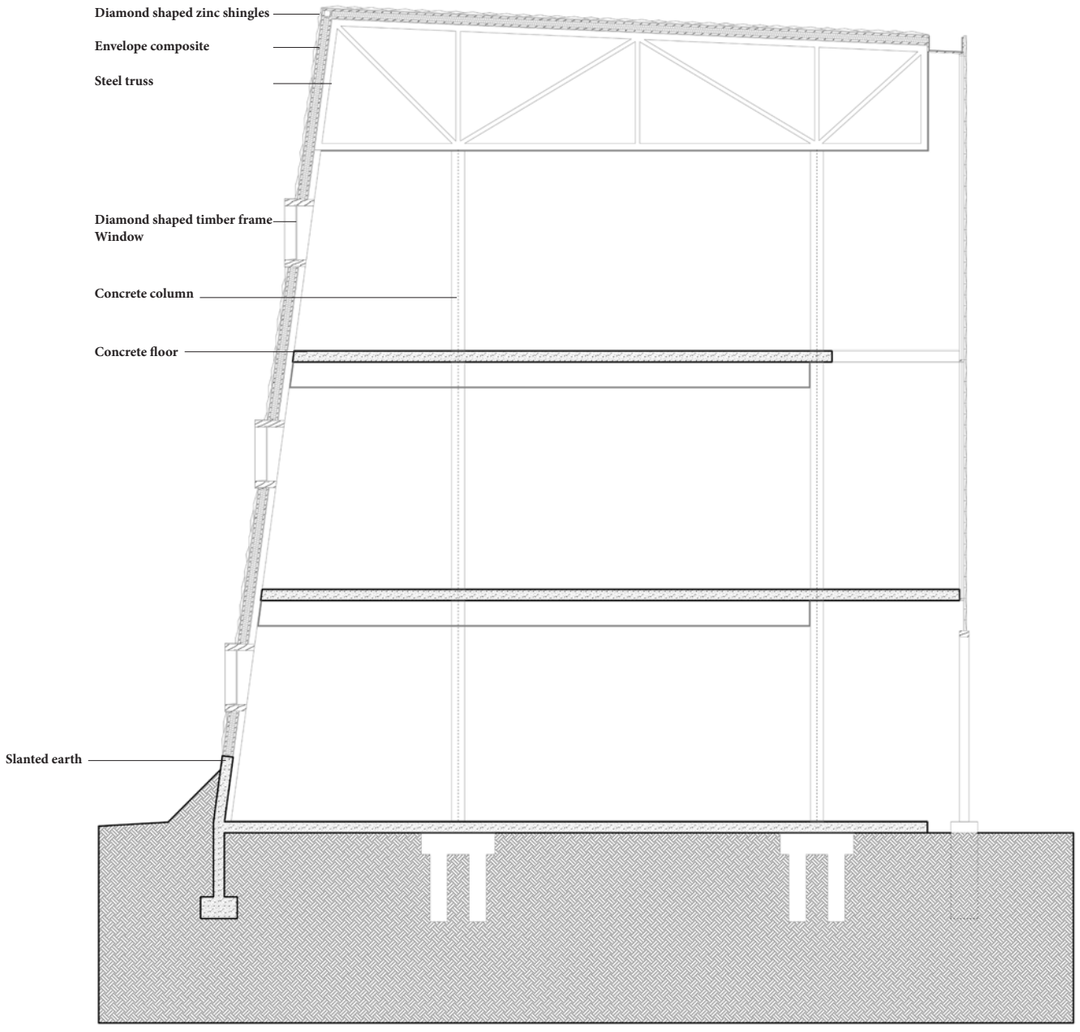
Structure & Floors

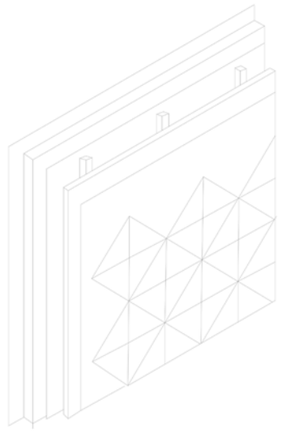


Fig.7.12 Exploded axo (Author 2021)

