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Communal Equity: Reimaging Educa4onal Infrastructure in Soweto

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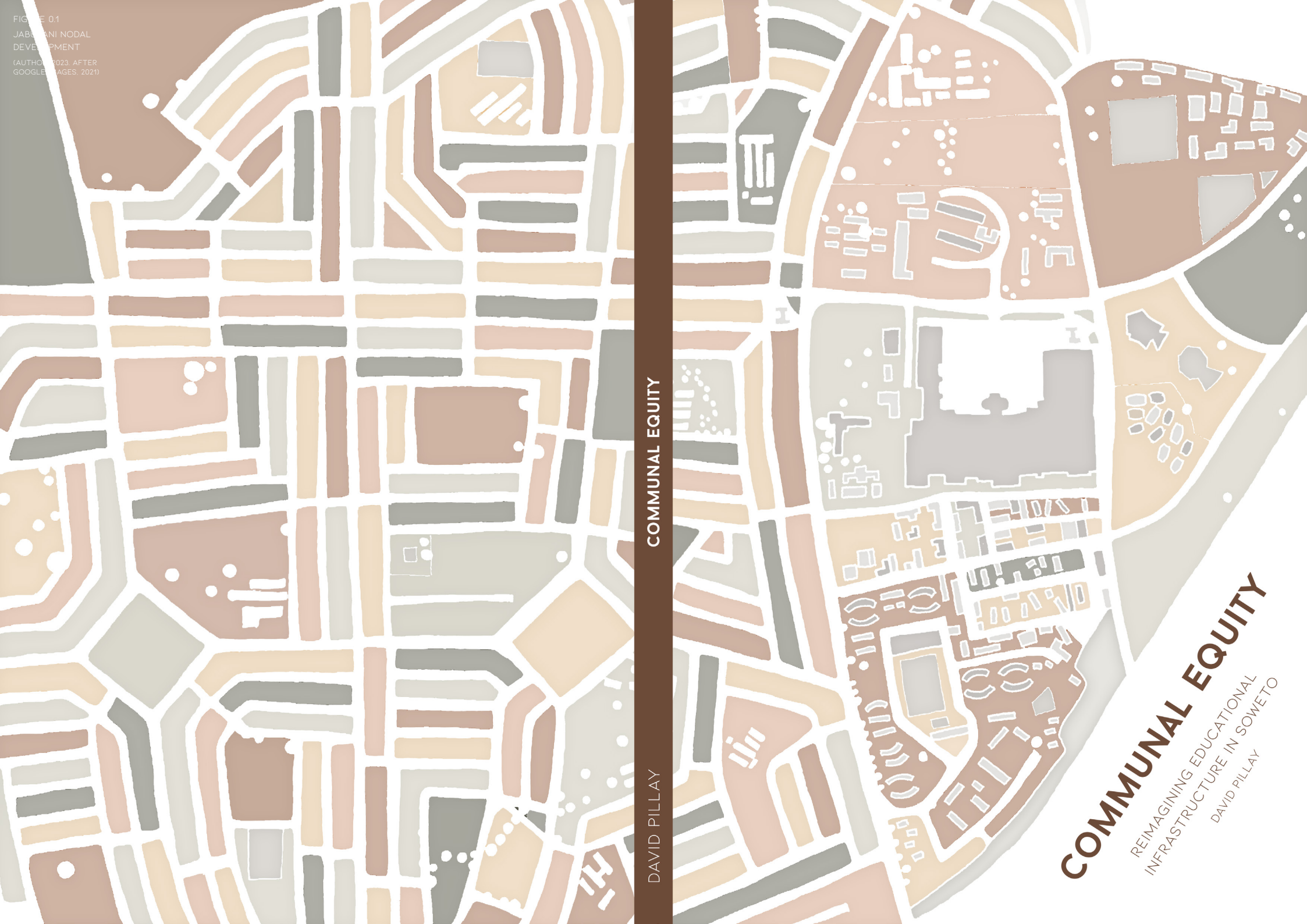


FIGURE 0.1
JABULANI NODAL DEVELOPMENT
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

COMMUNAL EQUITY

DAVID PILLAY

COMMUNAL EQUITY

REIMAGINING EDUCATIONAL INFRASTRUCTURE IN SOWETO

DAVID PILLAY

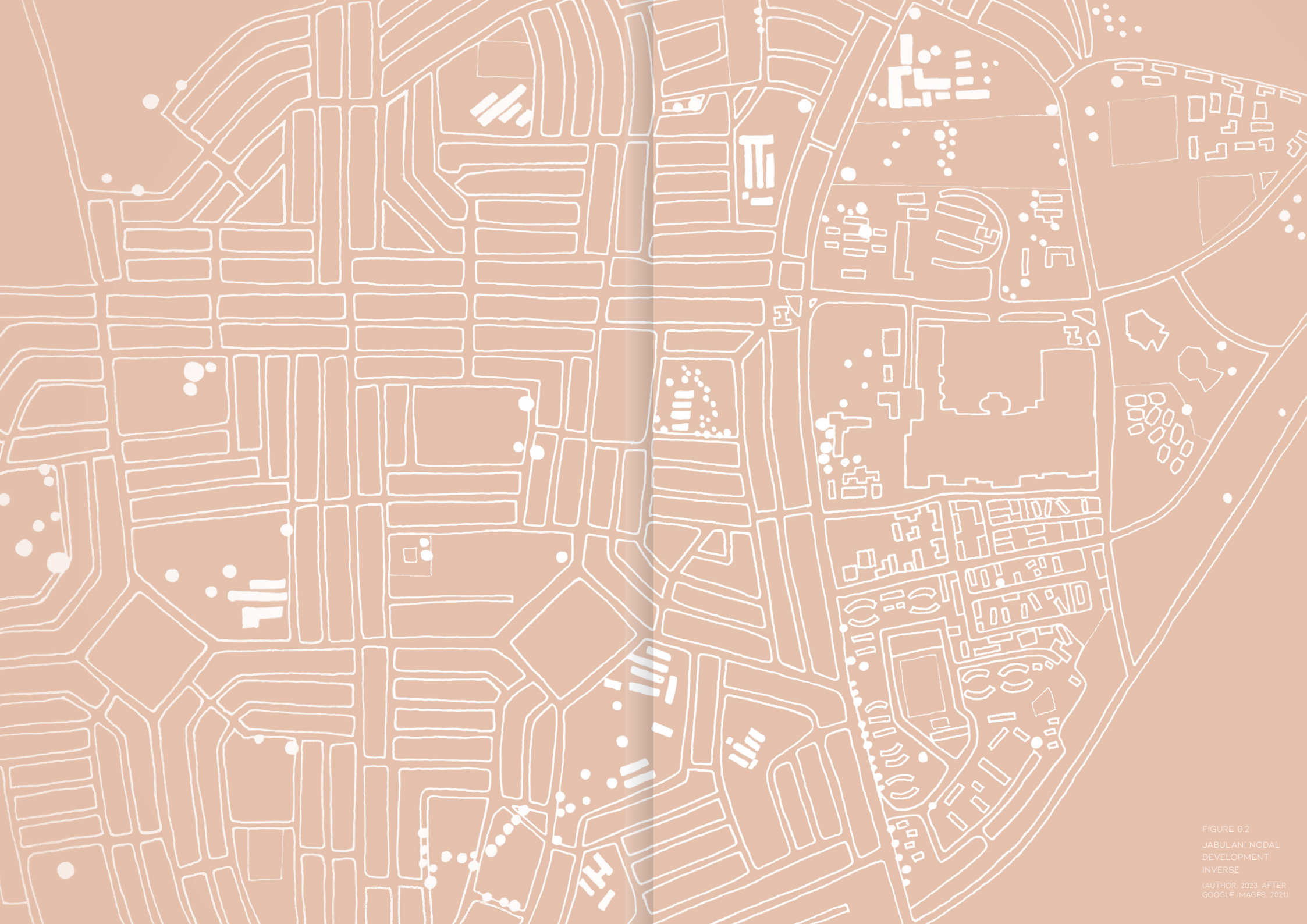


FIGURE 0.2

JABULANI NODAL DEVELOPMENT INVERSE

(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

FIGURE 0.3
JABULANI NODE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

This document is submitted in partial fulfilment to the degree: Master of Architecture (Professional) at the University of the Witwatersrand, Johannesburg, South Africa, 2020.

I, David Jonathan Pillay 1665494 am a student registered for the course Master of Architecture (Professional) in the year 2023. I hereby declare the following:

I am aware that plagiarism [the use of someone else's work without permissionand/or without acknowledging the original sources] is wrong. I confirm that the work submitted for assessment for the above course is my own unaided work except where I have stated explicitly otherwise. I have followed the required conventions in referencing thoughts, ideas, and visual materials of others. For this purpose, I have referred to the 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.



David Jonathan Pillay
24 October 2025



Supervisor
Sundeep Jivan



COMMUNAL EQUITY

REIMAGINING EDUCATIONAL INFRASTRUCTURE IN SOWETO

DAVID PILLAY

This research report is dedicated to my niece,
Aleiyah Lee Frank.



FIGURE 0.2
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

GLOSSARY

EQUALITY

The state of being equal, especially in status, rights, or opportunities.

EQUITY

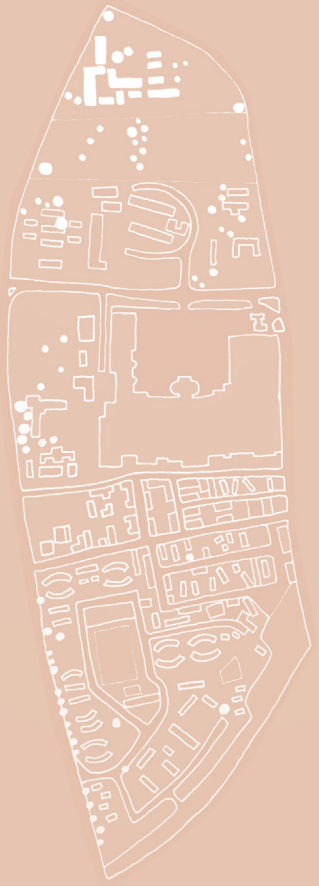
The quality of being fair and just. Different from equality which entails providing the same to all, equity is sensitive to differences and considers this in its execution.

DEVELOPMENT NODES

Areas deemed disadvantaged by the City of Johannesburg and receive upgrades to support local businesses and encourage economic and social development investments.

URBANIZATION

Refers to the population shift from rural to urban areas.



COMMUNAL EQUITY

REIMAGINING EDUCATIONAL INFRASTRUCTURE IN SOWETO

DAVID PILLAY

ABSTRACT

In defining the urban environments of modern-day South Africa, the remnant history of separate development has so deeply disrupted the equality between our communities that they remain a challenge today.

While there are efforts towards seeking a balance between communities, identified in the City of Johannesburg's nodal development schemes, the approach through which they are carried out may be exhibiting limiting results. Equal development can often be implemented by replicating rigid templates of the ideal infrastructure across communities.

These infrastructure which perform essential functions neglect the opportunity to adapt and evolve to the context and history of the populations they serve.

Within this research report, the City of Johannesburg's development of Jabulani, Soweto, will be assessed and their need for improved facilities and access within primary schools will be highlighted and addressed through an architectural intervention which reimagines educational space around the principle of equity.

FIGURE 0.4
JABULANI PRIMARY SCHOOLS
(AUTHOR, 2023.)





FIGURE 0.5
CONTENTS
(AUTHOR, 2023.
AFTER GOOGLE IMAGES, 2023.)