Chapter 7
Details

Section AA detail and axo





Envelope composite

Vapour Control Layer

Insulation

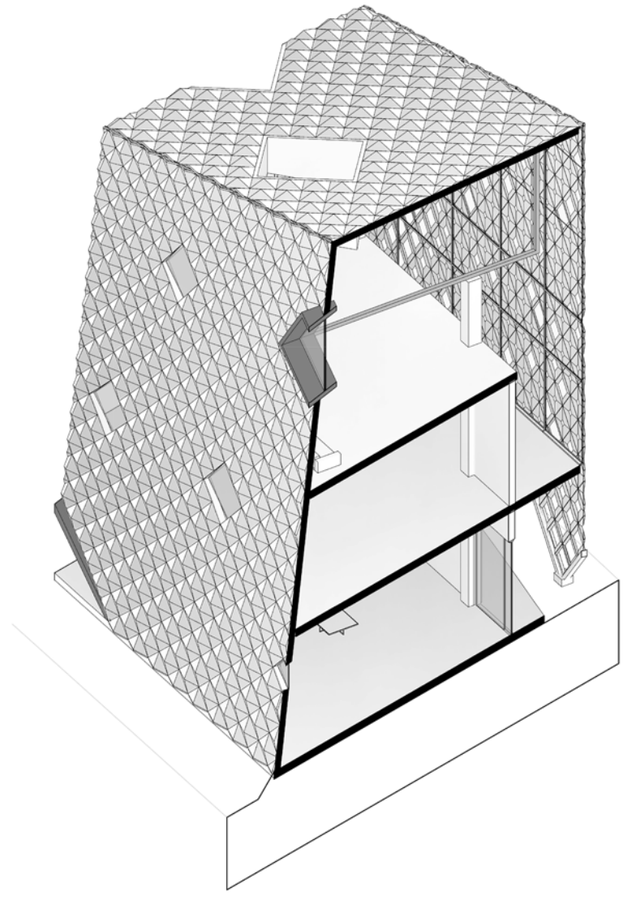
Breather Membrane

Timber Batten

18mm WBP Plywood

Breather Membrane

Diamond shaped zinc shingles



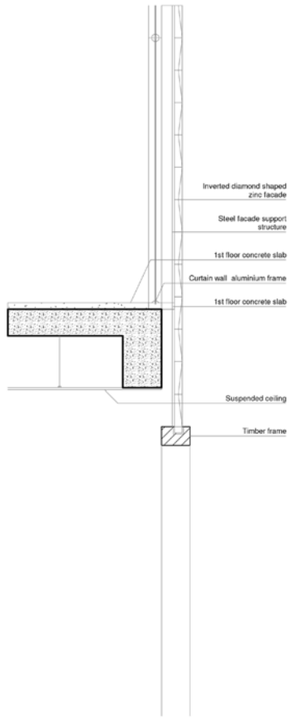
Rheinzinc convex diamond shingles envelope facade axo

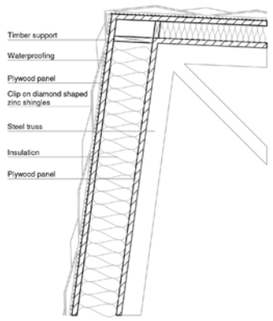
Fig.7.13 Detailed section aa (Author 2021)

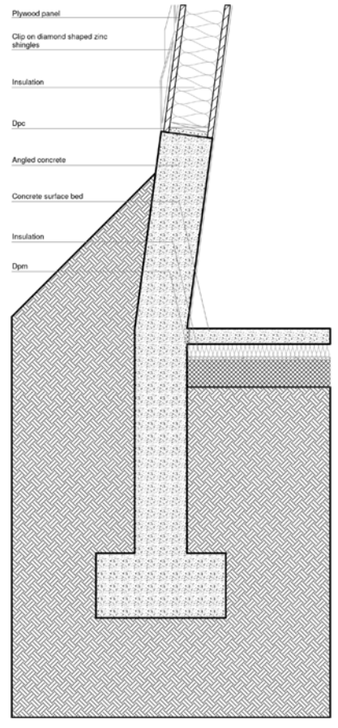
Fig.7.14 Detailed 3d section aa (Author 2021)

Chapter 7
Typical Details

Typical details unique to building







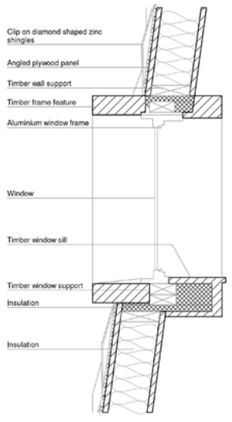
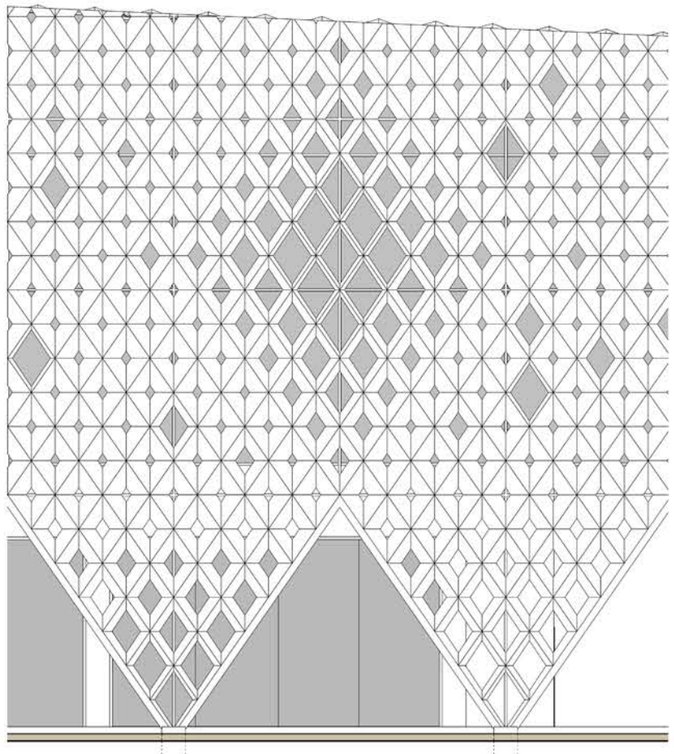
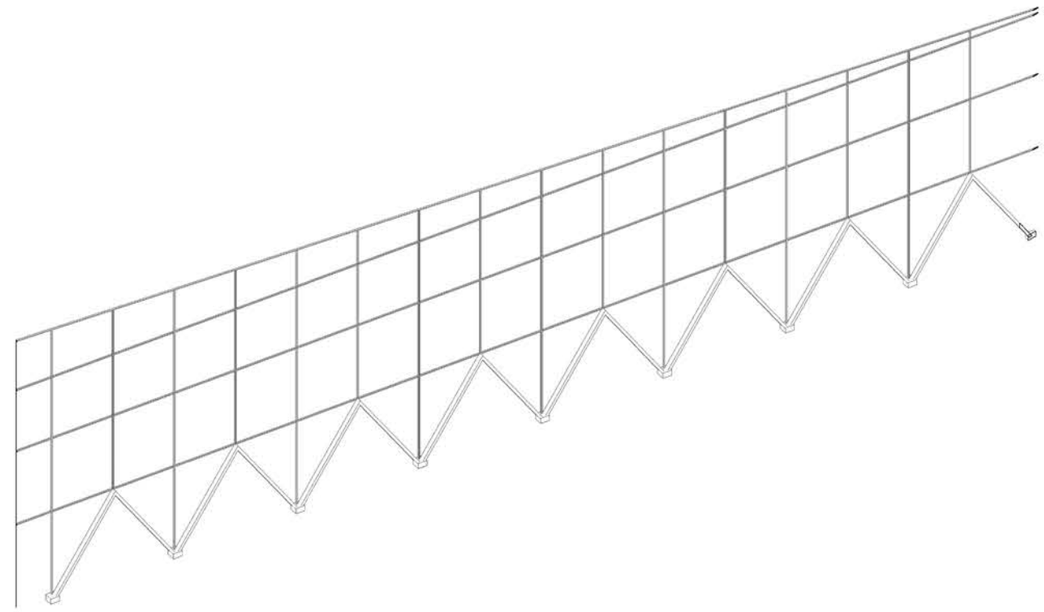


Fig.7.15 Typical details (Author 2021)