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PART ONE

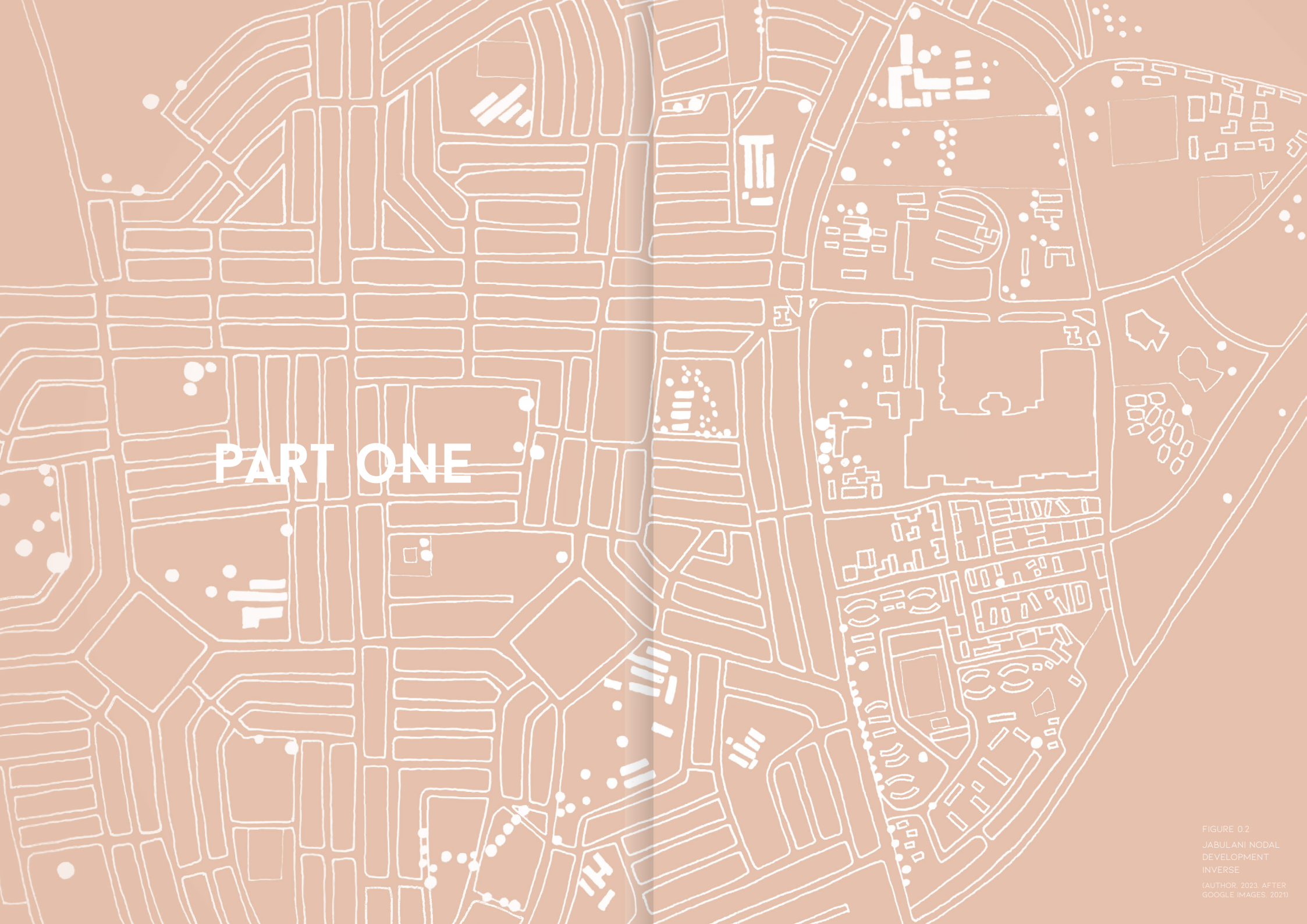


FIGURE 0.2

JABULANI NODAL DEVELOPMENT INVERSE

(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

Chapter 1

SEEKING BALANCE

FIGURE 1.0
JABULANI NODAL DEVELOPMENT
(AUTHOR, 2023, AFTER GOOGLE MAPS 2021)

PREFACE

The motivation guiding this thesis is founded in my personal experience of communal inequality in South Africa, and grounded by the emotions of exclusion, injustice and confinement which grow in these spaces. Apartheid's Group Areas Act of 1950 remains a scar on the geography of South Africa as these once racially zoned spaces, left to self-govern, today remain unequal in infrastructure, quality of life and opportunity.

The history of my family is not one that is particularly spoken of or shared with much pride, whether our displacement from India was a result of us being indentured laborers or 'passenger Indians' was not seen as a necessary detail to the story of our origin. Instead, I was taught pride and gratitude for my home-township of Phoenix, Durban. In 1958, Durban was zoned as a 'white city' resulting in Phoenix, along with Chatsworth, Kwamashu and Umlazi, becoming townships of displacement, uprooting community settlements scattered across the city. By the time I was born, in 1999, these laws had been reformed, populations remained displaced, and the vehement communal rejection of the move had by then been sequestered by time and had taken the form as the consequence of history. Things were the way they were, pride was fostered towards our new community, and the desire for anything else was an obvious and disrespectful conversation.

This community found spaces within which people could be united around common beliefs, needs and interests. Churches, school, sports fields, libraries and take-away shops were spaces where I remember the sense of connection expanding outside of my family.

The inequality of Phoenix only became apparent when we would make an effort to venture outside of our community boundaries to access public serving spaces such as libraries, which were more recently maintained and housed more modern material for my mom to use in her primary school classes. This departure from our community, in pursuit of the spaces of another's, exhibited that while our community had the infrastructure it needed, these needs were not met completely.

With issues such as urbanization growing internationally, greater pressure is placed on public serving facilities, making it of increasing urgency to identify what specific needs are felt and what reimagining of typology can sustain that need, while also creating new spaces where community gather and connect.

This report requires an understanding of the needs of a community, therefore, I believe it is of fundamental importance that the site of my intervention possesses a greater relation with the interest of this research proposal than myself. The Group Areas Act aimed to confine us within the borders of our communities and in order to counter the lasting effects of its ideology, I believe it is of greater value that this thesis embodies a process of learning beyond one's community borders, where ideas and experiences can be exchanged and the future of our country can be planned together.

INTRODUCTION

BACKGROUND

Following South Africa's liberation from apartheid, efforts have been focused on broadening the nation's sense of equality, with the intention of mending the remaining scars from the oppressive regime. The Apartheid Group Areas Act of 1950 can be understood as one of the most influential doctrines on the nature of communities and their infrastructure nationwide, having isolated communities, driven by aspirations of separate development, to govern themselves with scarce funding. This impact is still notable today, as previously 'white zoned' areas remain well-funded and possess a higher standard of quality of life.

PROBLEM

While the mission of addressing these communal inequalities is kept alive and well funded by the South African government, weaknesses can be identified in the strategy, leading to lack-luster implementation and results. A limiting flaw within existing approaches, which this thesis will explore, is the emphasis on equal rather than equitable development between communities. While developments aim to make a community appear to have equal facilities as another, their successes do not appear to be equal. This will require an exploration in development projects to better understand there shortcomings.

FIGURE 1.1
SOWETO THEATRE
(AUTHOR, 2023.)

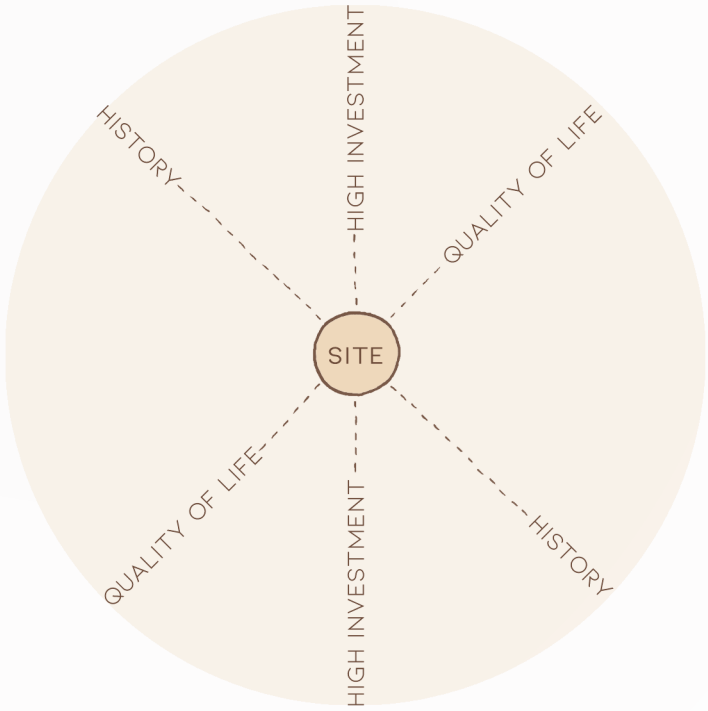


SOWETO THEATER. JABULANI, SOWETO.

SITE

The township chosen for this research report is Jabulani, Soweto. The relevance of the township of Soweto as the geographical center for an investigation into equitable development can be identified at the intersection of its status as a high potential development area, its current and projected quality of life statistics and the significant historic value of its communal unity.

FIGURE 1.2
SITE RELEVANCE
(AUTHOR, 2023.)



IDENTIFICATION OF SITE.

HIGH POTENTIAL DEVELOPMENT AREA

In the pursuit of creating equal experiences between communities, the City of Johannesburg has created a Nodal Development Scheme which identifies areas deemed disadvantaged, typically areas previously zoned for non-white citizens, where capital is allocated in the effort of raising their physical standards to that of higher-income areas. These investments seek to reenergize precincts through three natures of revitalization: infrastructural, economic and communal, with the aim of creating thriving centers of activity.
Out of all the development nodes implemented by the City of Johannesburg, Soweto has received the greatest government funding, amassing more than double the investment of other underprivileged areas as it is seen as being a high potential area for private investment and tourism.

QUALITY OF LIFE

Despite these government investments, Soweto exhibits worrying statistics on unemployment, crime rates and mental health, which suggest that these developments have had limiting success in affecting the lives of its communities. (Mapukata, 2019) This begins to shed light on the potentially outdated nature through which investment takes form within townships and the relevance of challenging the traditional orders of the essential infrastructure implemented.

HISTORIC SIGNIFICANCE

Preceding the modern nodal development schemes and following the strength of the Soweto Student Uprising in 1976, the township has experienced a history wherein urban development has been exercised as a tool for creating class divides on the basis of fragmenting communal unity. (Harrison, 2014) Within this context arises the challenge of developing the township without disrupting the social orders which exist.

FIELD OF INQUIRY

The design intervention proposed in this research report aims to answer the following question:
“How can an architectural intervention be sensitive to a unique need within a community, by reimaging essential infrastructure and embodying equitable development?”

To answer this question this research report is structured as follows:

IDENTIFYING SITE
The first field of enquiry explored is the finding of site, which investigates the streams of relevance which led to Soweto being an enlightening origin for this topic. The nature of the development node model and the areas prioritized for investment is assessed to reveal Soweto’s context as a highly funded township. Within this location the quality of life following the implementation of schemes is investigated through the measures of mental health surveys and statistics on crime and unemployment rates. This process highlights the node which has exhibited the least success, leading to the identification of the Jabulani Nodal Development as the relevant site for this research report.

FOCUSING STRATEGY
Following the exploration of the development node model, a new approach through which strategy can be reimagined is outlined through the exploration and defining of social sustainability and the facets which it is comprised of.

ACCESSING JABULANI
Using the model of social sustainability, the nodal development of Jabulani will be assessed by evaluating the spaces which address and represent each facet. This evaluation takes place in two degrees of investigation:

The Macro-Evaluation is conducted through the assessment of the physical experience of the space or its effectiveness at achieving its purpose.

The Micro-Evaluation is conducted through the gathering of community opinion towards these spaces by means of interviews and online comments.

Through this assessment the needs which have been neglected by the nodal development scheme can be identified. Revealing the specific need for greater educational facilities and access to resources, such as literature and specialists, within the primary schools of Jabulani.

EDUCATIONAL SPACES

To ensure that the design process is informed by the the past and existing context of the township, the the events of the Soweto Student Uprising, explored through historical accounts, and the existing nature of primary schools within Jabulani, analyzed through site visits in respect to their order of spaces and materiality which represents them.

DESIGNING EQUITY

The findings of the assessment of Jabulani, its nodal development and its educational spaces is addressed through the structuring of the design intervention. This takes form by outlining the design brief, program, design aims, site context, users and concept.

CONSIDERING COMMUNAL SPACE

To ensure that the design brief reaches the aims it sets out to achieve, theories which dissect the success of communal and public spaces are used as parameters through which precedents on both local and international community serving projects can be understood.

DESIGN DEVELOPMENT

To conclude part one of this research proposal, the design development of the education and wellbeing center is presented and discussed with context from lessons learned through the precedent and theoretical study.

FIGURE 1.3
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

Chapter 2

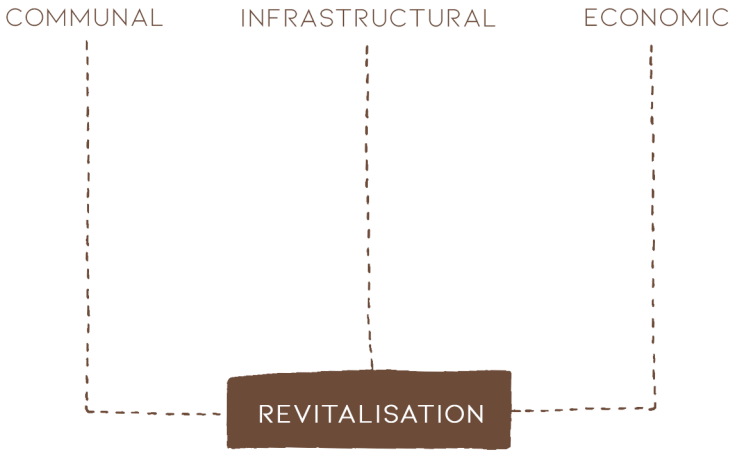
DEVELOPMENT NODES

In the City of Johannesburg, the goal of improving the quality of life to all residents has resulted in a focus on urban regeneration projects implemented within areas identified as disadvantaged. This has taken form primarily in four decided areas; the Inner City, Soweto, Alexandra and Randburg. In order to identify an area with controversial and substantial development activity to assess, this chapter will examine the development node strategy by noting the nature of revitalisation which has been implemented amongst these nodes and the expansive gap between the investments.

FIGURE 2.0
JABULANI NODAL DEVELOPMENT
(AUTHOR, 2023, AFTER GOOGLE MAPS 2021)

NATURE OF REVITALISATION

Amongst the areas selected by the City of Johannesburg for revitalisation, each is developed to a degree of independence, as varying programs and strategies are drawn up to guide the timeline of the development, the budget needed, and the direction decisions should be made in. Therefore, each area, in a general sense, experiences unique approaches sensitive to what is envisioned for their context. Although their contexts of application are different, the nature of revitalization can be categorized into three main aspects: infrastructural, economic and communal.