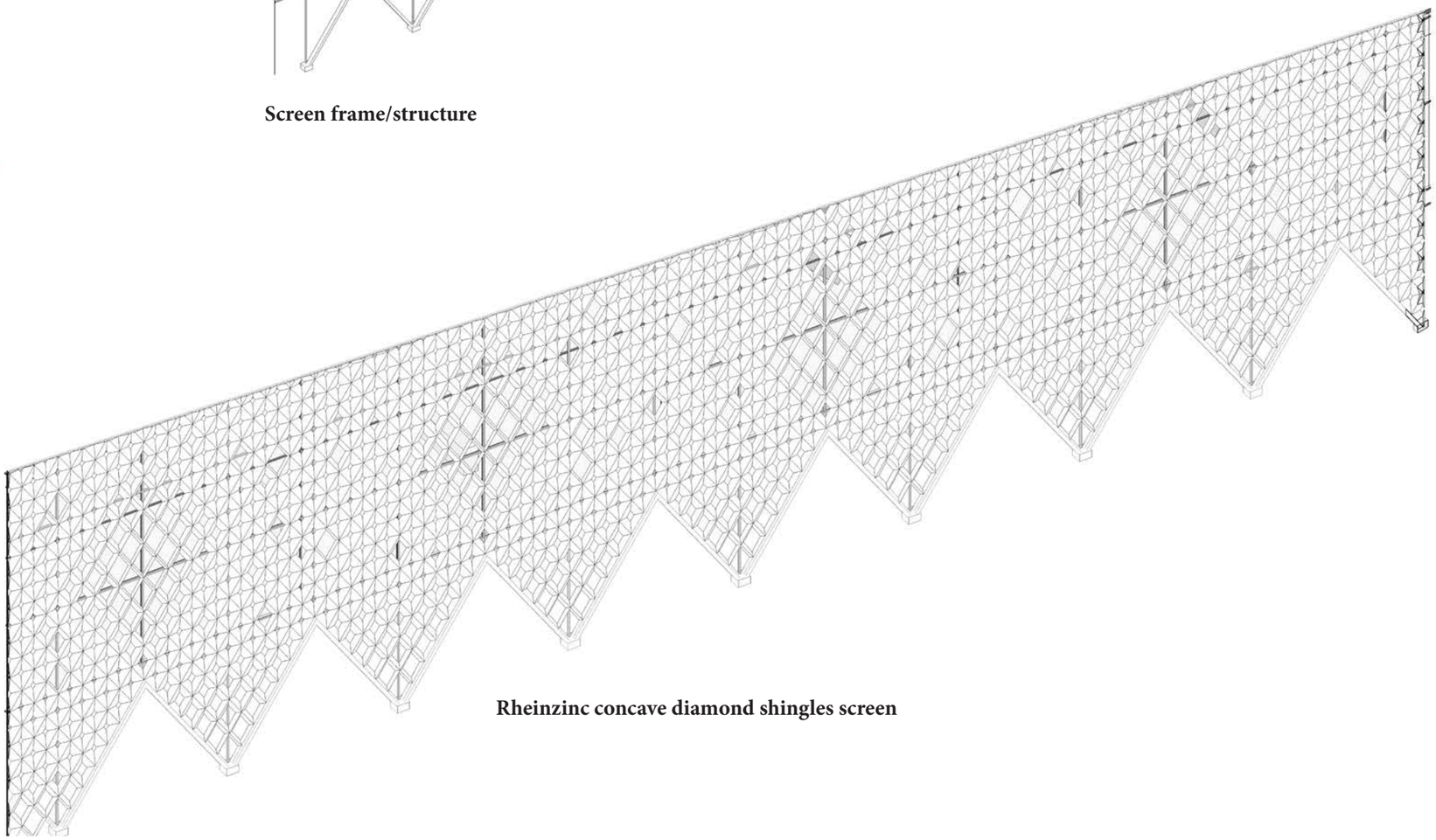
Chapter 7
Courtyard screen



Screen Elevation



Screen frame/structure

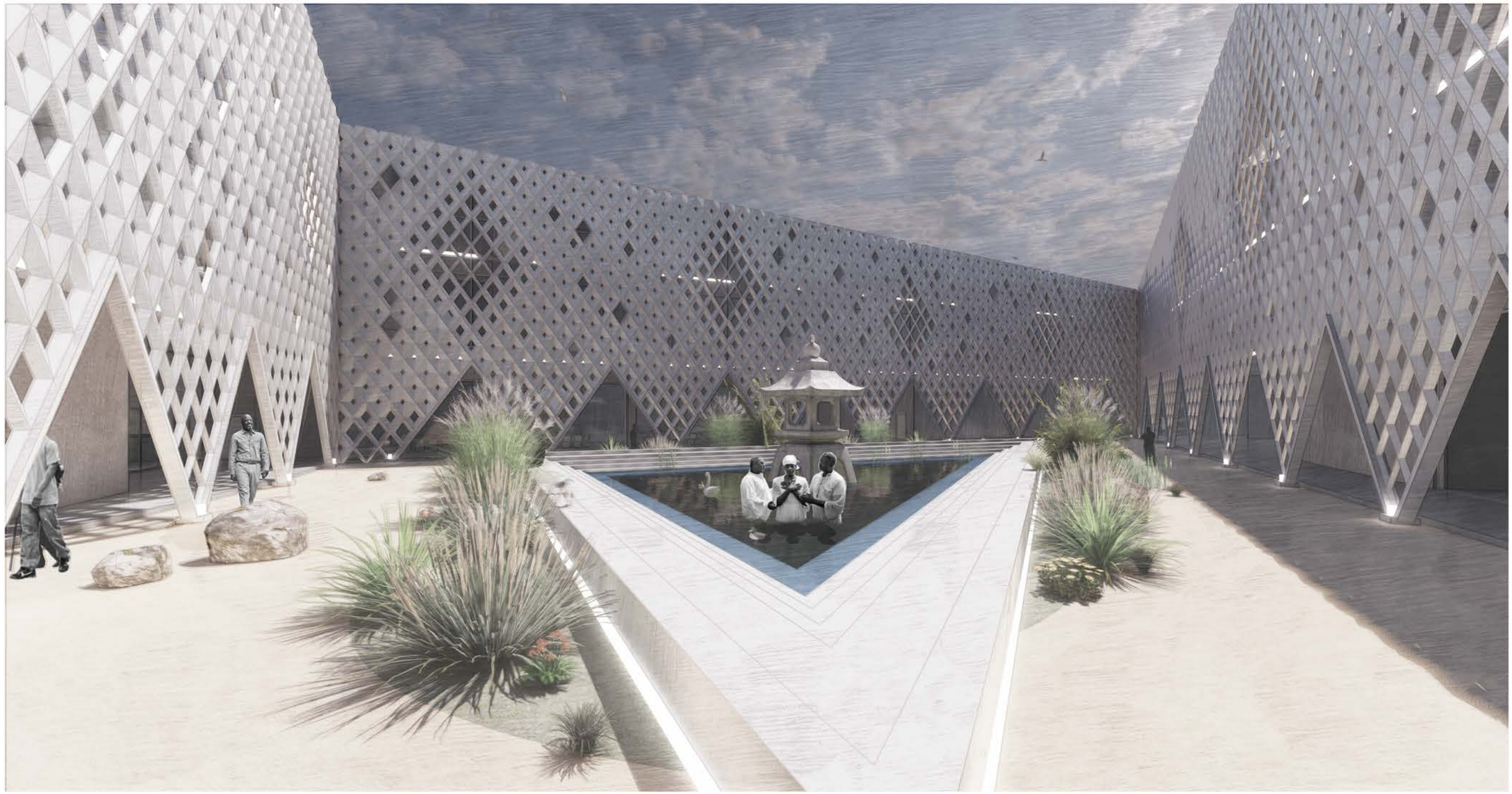


Rheinzinc concave diamond shingles screen

The screen shape comes from the proposed shape of the building. It is an interpretation that intends to celebrate the shape in a repetitive way, sticking to the therapeutic themes of seamlessness.