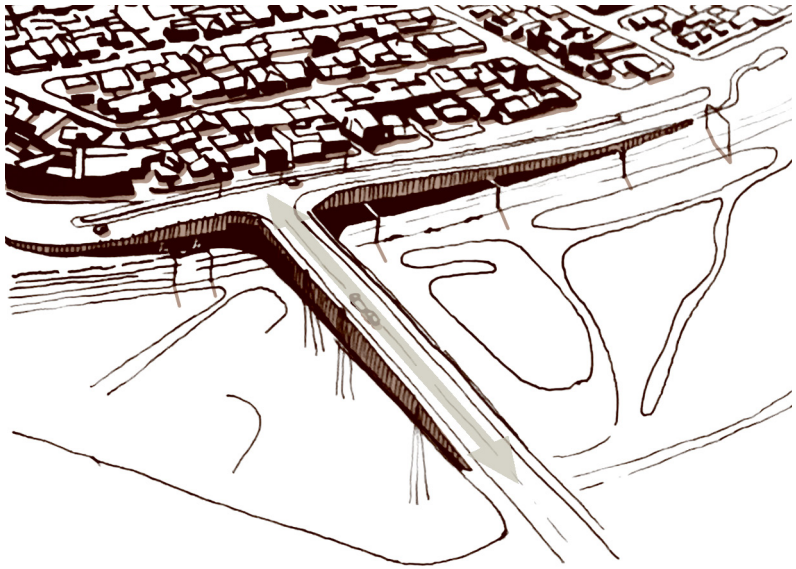
INFRASTRUCTURAL REVITALISATION

The infrastructural revitalization refers to upgrades which attend to public necessities such as housing, educational institutions, police stations, hospitals and fire stations. In addition to this, extensive gravel road and bridge upgrades are implemented by the Johannesburg Roads Agency (JRA). (Greve, 2014) The merit of investing in urban connections extend beyond their simple improvement on functionality.

FIGURE 2.1
REVITALISATION DIAGRAM
(AUTHOR, 2023.)

FIGURE 2.2
NEW NALEDI BRIDGE
(AUTHOR, 2023, AFTER DELTA GROUP, 2021)

NEW NALEDI BRIDGE, SOWETO.



In 2014 the JRA implemented their gravel roads upgrade program to the townships of Soweto, a three-phase program with a budget of R217.2 million. JRA MD Skhumbuzo noted that the purpose of constructing the new Naledi Bridge was set on, “bridging the historical apartheid separation of two close and interlinked communities in Soweto.” (Greve, 2014) This program served the purpose of a greater Transit-Orientated Development known as Corridors of Freedom, an inspiring and just approach to the future of Johannesburg’s urban planning motivated by the vision outlined by Executive Mayor Mpho Parks Tau,

“For too long our City continues to be shaped by our apartheid past. It is still divided between rich and poor areas, white and black areas, townships and suburbs. Black people in the main continue to live far from their workplaces and have to travel far distances to reach places of work, school, and leisure and so on...We are re-stitching our City to create a different future for our residents where we can link jobs to people and people to jobs.” (Tau, 2013; p.3)

South Africa’s history of separate development requires a majority of infrastructural investments to prioritise providing basic needs, such as urban connections between residential and commercial areas, which previously did not exist. Within this context these investments have shown great success by directly improving the quality of life for residents, with changes to the day-to-day experience of the population, by granting them better access to needed facilities and, with the clear vision of the Corridors of Freedom, the transit infrastructure has begun undoing the divides of apartheid planning and connecting communities to others and the rest of the city.

While this project’s success merits recognition especially for the history it wishes to amend, its the evolution of these essential infrastructure which can benefit from reimagining. As Francis Fukuyama discusses in his works on the origins of political order, the spaces which perform essential functions have the tendency to become stuck in their original orders. (Fukuyama, 2011) On the journey towards providing essential infrastructure to all communities, there must be an awareness of the limitations these western typologies may have in their translated function within the context of a modern South Africa. The simple function of a road-side sidewalk for primarily circulation in one western context differs from a South African context where these spaces become economic zones, play or social areas. What is worth considering is how these facilities can be adapted and evolved to cater to the specific community activities and requirements.

ECONOMIC REVITALISATION

The process of economic revitalisation has been explored and executed with varying controversial successes between the development nodes. This controversy stems from the definition of economic opportunity, in some approaches it prioritises creating opportunity for private investment, neglecting local economy, while in others it focuses on creating an attraction within an area for both private and local economy to benefit from. These two definitions of economic opportunity have been implemented in two respective approaches to revitalisation.

The one approach is through the creation of tourist destinations. In the context of Soweto, the Orlando Towers Extreme Heights Centre and Chaf Pozi reformed the unused power station cooling towers to serve as a site of adventurous activities such as bungee jumping from the tower's height. (Joburg, 2018) The sizeable cooling towers were painted with art and advertisements, and now serve a greater service as a landmark associated with the sightseeing of Johannesburg. This has created large scale attraction within Orlando, convincing private industry of the opportunity for investment and providing local businesses, such as food and art stalls, the opportunity to capitalise on the tourist market created.

The other prevalent strategy used involves creating an economic hub around trade which private investors are encouraged to acquire stakes in. In the context of Alexandra, the Alexandra Plaza and Pan Africa Retail Centre, opened in 2009, has since gained approximately R417 million from private investment. This approach uses this attention from investors to acquire larger funds for further urban renewal and further expansion, which allowed for the mall to undergo an extension in 2012. (Joburg, 2012)

FIGURE 2.3
SOWETO'S ORLANDO TOWERS
(AUTHOR, 2023. AFTER MATT LONG, 2014)

ORLANDO TOWERS, SOWETO.



While private investors provide the opportunity for greater capital, and therefore, continued regeneration projects, their presence can stunt the development of the businesspeople within a community.

A significant environmental contributor to this arrested development stems from many local businesses within townships operating out of their homes. (Harrison, P, 2014, p.309) The presence of large corporations not only threatens their demand, but their influence is compounded by the inability to relocate their location of operation.

The matter of economic revitalisation is therefore one that must cater for both local and private interests. Amongst these two approaches the creation of an attraction, which it not itself commerce but allows for commerce to prosper around it as witnessed in the Orlando Towers Extreme Heights Centre, is therefore the more progressive strategy by attracting more capital while encouraging growth within local economy.

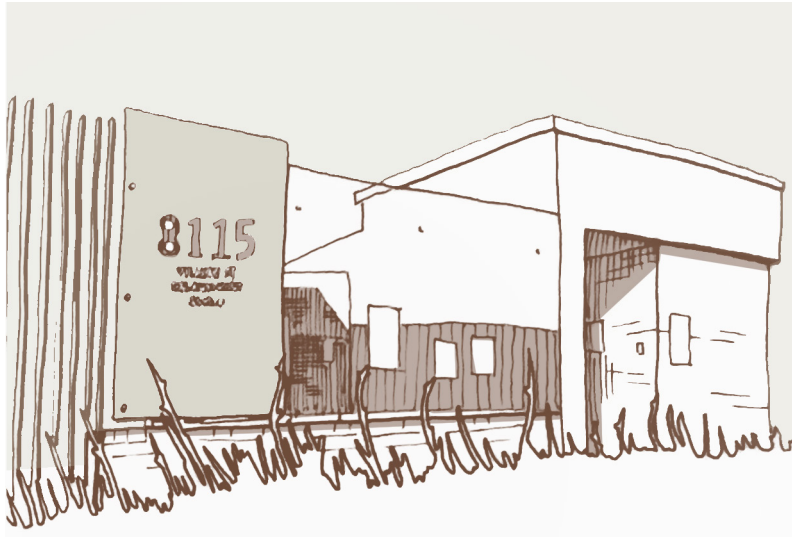
COMMUNAL REVITALISATION

The communal revitalisation refers to projects which aim to serve a larger social service to the population of an area. There are many typologies around which communities can socialise and connect. However, within the context of the development strategy, these spaces typically take the form of recreation and culture-centred works.

Cultural/historic preservation works such as the revitalisation of Vilakazi Street in 2018, honouring its memory as a place of residency for Nelson Mandela and Archbishop Desmond Tutu, serves an essential purpose of celebrating a sense of identity founded in historic significance.

FIGURE 2.4
MANDELA HOUSE
(AUTHOR, 2023.)

MANDELA HOUSE. VILEKAZI ST, SOWETO.



Upgrades and creation of recreational spaces has been introduced through works such as Orlando eKhaya Waterfront project which renovated the dam into a public space providing opportunities for social gatherings and leisure to be experienced. (Joburg, 2018) On a smaller scale the funding and maintenance of small parks and sports facilities around neighbourhoods perform space for play and connection especially engaging young demographics of a community.

By identifying these three main aspects of urban revitalisation; infrastructural, economic and communal, we can better understand and assess how each development node varies in their implementation of revitalisation. This will provide a deeper view into the future urban environment envisioned within each area, narrowing down the areas which receive the greatest investment and highlighting the townships most relevant to further assess.

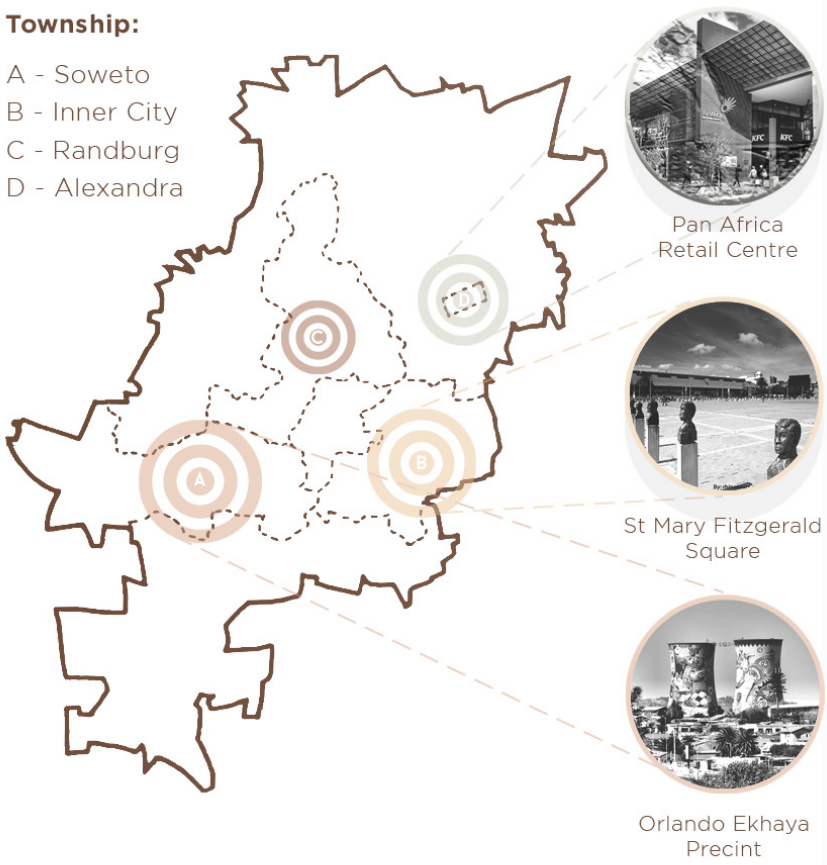
On a smaller scale the funding and maintenance of parks and sports facilities around neighbourhoods serve as a space for play and connection especially between young demographics of a community.

Assessing the three categories of developments provide a useful measure through which we can breakdown the notable developments amongst the four areas and begin to understand the way they are developed differently.

FIGURE 2.5
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

DIFFERENT AREAS, DIFFERENT DEVELOPMENT

As a result of the different degrees of development the nodes will be divided into two categories; areas where development is necessary, to attend to the basic human rights of the communities, and areas developed beyond the necessary with a vision to maximise potential.



NECESSARY DEVELOPMENTS

FIGURE 2.6
DEVELOPMENT NODES
(AUTHOR, 2023.)

ALEXANDRA

The township of Alexandra has a history of being underdeveloped, evident in having been referred to as the 'dark city' on account of it not having electricity up until the early 1970s. In present day it remains the most underdeveloped community amongst the other nodes. Its development is guided by the Alexandra Renewal Project, introduced by ex-President Thabo Mbeki in 2001, and had been allotted R1.3 billion for the development of infrastructure. (Show Me, 2013) Alexandra's drastic gap in infrastructure means that most of the investment is used to attend to establishing economic opportunity and catering to basic needs such as: providing housing units, introducing a water reservoir and upgrading roads and bridges.

Alexandra's most notable projects highlighted by the City of Johannesburg include:

COMMUNAL REVITALISATION

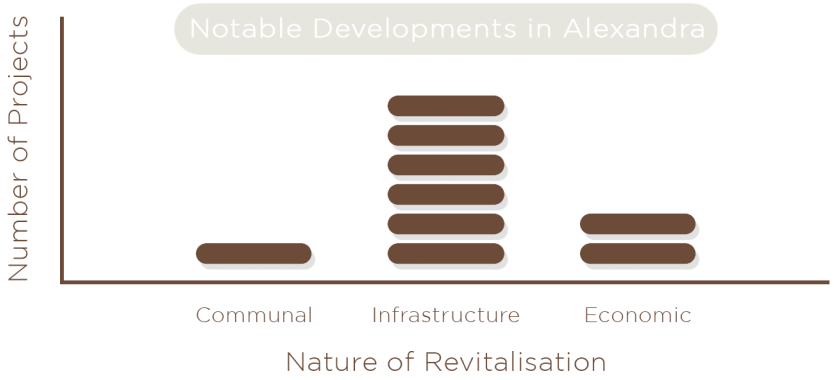
- Turning 37 hectares of land into public parks.

ECONOMIC REVITALISATION

- Alexandra Plaza.
- Pan Africa Retail Centre.

INFRASTRUCTURAL REVITALISATION

- The construction of new water reservoir in Linbro Park.
- The construction of 11 000 housing units.
- Creation of formal taxi ranks.
- Upgrades to pavements, roads and bridges.
- Upgrades to electrical infrastructure.



RANDBURG

Randburg's Central Building District is perhaps the area which, relative to the other nodes, possesses the least extensive schemes to guide its development and therefore has received the smallest investment of capital. The current goal of the development is aimed at enhancing its role as a public transport hub and as a centre for business. (JDA, 2009) These goals have taken form in projects such as:

COMMUNAL REVITALISATION

- Improved street lighting and cleaning initiatives.

INFRASTRUCTURAL REVITALISATION

- Renovation of council offices in Civic Centre.
- Creation of a Gautrain station.
- Creation and upgrades to taxi ranks.

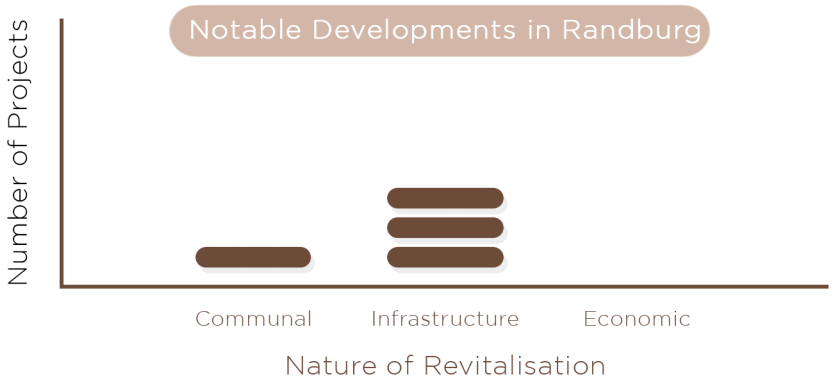


FIGURE 2.7
REVITALISATION: ALEXANDRA
(AUTHOR, 2023.)

FIGURE 2.8
REVITALISATION: RANDBURG
(AUTHOR, 2023.)

HIGH POTENTIAL DEVELOPMENTS

In high potential development areas, it is more common to see a focus on precinct developments. Precinct developments are a large-scale urban regeneration scheme applied to selected neighbourhoods where, typically, all three aspects of revitalisation are implemented in phases with the aspiration of creating a central hub of activity. The Johannesburg Development Agency is responsible for some of the most notable precinct regenerations. (JDA, 2009)

THE INNER CITY

The Inner City is one of the City of Johannesburg's larger focuses. The importance of its development is emphasised in the Inner-City Regeneration Charter which outlines a vision statement and goals to ensure that progress is steady, therefore, investment is encouraged. Its strategy is predominantly focused on communal and economic revitalisation aimed at attracting private investments.

"The Vision stated that the Inner City would become:

- A dynamic city that works
- Liveable, safe, well-managed and welcoming
- People-centred, accessible and celebrating cultural diversity
- A vibrant 24-hour city
- A city for residents, workers, tourist, entrepreneurs and learners
- Focused on the 21st Century
- Respecting its heritage and capitalising on its position in South Africa, Africa and the whole world
- A truly global city
- The trading hub of Africa, thriving through participation, partnerships and the spirit of Ubuntu" (City of Johannesburg, 2007: p.3)

Notable developments following the creation of this charter include:

PRECINCT DEVELOPMENTS

- Newtown Cultural Precinct
- Doornfontein and New Doornfontein Precinct.
- Ellis Park Precinct.
- Hillbrow and Yeoville.

COMMUNAL REVITALISATION

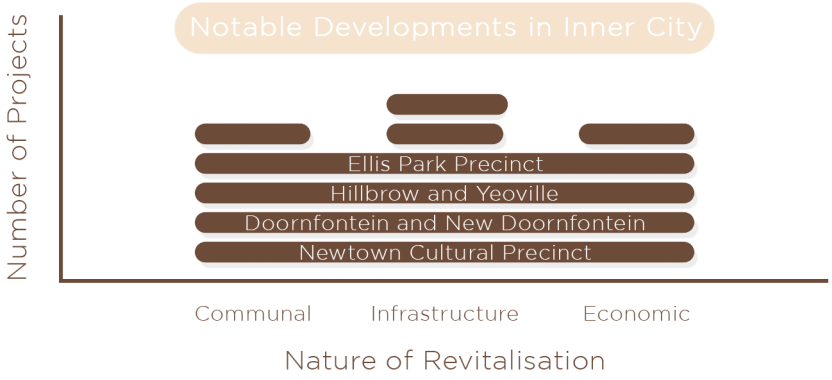
• The R10 million facelift of the former wagon site and scene of strikers' meetings, Mary Fitzgerald Square (Joburg, 2018).
• Public environment upgrades to Berea.

ECONOMIC REVITALISATION

• Establishment of the Fashion District, a centre for fashion retail.
• Uplift to Ghandhi Square.
• Upgrades to Rockey / Raleigh Street in Yeoville.

INFRASTRUCTURAL REVITALISATION

• Brickfields social housing.
• Anglo Ashanti's Turbine Hall headquarters.



SOWETO

Soweto finds itself as the other high potential development node, receiving some of the largest capital investments relative to other areas. Large scale regeneration has been implemented in Soweto with great strength since the 2000s, with many of these projects motivated by the events of the hosting of the World Summit on Sustainable Development in 2002, the 50th anniversary of the Freedom Charter in 2005 and the Fifa World Cup in 2010. The focused development on Soweto around these events represents the City of Johannesburg's vision for the township to become a symbol for pride, strength and identify for the city.

FIGURE 2.9
REVITALISATION: THE INNER CITY
(AUTHOR, 2023.)

Some of the most notable developments include:

PRECINCT DEVELOPMENTS

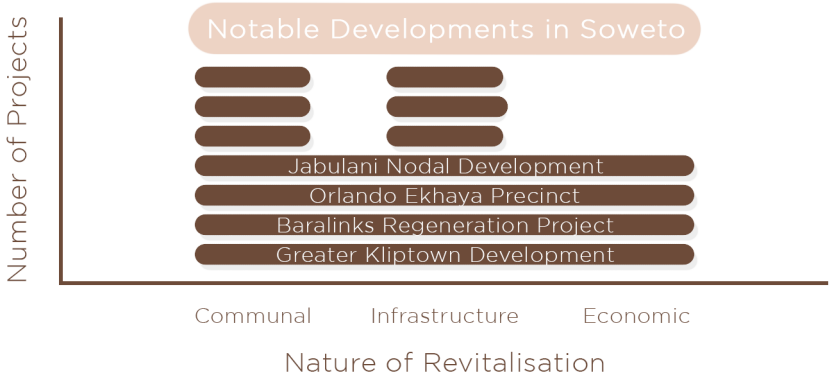
• The Greater Kliptown Development Project, in response to the 50th anniversary of the Freedom Charter.
• The Baralinks Regeneration Project.
• Jabulani Nodal Development.
• Orlando Ekhaya Precinct.

COMMUNAL REVITALISATION

• Rehabilitated the Moroka dam and Thokoza park, in response to the hosting of the World Summit on Sustainability in 2002.
• Vilakazi Street upgrades.
• Public Parks and sports facility upgrades.

INFRASTRUCTURAL REVITALISATION

• Rebuilding of the Calabash Stadium.
• Creation of bus transit connection to Inner City.
• Gravel Roads upgrades.



From this overview of these two degrees of development; necessary and high potential development, one can understand that the necessary developments, given their urban environmental progress relative to the high potential developments, prioritise their funding on elevating basic infrastructure that have been lacking throughout the history of these spaces.

The high potential areas on the other hand, while similarly sharing a history of underdevelopment, are areas that have been envisioned and received funding with the intention of defining the identity of the future South African urban environment. Therefore, these high development nodes become more relevant to explore, understand and critique the sensitivity of their strategy and the levels of success they have had in embodying the identity of the modern South African urban environment. To understand and compare their degrees of success, an analysis of mental health statistics within the Inner City and Soweto will be used to visualise the compatibility these investments have had on their communities and understand the influence they have had on the quality of life experienced.

FIGURE 2.10
REVITALISATION: SOWETO
(AUTHOR, 2023.)

THE INFLUENCE ON QUALITY OF LIFE

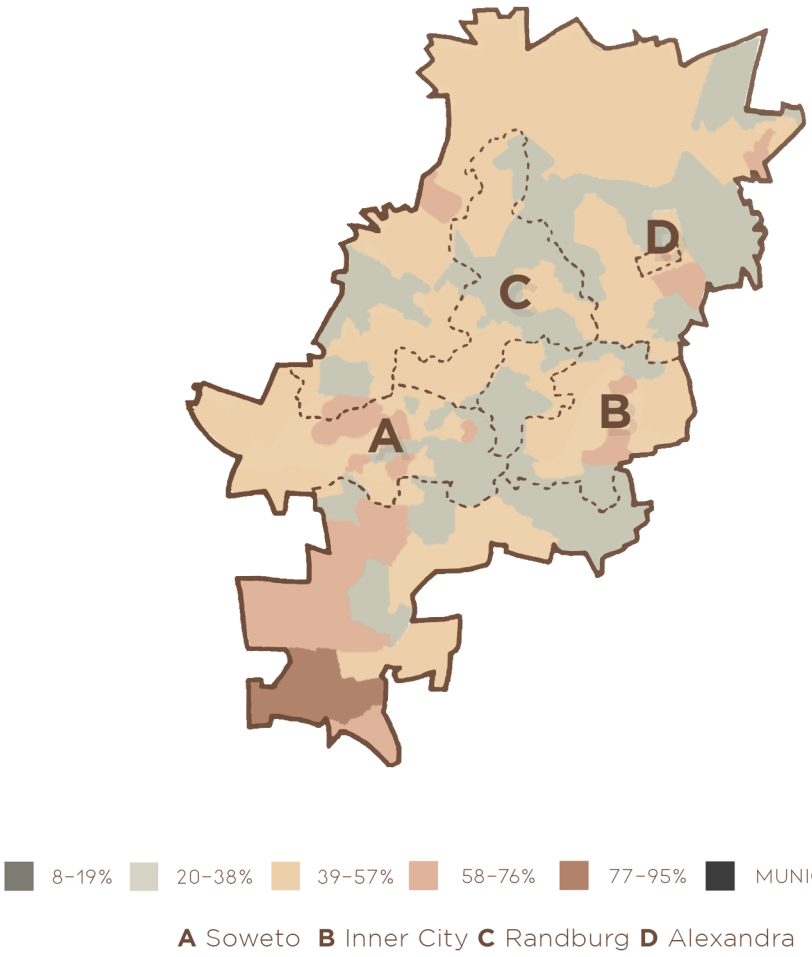
Quality of life refers to the lived experience of an individual, influenced by their external environments, personal health and comfort. To compare the improvement of quality of life, following revitalisation schemes, this section will first analyse the mental health statistics recorded within these development nodes. Between the two high potential areas, the Inner City and Soweto, the township which has exhibited the least influence on improving mental health will be further analysed, through the measures of unemployment and crime statistics, to reveal a broader context into their quality of life experienced and the site most relevant for a reimaging of strategy.

MENTAL HEALTH IN THE CITY OF JOHANNESBURG

The Gauteng City-Region Observatory conducted their fifth Quality of Life survey between 2017 and 2018 where questions related to mental health were presented to 24 889 adults. As a means of determining frequency of depressive or hopeless moods, individuals were asked how often they had felt hopeless or depressed over the last two weeks. Participants could choose between the options: 'nearly every day', 'more than half the days', a few days' or 'not at all'. The result from this survey is represented in the figure opposite, where the percentage of participants who chose prolonged feelings of depression and hopelessness are represented in each ward.

FIGURE 2.11
FEELINGS OF HOPELESSNESS AND DEPRESSION
(AUTHOR, 2023. AFTER GAUTENG CITY-REGION OBSERVATOR.)

FEELINGS OF HOPELESSNESS OR DEPRESSION IN JOHANNESBURG



MENTAL HEALTH IN SOWETO

When further assessing the average mental health, amongst the precinct developments implemented within Soweto, the following areas and their respective projects exhibited moderate levels of mental health:

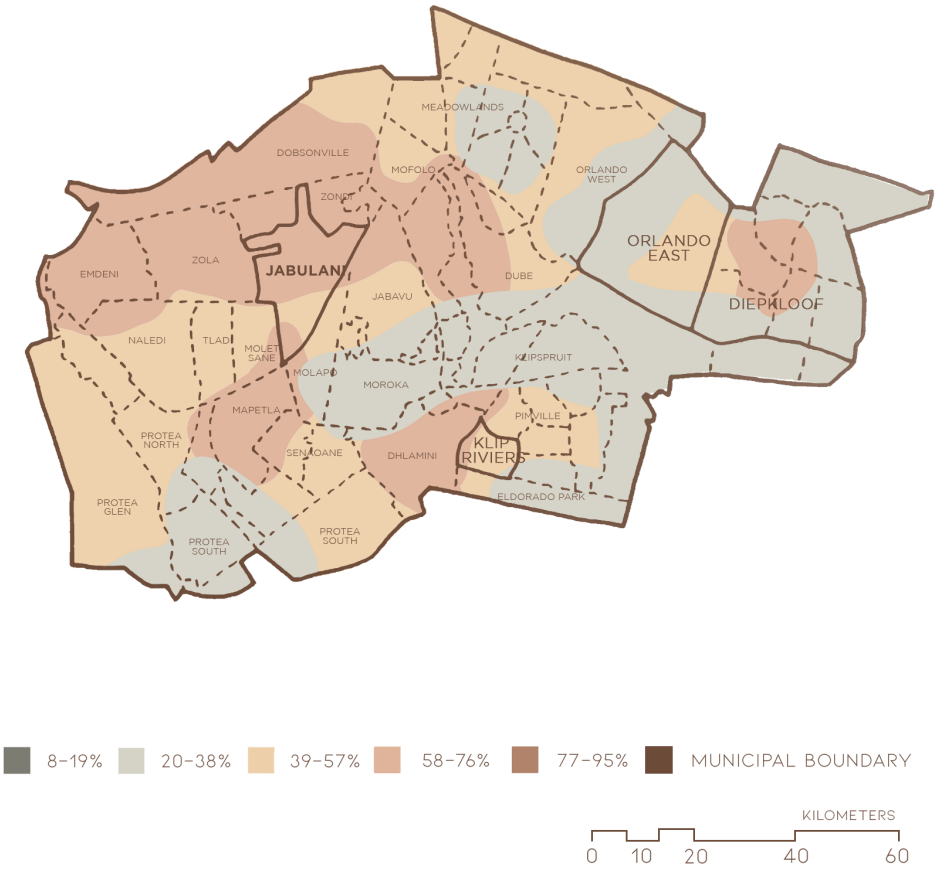
- Baralinks Regeneration Project of Diepkloof.
- Orlando Ekhaya Precint of Orlando East.
- Greater Kliptown Project of Klipriviers.