Fig.7.16 Screen drawings (Author 2021)

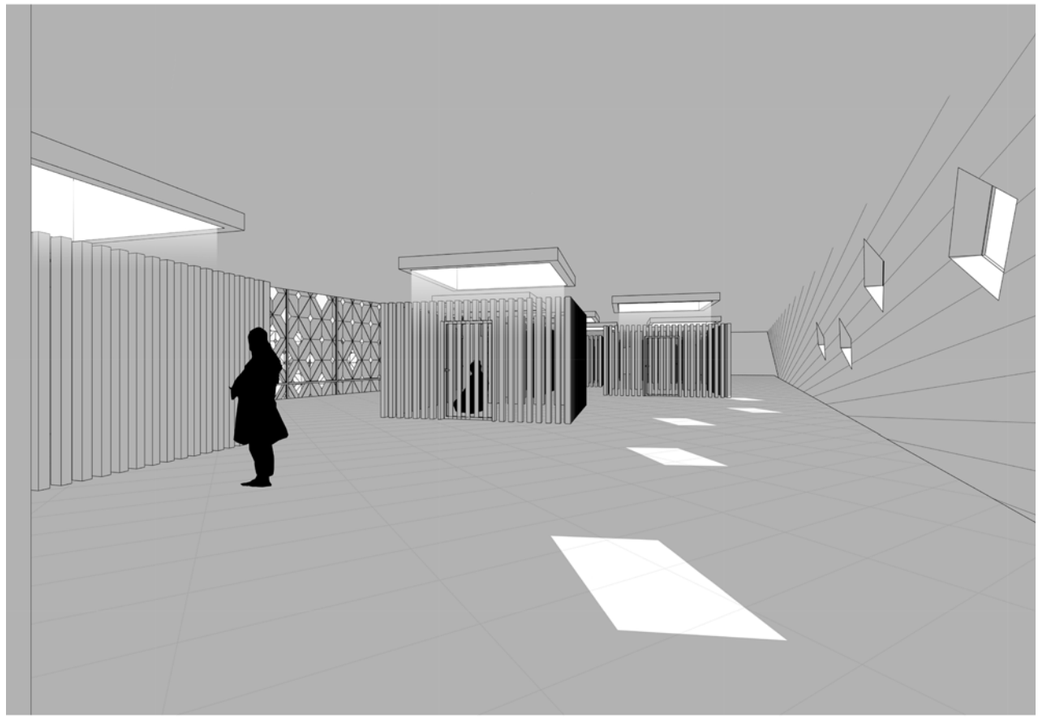
Chapter 7
Courtyard perspective



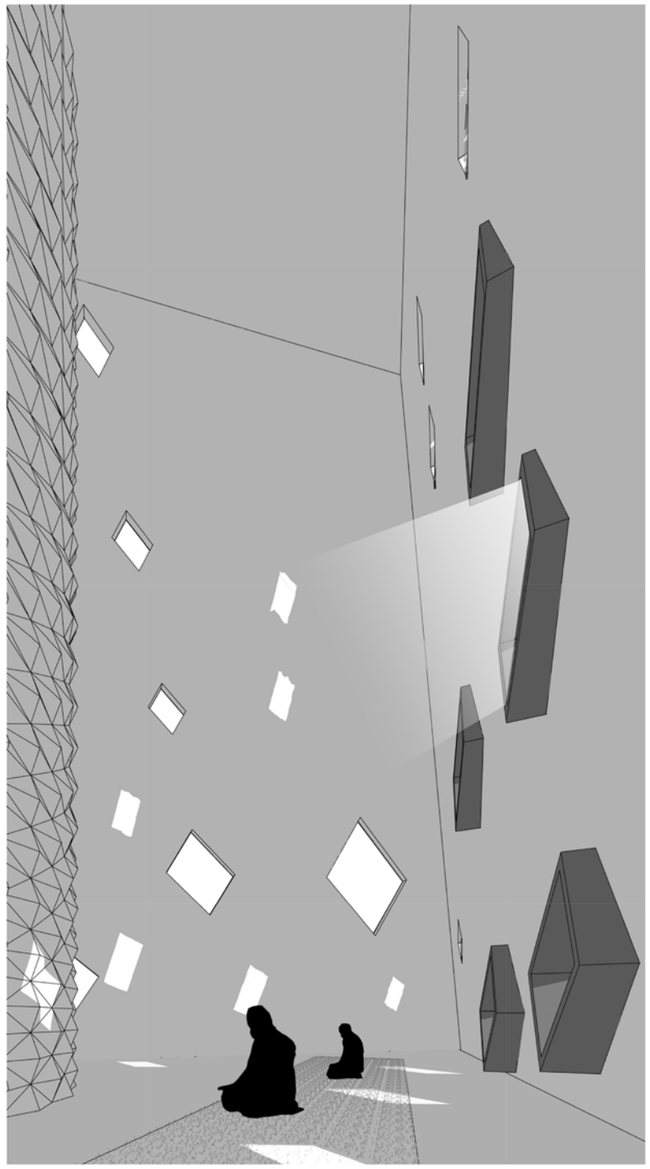
Public Courtyard

Fig.7.17 Courtyard render (Author 2021)