These precincts recorded a spread between 20-57% of population with feelings of hopelessness and depression. The outlying precinct development, Jabulani, showed a larger area and average population, between 58-76%, which experienced feelings of hopelessness and depression. (Mapukata, 2018)

Based off this reading of the statistics, the Jabulani Nodal Development can be identified as one of the least effective precincts of Soweto in elevating living conditions which influence average mental health. This precinct development will therefore serve as the most relevant origin for further investigation into how investment has resulted in limited communal upliftment. However, before this assessment can take place, a new approach to strategy needs to be defined around which this research report's pursuit of equitable design will be centred.

FIGURE 2.11
FEELINGS OF HOPELESSNESS AND DEPRESSION
(AUTHOR, 2023. AFTER GAUTENG CITY-REGION OBSERVATOR.)

FEELINGS OF HOPELESSNESS OR DEPRESSION IN SOWETO



Chapter 3

FOCUSING STRATEGY

To design equitably, the unique requirements of a community must be identified. Given the poor mental health statistics recorded in Jabulani, a new strategy needs to be outlined which prioritises the communal needs responsible for a higher quality of life. In this chapter, the importance of social sustainability as a model for identifying these needs will be discussed and a new strategy will be defined around the facets which contribute to this concept



FIGURE 3.0

JABULANI NODAL DEVELOPMENT INVERSE

(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

URBANISATION & MENTAL HEALTH

In light of the poor mental health statistics which revealed Jabulani to be a relevant site to be assessed, it is crucial to first understand the nature in which quality of life in urban areas are greatly influenced by their relationship with urbanisation. Underdeveloped communities are at risk of experiencing both accelerated and exaggerated symptoms of urbanisation due to the imbalance of needs verse population.

Urbanisation is understood as the increase of populations in cities, usually in pursuit of access to greater economic opportunity. Internationally we have become more aware of this phenomenon and its implications on our future. In the context of South Africa, 67% of the population is currently living in urban areas and is projected to rise to 71% by 2030. (Parliamentary Monitoring Group, 2022.)

The majority of the population comprising this movement can be identified as young adults who move to developing areas to support their older family members in their area of origin. What is visible when observing this movement is the strain on infrastructure and resources which threaten the sustainability of urban areas. However, what is unseen, and therefore more sinister, is the extent of social and psychological changes urbanisation has amongst populations. A medical journal by Srivastava explains that as a result of this demographic movement changes can be observed to have influences on social organisation and the nature of family life. With increased stressors due to factors such as poor living conditions, high cost of living and reduced social support, there are a higher recorded number of mental disorders within urbanised communities “80.6% in urban areas in contrast to 48.9% in rural areas”. (Srivastava K, 2009.)

With this understanding of urbanisation’s influence on psychological and social habits within communities, it is crucial to structure the reimagining of strategy with the sustaining of social orders and health at its centre. Therefore, the new strategy will be based on the facets which bring about social sustainability.

SOCIAL SUSTAINABILITY

The concept of 'sustainable development' is an umbrella term used to describe designing urban environments with sensitive consideration of the social, environmental, economic and institutional implications it will have on a community. Between these considerations the social aspect can be understood as the most challenging. The intangible nature of this aspect creates complexity when trying to quantitively assess how successful a development is at preserving and strengthening the social order of a community. (Colantoni, 2009, p.3) It is therefore necessary to simplify the concept of social sustainability by dissecting it into the different facets which bring about a stable social environment.

An exploration of Goosen's thesis on social stability introduced four facets required to maintain a stable social order. (Goosen, 2019) These included:

GOOSEN'S MODEL OF SOCIAL STABILITY

- Participation.
- Community stability.
- Pride and sense of place.
- Safety and security.

While these facets provide a strong foundation, their current descriptors lack specificity, and will therefore be elaborated into a new model of social stability comprised of the following facets:

THE PROPOSED MODEL OF SOCIAL SUSTAINABILITY

• Health and Wellbeing.

Access to both medical and mental health professionals are basic needs which reduce the physical and mental stresses experienced by a community.

• Safety and Justice.

The presence of law enforcement and emergency responders, such as firefighters, provide a sense of protection and peace of mind against the unjust and unpredictable events which can take place within a community.

• Political Stability.

The connection to local government serves the essential role of granting power to the voice of a community to gain assistance and express their needs to the authorities which govern the spaces they inhabit, therefore, providing a greater sense of control over their environment.

• Economic Health.

Opportunities for independent businesses to grow is essential in promoting populations to thrive and encouraging them to invest within the community.

FIGURE 3.1
PROPOSED
MODEL OF SOCIAL
SUSTAINABILITY
(AUTHOR, 2023.)

• Education and Access to information.

The access to a high standard of education and resources is a necessary component for the further development of the individual within a community.

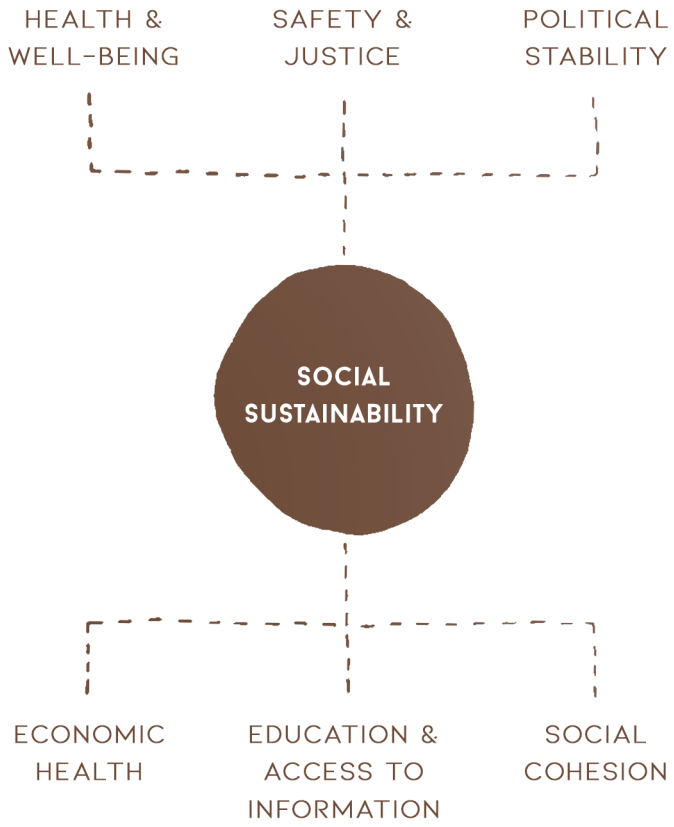
• Social Cohesion.

The preservation and celebration of community connection, history and identity is a vital component to a greater sense of belonging. Social cohesion can be understood as being facilitated in the spaces which enable cultural and religious freedoms, recreation and gatherings.

This model for social sustainability represents the proposed structure towards strategic urban development. By ensuring that each facet is identified and implemented appropriately within the context of their site, the application of this approach ensures that the development of an area priorities the long-term communal requirements and therefore provides a greater context towards understanding which infrastructure is most essential in improving a community.

To determine the successes and weaknesses of the Jabulani Nodal Development this model will be used to identify the facets accommodated and neglected within its implementation.

MODEL OF SOCIAL SUSTAINABILITY



Chapter 4

ASSESSING JABULANI

The evaluation of Jabulani's nodal development be structured using the facets of the model of social sustainability. The facets being addressed will be health and wellbeing, justice system, access to resources, political stability, social cohesion and economic conditions. These facets will be identified through the spaces which represent them as part of and within a 1km radius of the nodal development.



FIGURE 4.0
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

HISTORY OF DEVELOPMENT

URBAN DEVELOPMENT DURING APARTHEID

The township of Soweto's importance is one which is recognised with pride in the history of South Africa. It was the unity of these ethnically divided communities around a common oppressor which brought about turning points around movements such the Anti-Pass Campaign of 1960 and the Student Uprising of 1976. However, following these uprisings there has been a noticeable dampening of the voice of Soweto while other townships were propelled by the momentum they had started. Professor of Political Science, Jeremy Seekings, noted that Soweto had become "less politically turbulent" following this period accrediting his observation to the "entrenched divides which had formed between the economic classes." (Seekings,1988)

In a chapter titled "Soweto: A study in socio-spatial differentiation" in the book "Changing Space, Changing Soweto" it is explained that perhaps development was a tool to silent the polical youth, as PW Botha's administration deliberately aimed to establish a black middle class within Soweto with the intention of "creating a buffer for radicalising youth".(Harrison, 2014) These aims are represented in the change of housing policies which granted this new middle class a 99-year leasehold right on a property. In addition to these housing policies pass laws were slowly being dropped which now allowed for populations from rural areas to move into Soweto. By 1989 an estimated 42,364 shacks had been established in the township and would continue to grow.

URBAN DEVELOPMENT POST-APARTHEID

Following the first democratic election in South Africa, the incentives persuading the new government to develop townships were no longer focused on creating divides. However, the African National Congress' policy of turning South Africa into a nation of homeowners pushed households in need for rental accommodation to rely on more informal market, thus the "backyard shack" percentages continued to grow in the 1990s.

In 2000, the City of Johannesburg had elected a new mayor, Amos Masondo. Under Masondo's administration large percentages of capital funding were push into townships at large but in Soweto with greater intention. During the years 2003-2004 Soweto had received 35% capital budget and between 2007-2008 this increased to 78%. The budgets were justified as being allocated for a "marginalised area" and Masondo outlined his vision for their use as enabling Soweto "to be normalised, functioning like other settlements, with malls and places of leisure." (Harrison, 2014) Masondo's intentions and the commitment to those intentions are commendable and

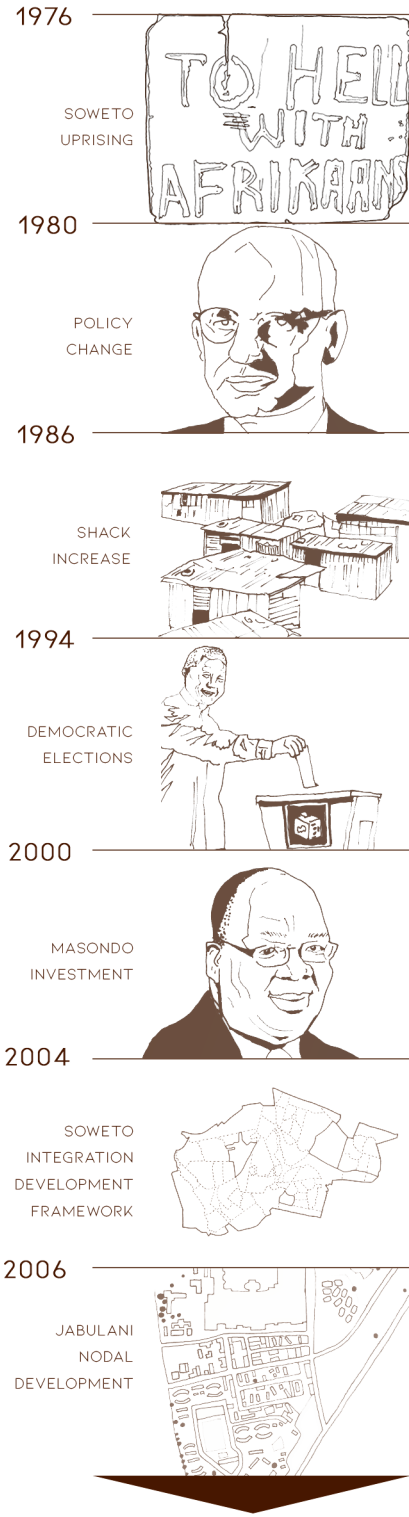


FIGURE 4.1 TIMELINE ON HISTORY OF DEVELOPMENT (AUTHOR, 2023.)

brought with it the introduction of many municipal facilities which previously lacked to the dense populations of Soweto. However, echoed in the quote is the oversimplified approach believed necessary to successfully develop Soweto.

This funding brought about development projects as part of the Soweto Integrated Spatial Development Framework of 2004, such as the Baralinks Regeneration Project (which introduced multimodal transport, a new shopping centre, multimodal transport interchange with major roads and university upgrades) and other nodal developments which aimed at creating hubs of economic, educational and recreational opportunities within promising neighbourhoods. Amongst these developments was a focus on the precinct of Jabulani which, at the time, was envisioned to be Soweto's CBD and projected to be a complete residential, business and recreational node. This would include a mall, hospital, fire station, police station, theatre, multistorey residential units, a technical college, a new public square and a civic centre.

While there exists a perspective that urban development is a trigger for communal prosperity, the initial implementations of development simply aimed to supress the politically threathening population of Soweto as PW Botha began encouraging a black middle class. The African National Congress, by prioritising of their own homeowner policies, brought about further degradation of quality of life within Soweto, with informal housing increasing.

Therefore, given this context, it is crucial to include public opinion as an additional degree of assessment when viewing the Jabulani Nodal Development to ensure that success is determined addtionally by the community's perspectives on the spaces which were introduced and the spaces which are lacking. By including the community's opinion within the assessment of needs met, this approach aims to correct the history of their exclusion within the development of their spaces.

THE JABULANI NODAL DEVELOPMENT

FIGURE 4.2
PROPOSED MODEL OF SOCIAL SUSTAINABILITY
(AUTHOR, 2023.)

The evaluation of Jabulani's nodal development is structured using the proposed approach to development based off the facets required for social sustainability.

The facets being addressed, in order of necessity, include:

- Health and Wellbeing.
- Safety and Justice.
- Political Stability.
- Economic Health.
- Education and Access to information.
- Social Cohesion.

MODEL OF SOCIAL SUSTAINABILITY

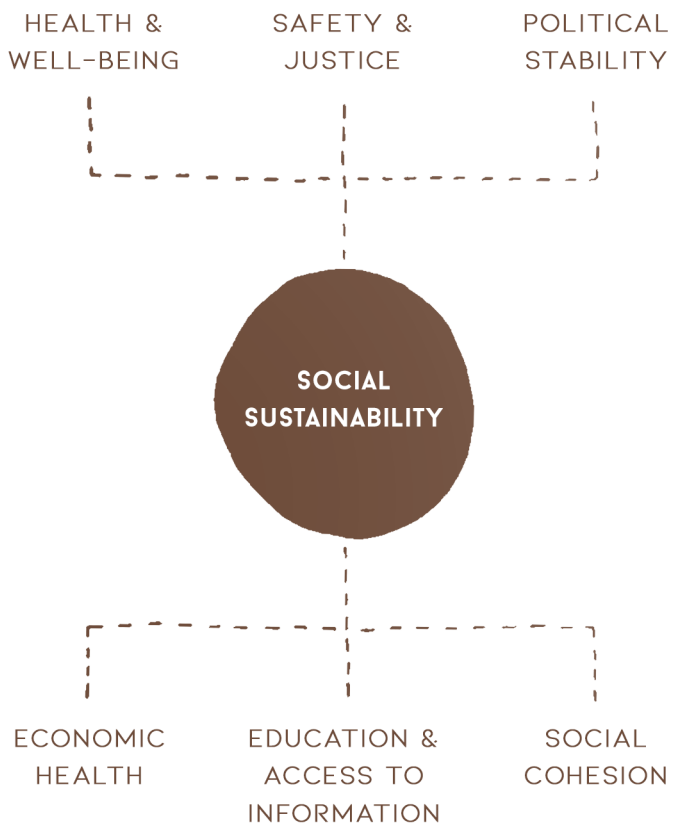


FIGURE 4.3
JABULANI NODAL DEVELOPMENT MAPPING
(AUTHOR, 2023. AFTER GOOGLE IMAGES.)

These facets will be evaluated through the spaces which represent them as a result of the multi-phased development and pre-existing spaces within a 1km radius of the nodal development. The result of the multi-phased nodal development is comprised of:

COMMUNAL REVITALISATION

1. The Soweto Theatre.
2. The Jabulani Safe Hub and Sports Complex.

ECONOMIC REVITALISATION

3. Jabulani Mall.

INFRASTRUCTURAL REVITALISATION

4. Public sports facilities upgrades.
5. Public Park upgrades.
6. Jabulani Technical College.
7. Bheki Mlangeni Hospital.
8. SAPS Jabulani Police Station. (A pre-existing component of the node).
9. Jabulani Fire Station.
10. Jabulani Civic Centre (A pre-existing component of the node).
11. Residential Complexes.

The assessment of these spaces will take place in two degrees of detail, the macro-evaluation which involves mapping the relevance of the space and micro-evaluation where interviews with local community members will provide a greater depth of understanding of public experience and perception.



HEALTH & WELLBEING

FIGURE 4.4
HEALTH & WELLBEING MAPPING (OPPOSITE)
(AUTHOR, 2023. AFTER GOOGLE IMAGES.)

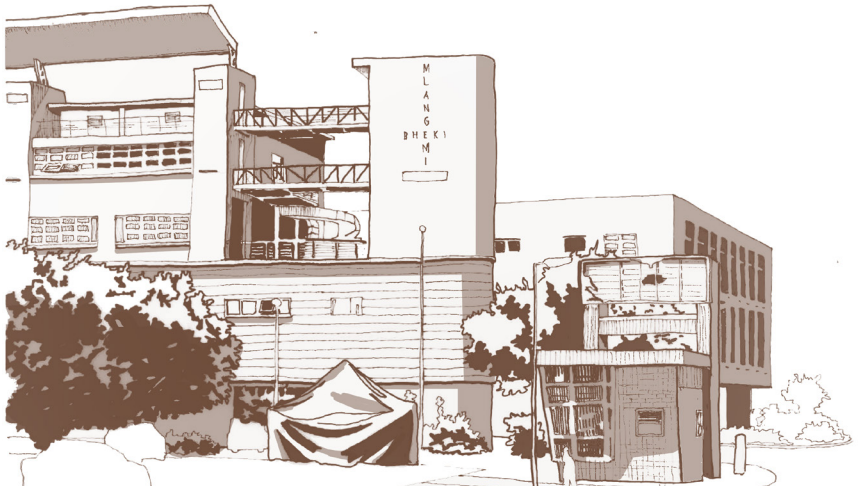
This facet of social sustainability is one that requires appropriate infrastructure to allow the physical and mental health of the community to be met with professionals who are skilled to cater to these needs. The Bheki Mlangeni District Hospital is the infrastructure which addresses this facet within the order of the nodal development.

FIGURE 4.5
BHEKI MLANGENI HOSPITAL
(AUTHOR, 2023.)

MACRO-EVALUATION

As part of the nodal development a new hospital, the Bheki Mlangeni District Hospital has been a vital success in meeting the infrastructural need of access to medical health professionals. Initially named the Jabulani Hospital, constructed to relieve pressure from the Chris Hani Baragwanath Hospital, it was an essential development as the district had no other hospital.

BHEKI MLANGENI HOSPITAL. JABULANI, SOWETO.





N

HEALTH AND WELLBEING SPACES

100M

FIGURE 4.5
BHEKI MLANGENI
(AUTHOR, 2023, AFTER VLACHAKIS.)

In 2015 it was renamed after a strategist in the youth liberation movement during Apartheid and human rights lawyer, Bheki Mlangeni, who was born in Jabulani and whose firm was responsible for investigations into the hit squads performing political assassinations. Mlangeni along with his associates were responsible for "exposing activities of the Civil Cooperation Bureau, a secret army unit, and other gangs which were carrying out orders of attacks against anti-apartheid leaders. "(SAHO, 2019)

Today the pride toward his role in the anti-apartheid movement is celebrated and remembered in the naming of the district hospital. In April of 2023, the hospital became a site of pride when performing its first heart surgery.



BHEKI MLANGENI

Aside from the Bheki Mlangeni hospital the only other existing medical facility, separate to the nodal development, is the Emdeni Rehabilitation Centre, which additionally provides the service for individuals to tackle their own substance abuse struggles.

MICRO–EVALUATION

In order to understand the community's perception of the spaces of 'health and wellbeing' which exist participants were asked, "What are your thoughts towards the Bheki Mlangeni District Hospital?"
Interview A, a primary school principal in the area, answered that; "For the students and even my family staying...in Pimville... it's comforting to know that it's also here, and close, for emergencies." (Interview A, 2023)

The perception of the hospital was all-round positive and the need for the additional hospital in the district was expressed. To identify any health and wellbeing spaces which community member's felt was needed, participants were asked, "Are there any problems you face in your work environment or life which would benefit from a medical professional?"

In the same interview, the participant expressed that within schools there are a lot of problems faced which could benefit from additional professional access. At the time of the interview, they had just completed a meeting with district officials regarding a bullying case within the school. The case had sat in their heart led them to speak with passion when expressing that the treatment of these situations can be flawed as they

are reactive to the incident which took place, that the problems of bullying start at the house and until that issue can be addressed these incidences won't get any better.

"It's time that we've become proactive and educate not only this human...in life orientation you'll always find an aspect about bullying, but why does it continue unabated as if it's not part of the curriculum, it is because it is not enforced from home, from society...I'm not sure there is anything one can do to actually help the community (with regards to deep rooted bullying)...I'm a principal of this school and I can tell you; you actually go to the extent of solving problems of parents, who have a child at the school, and who are not on speaking terms. You can imagine the expectation from me a principal, you become everything, to an extent where sometimes you even neglect your own family. It takes a lot out of you...you don't even want your own children to tell you their own problems (after everything you deal with) ...The community is damaged, and the government is not helping." (Interview A, 2023)

The Bheki Mlangeni District Hospital is a successful achievement of the nodal development in persevering awareness and celebrating the community's historic identity, as well as in addressing an infrastructural need that existed in the area, which ultimately placed strain on the Chris Hani Baragwanath Hospital as the sole hospital in Soweto.

While the spaces which tend to the physical health needs of the community are sufficient, the micro-evaluation revealed that the issues experienced within the community are not limited to physical wellbeing. Access to mental health professionals and facilities are lacking and has therefore begun to place strain on leadership positions such as school principals who have take on responsibilities of mediators and counsellors without any specialised training. The significance of this absence is further compounded when referred to the context of average population, between 58-76%, which experienced feelings of hopelessness and depression in Jabulani. (Mapukata, 2018) Therefore, this facet of social sustainability will be addressed within the design intervention created.

JUSTICE SYSTEM

FIGURE 4.7
SAFETY AND
JUSTICE MAPPING.
(AUTHOR, 2023. AFTER
GOOGLE IMAGES.)

This facet of social sustainability refers to the presence of law enforcement and emergency responders, such as firefighters, who provide a sense of protection and peace of mind against the unjust and unpredictable events which can take place within a community. The SAPS Jabulani Police Station and the Jabulani Fire Station are the infrastructures which represents this facet within the order of the nodal development.



MACRO-EVALUATION

JUSTICE

The SAPS Jabulani police Station has existed before the forming of the Soweto Integrated Spatial Development Framework of 2004 and played a role in deciding the central location for the development node. The station's geographical positioning should in theory grant it the advantage of efficient response times as it is surrounded by dense residentially zoned land.

SAFETY

The Jabulani Fire Station existed before the nodal development, first opened in 1973 as the first black managed fire station in Soweto with approximately 50 firefighters. "At that time, the station operated seven ambulances, one fire engine, a utility van and one rescue van to service the residents of Soweto." (Mathang, 2011)

On the 22nd of November 2011 the fire station was reopened with a new facelift and improved services to attend to the service demands recorded within the area, these statistics were shared by the Acting Executive Mayor of Johannesburg, Counsellor Ruby Mathang, on the opening of the Jabulani Fire Station, "The Jabulani Fire Station is situated in the heart of Soweto and the station treats approximately three hundred walk in patients. According to statistics Jabulani Fire Station has a high volume of medical calls. The most critical caseloads for the area are as follows: High maternity, Medical (burns), Assault and Motor Vehicle Accidents." (Mathang, 2011)

As part of an initiative to improve the emergency facilities within townships the City of Johannesburg's Emergency Management Services invested in 76 new ambulances a portion of which was allocated to the reopening Jabulani Fire Station.

FIGURE 4.8
CRIME STATISTICS IN JABULANI VS MOROKA.
(AUTHOR, 2023. AFTER CRIMESTATS SA.)