Chapter 7
Interior perspectives



Ritual/Meditation Rooms

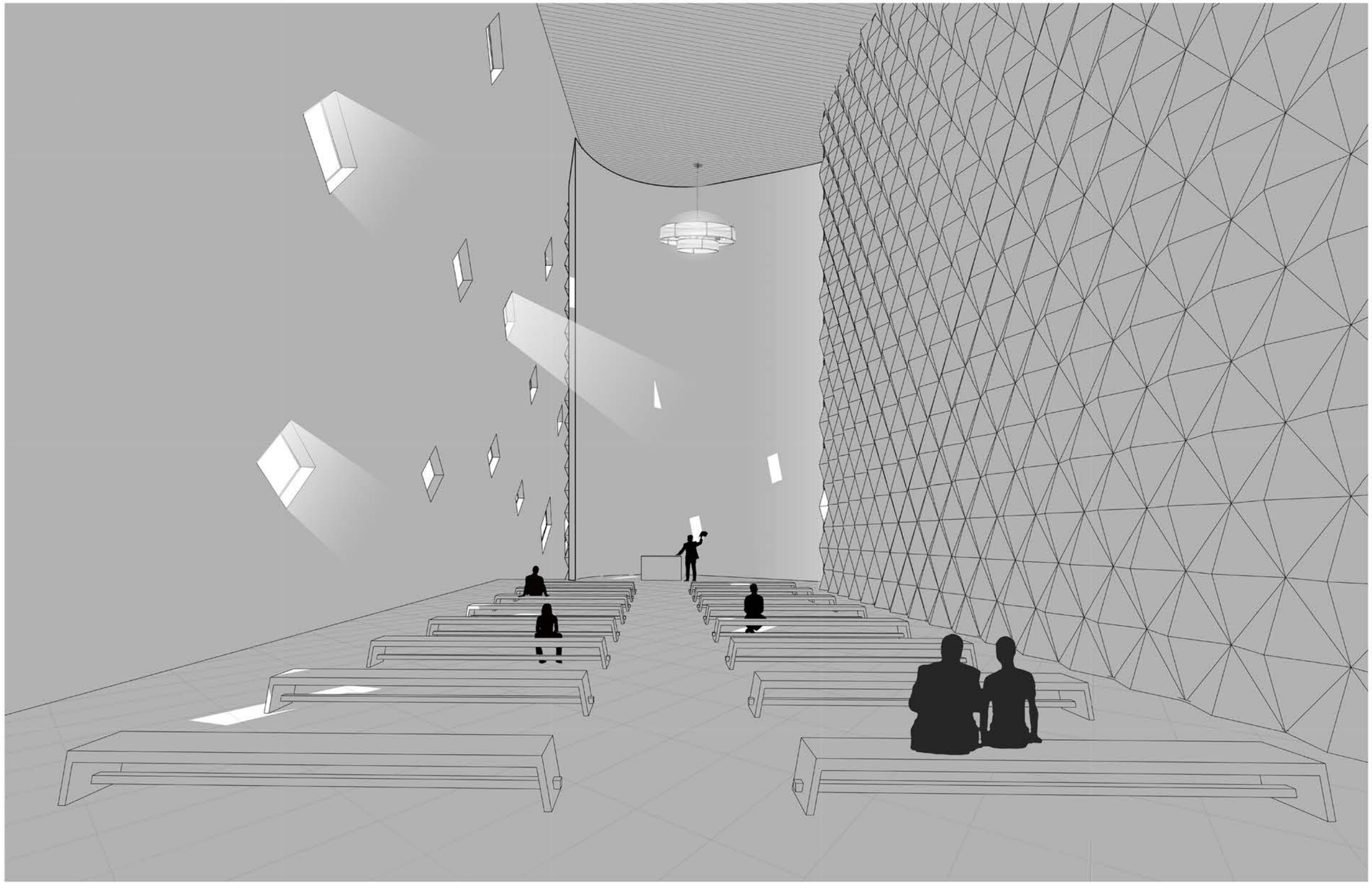


Prayer Room

Fig.7.18 Rituals room (Author 2021)

Fig.7.19 Prayer room (Author 2021)

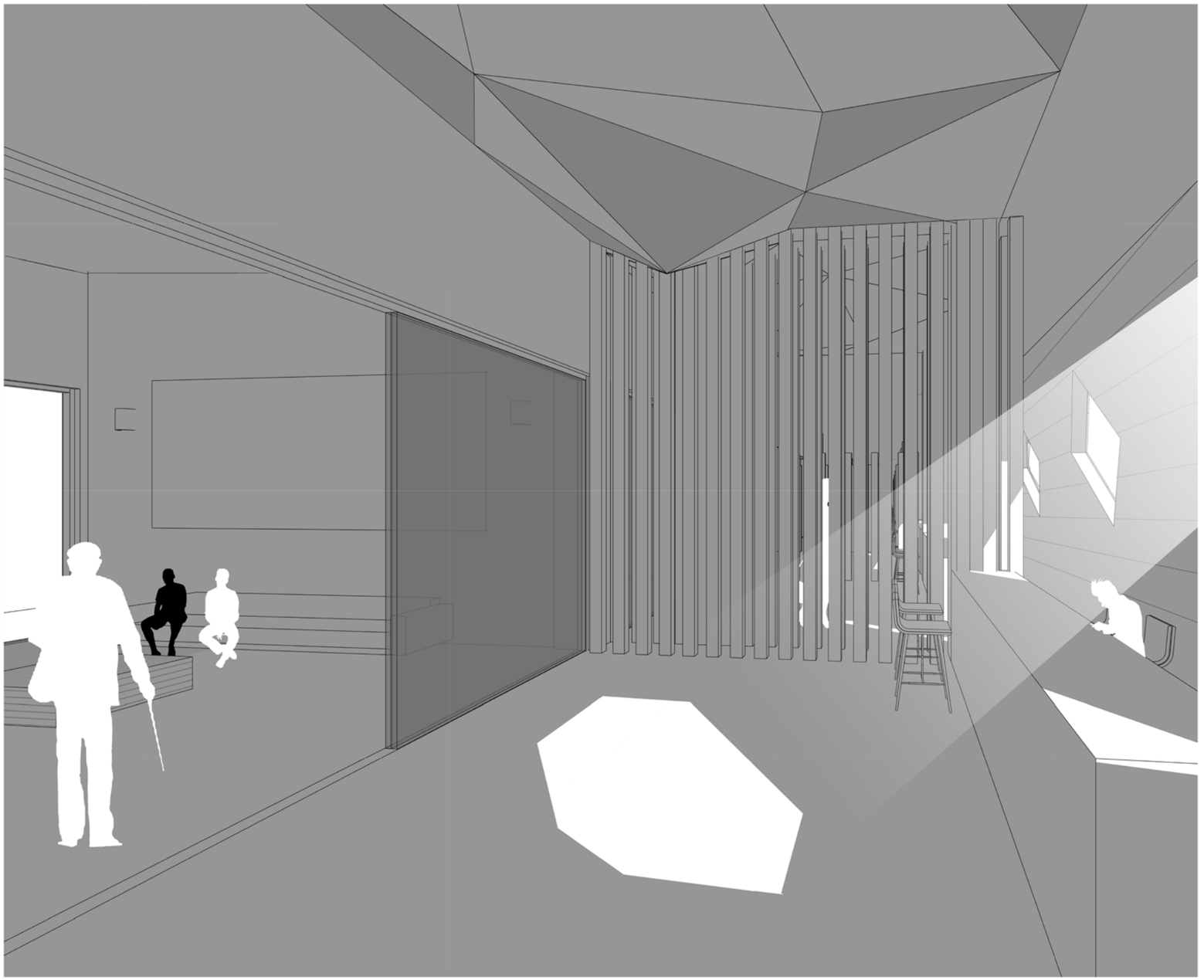
Chapter 7
Interior perspectives



Worship Room

Fig.7.20 Worship room (Author 2021)

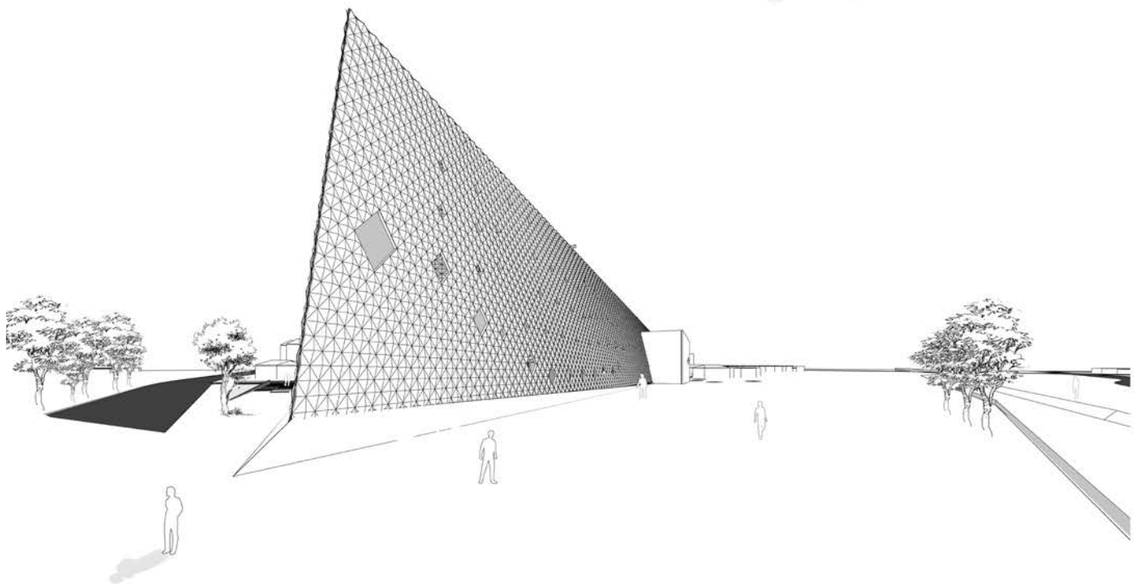
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Interior perspectives