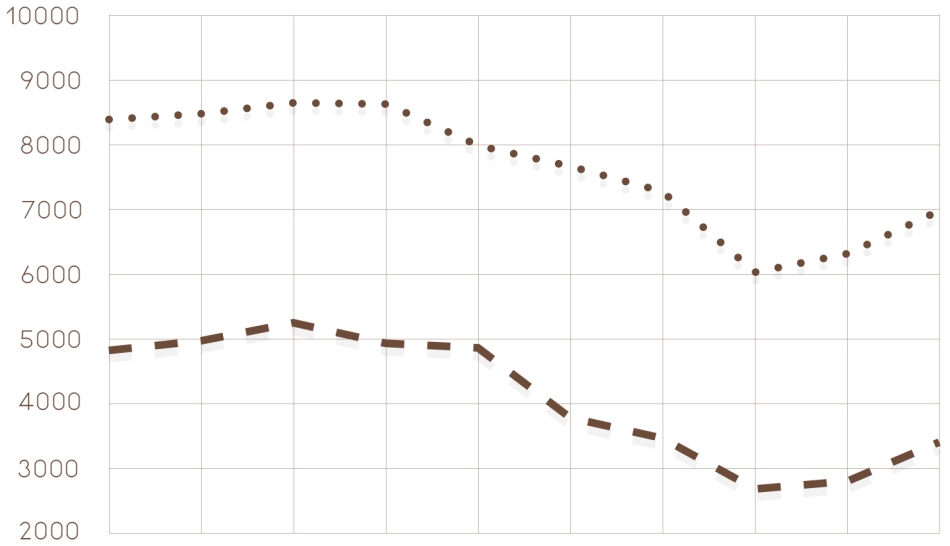
JUSTICE

The further evaluation of the success of the SAPS Jabulani Police Station will consider the crime statistics recorded by the station. While these numbers fluctuate amongst the years, the neighbourhood of Jabulani exhibits lower crime statistics than its surrounding precincts. The success of this police station can be seen visualised in the figure opposite which depicts the number recorded crimes relative to the neighbouring precinct of Moroka. The drastic difference between the stations' recorded crimes therefore highlights that the presence of justice within Jabulani is sufficiently successful relative to the surrounding context. (Crimestats, 2018)

Regardless of these statistics, community members are highly aware of the threats faced within their urban context and are sceptical towards the reliability to the police force. During an interview with a community member, they shared their own experience and frustration with the authority of the SAPS Jabulani Police Station,

"You've got the Jabulani Police Station, but I can tell you there are a lot of heists that are taking place at the Jabulani Mall. I witnessed one and I can tell you their response time (is bad). The police station is just there (across the mall)." (Interview A, 2023)

RECORDED CRIMES IN JABULANI VS MOROKA



2014	2015	2016	2017	2018	2019	2020	2021	2022
4834	4982	5226	4993	4894	3883	3574	2838	2961

JABULANI POLICE STATION ANNUAL RECORDED CRIMES

2014	2015	2016	2017	2018	2019	2020	2021	2022
8309	8476	8684	8676	7827	7335	6780	4914	5283

MOROKA POLICE STATION ANNUAL RECORDED CRIMES

Meeting the requirements of providing a sense of a justice and safety within an area is not a complex facet of the model. The lacklustre effectiveness of the police force, critiqued during the micro-evaluation, is perhaps a problem larger than problem solving capabilities of an architectural intervention. However, as a result of the efforts toward improving the facilities of the fire station and the relatively low crime statistics recorded by the police force within Jabulani, it can be understood that the spaces which represent justice and safety provides a sufficient presence of security within the nodal development of Jabulani.



FIGURE 4.9
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

POLITICAL STABILITY

FIGURE 4.10
POLITICAL STABILITY MAPPING. (OPPOSITE.)
(AUTHOR, 2023. AFTER GOOGLE MAPS.)

The facet of political stability will look specifically at the formal spaces which encourage political connection and discussion. Within the order of the nodal development the space which represents this facet is the Jabulani Civic Centre. For the evaluation of this facet the architecture, planning and function of the Civic Centre will be investigated.



FIGURE 4.11
CIVIC CENTRE
SKETCH.
(AUTHOR, 2023.)

SPACES AND ARCHITECTURE

The Jabulani Civic Centre was created to serve as a link between the people of Jabulani and the municipality. The centre serves as a precedent to traditional government institutional architecture. The physical representation of the building is void of any unique identity and from its exterior could be mistaken for any other government facility.

CIVIC CENTRE. JABULANI, SOWETO.

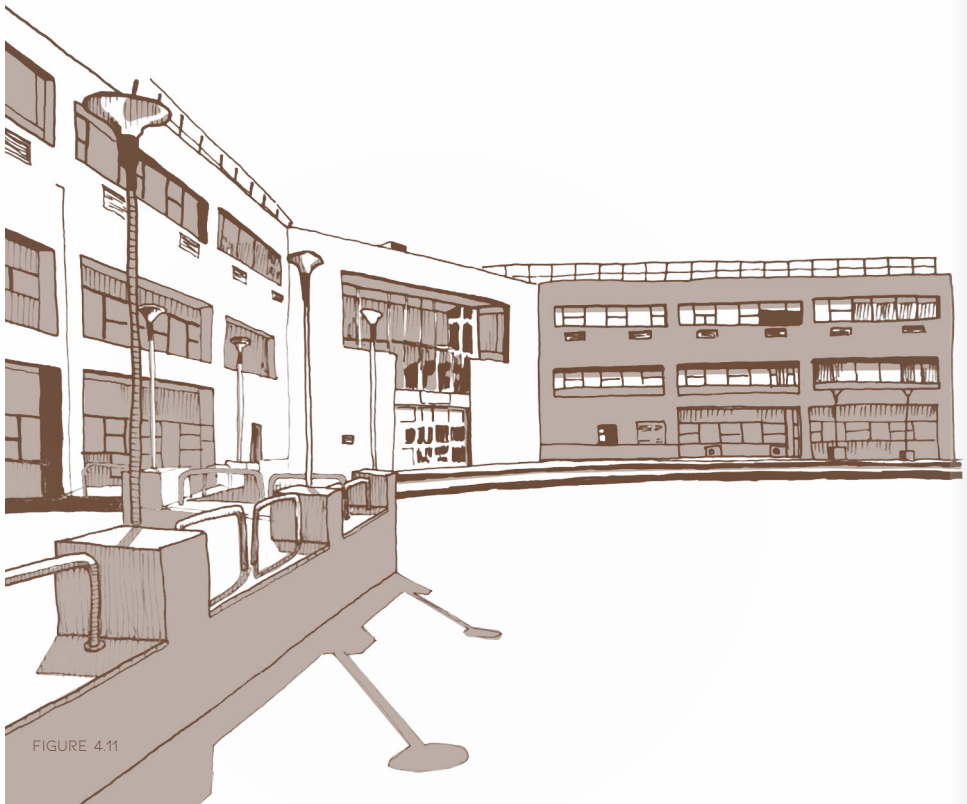


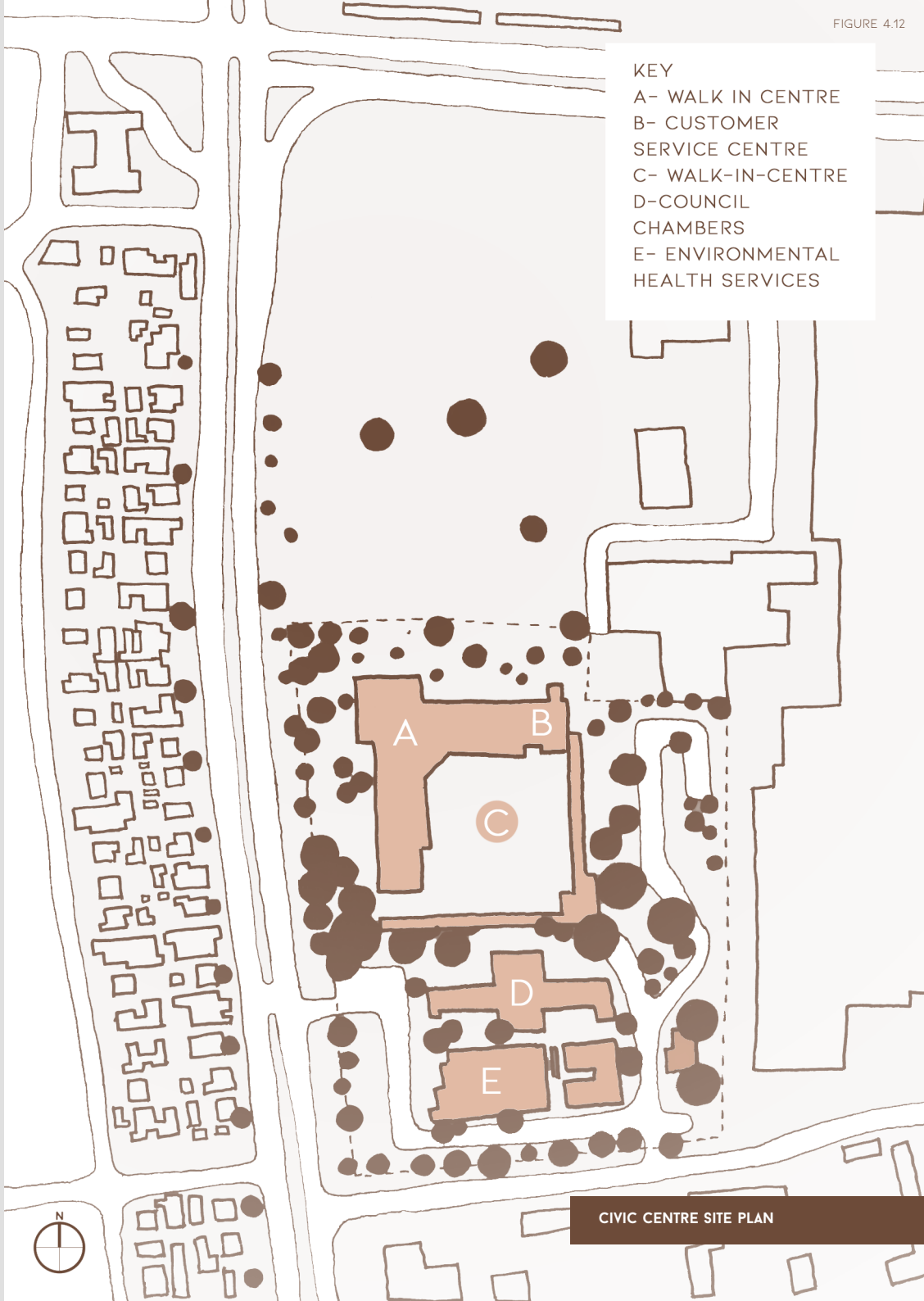
FIGURE 4.11

This facility is comprised of three main buildings, seen in in the figure on the following page, the first labelled ‘a’ is the ‘Walk-in-Centre’. The main program of this building is to house a reception desk, job opportunity bulletin board, several customer service booths, around a hundred office spaces (many of which were unused) and amenities such as kitchenettes and ablutions. What was observed was that all public service counters were empty, in fact most of the building - whose main purpose spatially is to accommodate the staff - seemed to be almost empty. The east wing of the ‘Walk-in-Centre’ appeared to be the space currently functioning as the customer service centre, labelled ‘b’. Although being inferiorly equipped, it was here that community members queued outside of the smaller reception waiting for assistance.

FIGURE 4.12
CIVIC CENTRE SITE PLAN
(AUTHOR, 2023. AFTER GOOGLE MAPS.)

The 'Walk-in-Centre' overlooks a public square, labelled 'c', created to host small gatherings, social hang outs as well as accommodate crowd overflows from the customer service. During site visits, this square showed no sign of being used for any other purpose other than accommodating crowd overflow. This is perhaps due to its isolation from the other green spaces on the site, the Walk-in-Centre's overbearing multistorey enclosure around it or its strange organisation lacking a worthy focal point which justified its arrangement.

The Council Chambers, building 'd', was used as more private offices, accommodating more senior staff members such as the civic centre's director. The building to its south, labelled 'e', was represented as the Environmental Health Services. This single storey building seemed to be an addition to the initial construction done and was found completely empty except for the staff members who utilised its public bathrooms. This building facilitated more offices spaces within which community members who required their specific services could meet.



CIVIC CENTRE SITE PLAN

FIGURE 4.13
CIVIC CENTRE URBAN EDGES PLAN
(AUTHOR, 2023, AFTER GOOGLE MAPS.)

FIGURE 4.14
CIVIC CENTRE URBAN EDGES PLAN
(AUTHOR, 2023.)

USER EXPERIENCE

The Civic Centre suffers greatly from a lack of legibility to the first-time user. Its corner positioning on a busy main road, constantly animated with the movement of people, provides it with the opportunity to present and attract pedestrians into its facility, instead what can be witnessed is the use of a dense perimeter of greenery which divides the sidewalk from the building while isolating this green space from public use behind its boundary fences.

This greenery additionally creates a visual divide between the street, and it is only upon finding the vehicular access roads when you begin to identify more about the centre through its government signage. This visual and physical divide from the sidewalk disconnects the centre from the public activity on the sidewalks.