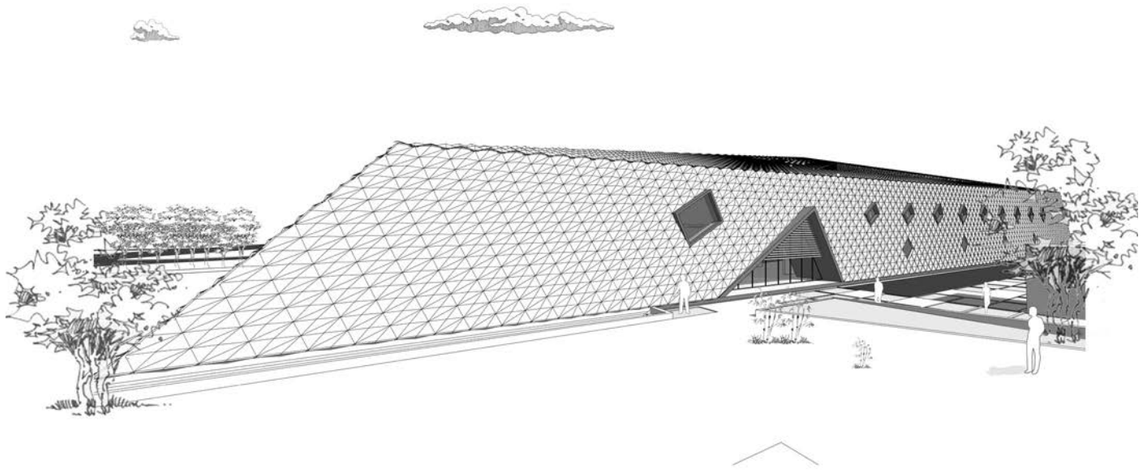
Family Room

Fig.7.21 Family room (Author 2021)

Chapter 7
Exterior perspectives



Waterway/Park perspective

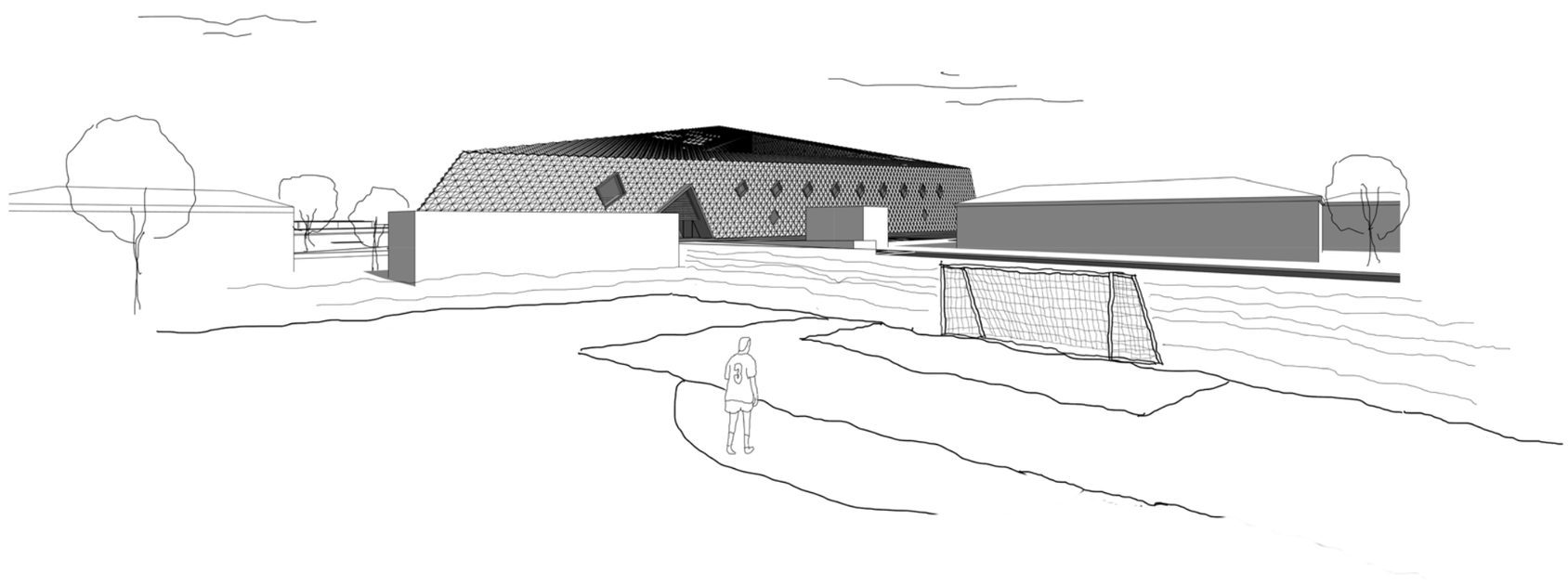


Parolee/Prison perspective

Fig.7.22 Waterway perspective (Author 2021)

Fig.7.23 Parolee perspective (Author 2021)

Chapter 7
Exterior perspectives



Soccer field perspectives

Fig.7.24 Soccer field perspective (Author 2021)

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The end

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

21 September 2021

Faculty of Engineering and the Built Environment:

Ethics clearance letter:

Dear Thami Kubheka (733730), this letter confirms that your ethics application has been cleared. Your clearance/protocol number is SOAP013/2021

Yours sincerely

Lerato Nkosi

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