SECTIONAL SKETCH OF URBAN EDGE

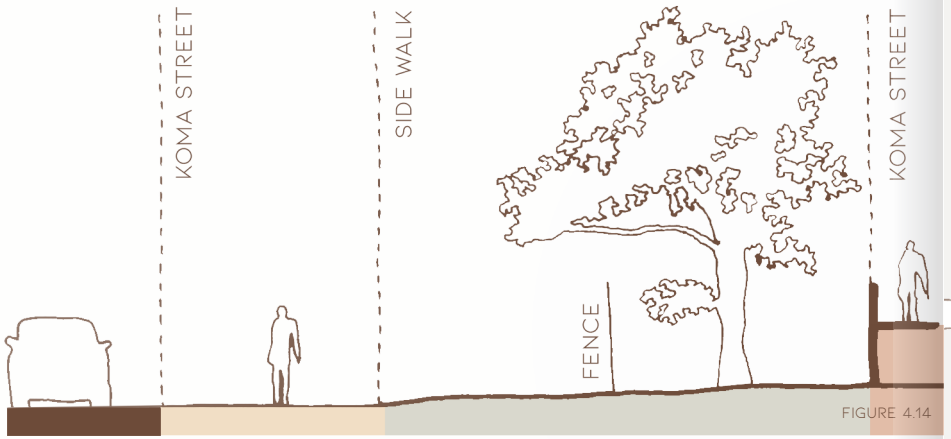
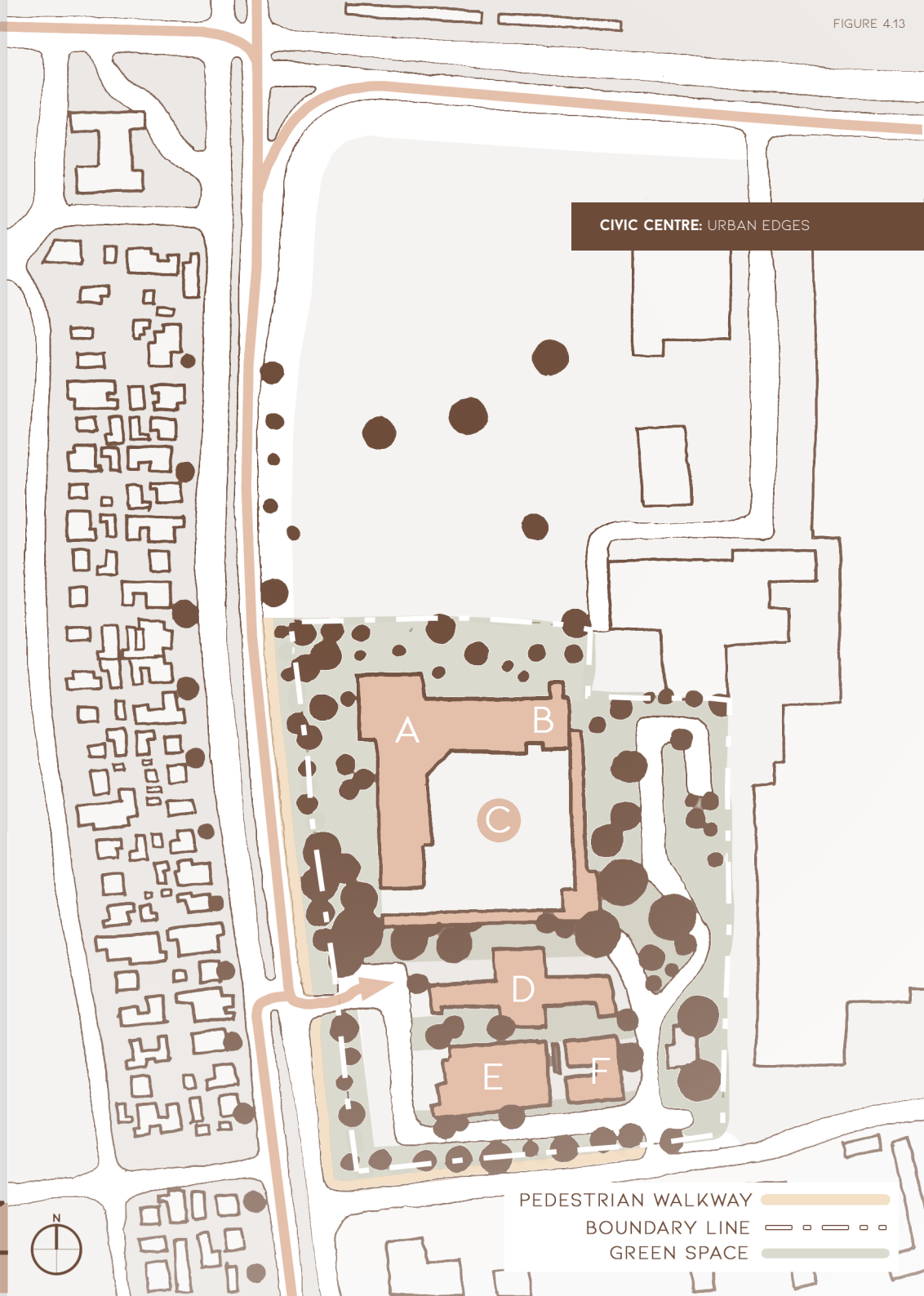


FIGURE 4.14

FIGURE 4.13

CIVIC CENTRE: URBAN EDGES



MICRO–EVALUATION

The public opinion towards the Jabulani Civic Centre is sourced from Google Reviews posted by users of the centre. Two main trends can be identified from assessing the collection of comments. Many members of the community are proud of the spaces of the Civic Centre and admire its clean and professional environment, sharing comments such as:

“It’s a very clean and safe place, with clean rest rooms and more parking. the staff is very helpful and the security officers at the entrance are good people with happy helping ideas.” (Mpahtsoe, 2023)

“The City of Johannesburg’s Regional Offices. While this serves as an entry point to access local government services, it also provides a platform for learning more about different spheres of government, how local government can be better equipped and utilized to transform the lives of the residents by tapping into resources available towards catering for basic human rights.” (Mahume, 2023)

Others, on the other hand, find their issue with the service delivery experienced at the centre. The issued experienced are addressed in the following reviews.

“Good morning, everyone,
As I’m writing this article on this Saturday morning, I’m not happy about the present government structures. Yesterday I personally went to Jabulani Civic Centre to collect my health certificate for catering that I applied for in 2020/02/03, the inspector in charge was out delivering certificates to the owners. That made me very sad about the government and today’s youth. I have been in the centre countless times, at times he will say he doesn’t have a transport to deliver, at times he will come the next day, all the promises he made were not kept. Where did Ubuntu go? What happened to service delivery? What happened to respect your father and mother so your days will be Multiplied. In all government and municipalities structures its foreigners first South Africans last. They do it for the love of money, the country comes second. As Zuma said in his interview ANC first country second. Cry the beloved Mzansi!!!” (Saunder, 2022)

From a macro investigation the spaces of the civic centre remains primarily unused, therefore highly inefficient, with an urban connection to the community which is architecturally harsh and therefore unwelcoming. However, the micro-evaluation revealed that the public's perception of this space of political connection as spatial and programmatic success while the poor service delivery experienced from its employees were viewed as its more prevalent weakness.

The Jabulani Civic Centre can therefore, due to its acceptance by the public and its performance as a space for political connection, can be understood as a successful catering to the need for a space to foster political stability within the order of the Jabulani Nodal Development, requiring no urgent intervention.



FIGURE 4.15
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

ECONOMIC HEALTH

FIGURE 4.16
ECONOMIC HEALTH MAPPING
(AUTHOR, 2023, AFTER GOOGLE IMAGES)
FIGURE 4.17
JABULANI MALL SKETCH.
(AUTHOR, 2023.)

Within the strategy of the nodal development the infrastructure which addresses the economic health of the area is the Jabulani Mall which defines an economic hub within the precinct.

MACRO-EVALUATION

The Jabulani Mall was opened on 26 September 2006 and costed R160 million after its completion. It represents a typical commercial architectural language which holds a closer relation to most malls in the country than any other building within Soweto. While the massive infrastructure may come across as invasive and foreign to the smaller scale architectural context which surrounds it, the mall's successful integration with the lives of the community can be seen through its constant flow of pedestrian circulation moving in and out of the site to access the well-known brand names.

JABULANI MALL. JABULANI, SOWETO.

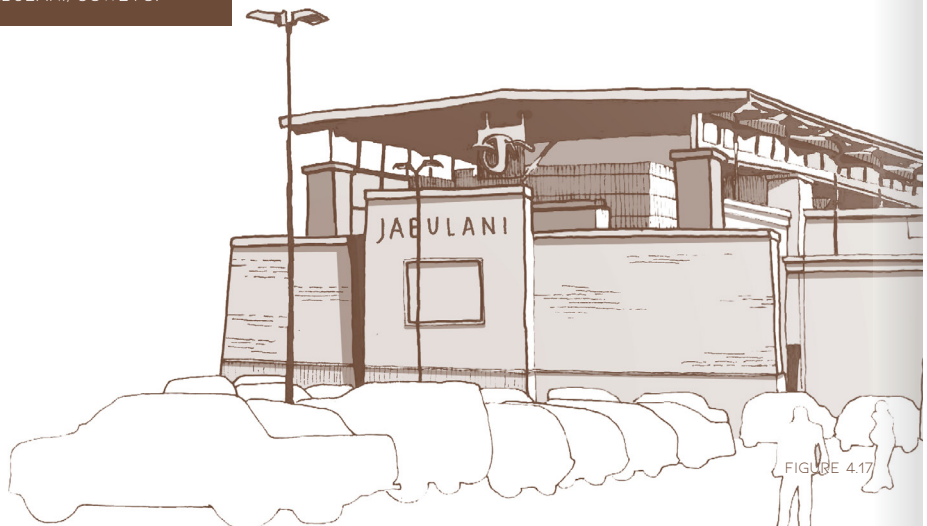


FIGURE 4.17

FIGURE 4.16



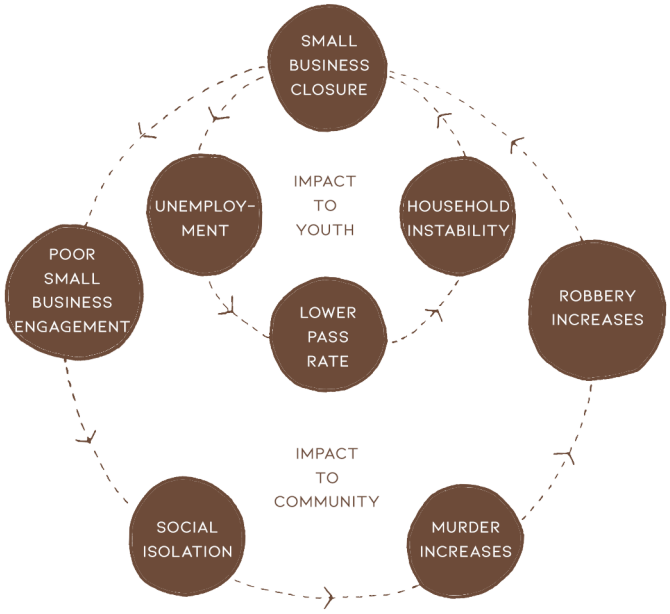
ECONOMIC HEALTH

FIGURE 4.16
ECONOMIC HEALTH CYCLE.
(AUTHOR, 2023.)

MICRO–EVALUATION

The further evaluation of the Jabulani Mall will consider the influence it has had on economic health following its introduction. ‘Economic Health’ will be used as an umbrella term to discuss the interlinking struggles of local business failure, increase of crime rates, damage to household stability and the growth of unemployment experienced in Jabulani.

CYCLE OF ECONOMIC FAILURE



BUSINESS FAILURE

One of the weaker strategies for economic revitalisation, which has been previously highlighted, is the creation of an economic hub of commerce with the intention of attracting private stakeholders. As a result of the competition between the independent local businesses and the large corporations introduced, local business has been recorded to take significant financial hits.

The Jabulani Nodal Development exhibited evidence of this negative influence after the creation of its economic hub, which took form with the Jabulani Mall. After a year, “within a 5km radius of the shopping centre, a 38% closure of small businesses” was recorded. “This percentage increased to 48% the following year”. (Harrison, 2014) Projections hoped that the mall would attract further private investment, therefore creating more job opportunities, but these projections were flawed, and private investment showed little interest. The consequence of this was the negative impact to local economy while failing to deliver on new economic opportunities.

INCREASED CRIME RATES

In the adjacent neighbourhood of Moroka, just outside of the 1km radius where business failure was noted, increased rates of robbery as well as murders, due to aggravated robbery were recorded. Between the years 2018-2019, crime within Moroka had escalated 19.7% making it the 10th police station nationwide with the highest recording of robbery with aggravating circumstances. The severity of these increased robberies is further reinforced with Moroka's police station reporting as the 15th highest recorded cases nationwide. (SAPS, 2019, p.4) These stressors begin to shed light as to why Jabulani recorded an average population of 39-57% who felt depressed or hopeless (Mapukata, 2018), as communities begin to fragment and isolate themselves due to the fear of crime. (Riley, 2014)

HOUSEHOLD INSTABILITY

These failures of business and the stressors of increased crime rates possess the likelihood of jeopardising the stability of households around the community. The compounding effects of poor living conditions, the weight of environmental pressures and the economic struggles experienced within household, have shown to ultimately impact the success of young populations seeking further education.

UNEMPLOYMENT

This instability translates to the young population struggling within the labour market. The Q1 Labour Survey of 2023 revealed a further increase to 32.9% in unemployment rate in the first three months of 2023. The interconnectedness of this unemployment statistic to household instability was echoed by a reporter for Rise Mzansi, Songezo Zibi, who responded to the Labour Survey by stating that, "Too many young people, by no fault of their own does not have the means to complete their schooling due to conditions at home and in their communities." (Nondywana, 2023)

This evaluation of the economic health experienced within Jabulani reveals that, the struggles of economic opportunities have been made more drastic following the nodal development's contradictory implementation of economic revitalisation with the introduction of the Jabulani Mall.

While the mall is successful in creating a hub for retail, food and service businesses around which populations gather and socialise around. Its true failure is found in its execution of its aims of boosting local economy, having adverse results and greatly affecting the immediate local businesses.

The creation of opportunities for local business to expand and be celebrated through the infrastructure of the nodal development is therefore lacking and will be further addressed in the structuring of the design intervention to attend to the facet of economic health.

ACCESS TO INFORMATION

FIGURE 4.19
MOCHOCHONONO PRIMARY SCHOOL SKETCH.
(AUTHOR, 2023.)

The education and access to information facet of social sustainability will be assessed with consideration of the educational spaces in and around the nodal development which grant populations the opportunity for individual development. The Jabulani Technical College is the only infrastructural response created by the development scheme to attend to this facet. The facility provides the opportunity for higher standard of education to be accessed by the surrounding communities, however, given that this facility only serves its enrolled students it was of greater value to access other educational infrastructure and spaces where information could be publicly accessed around of the nodal development.

MACRO-EVALUATION

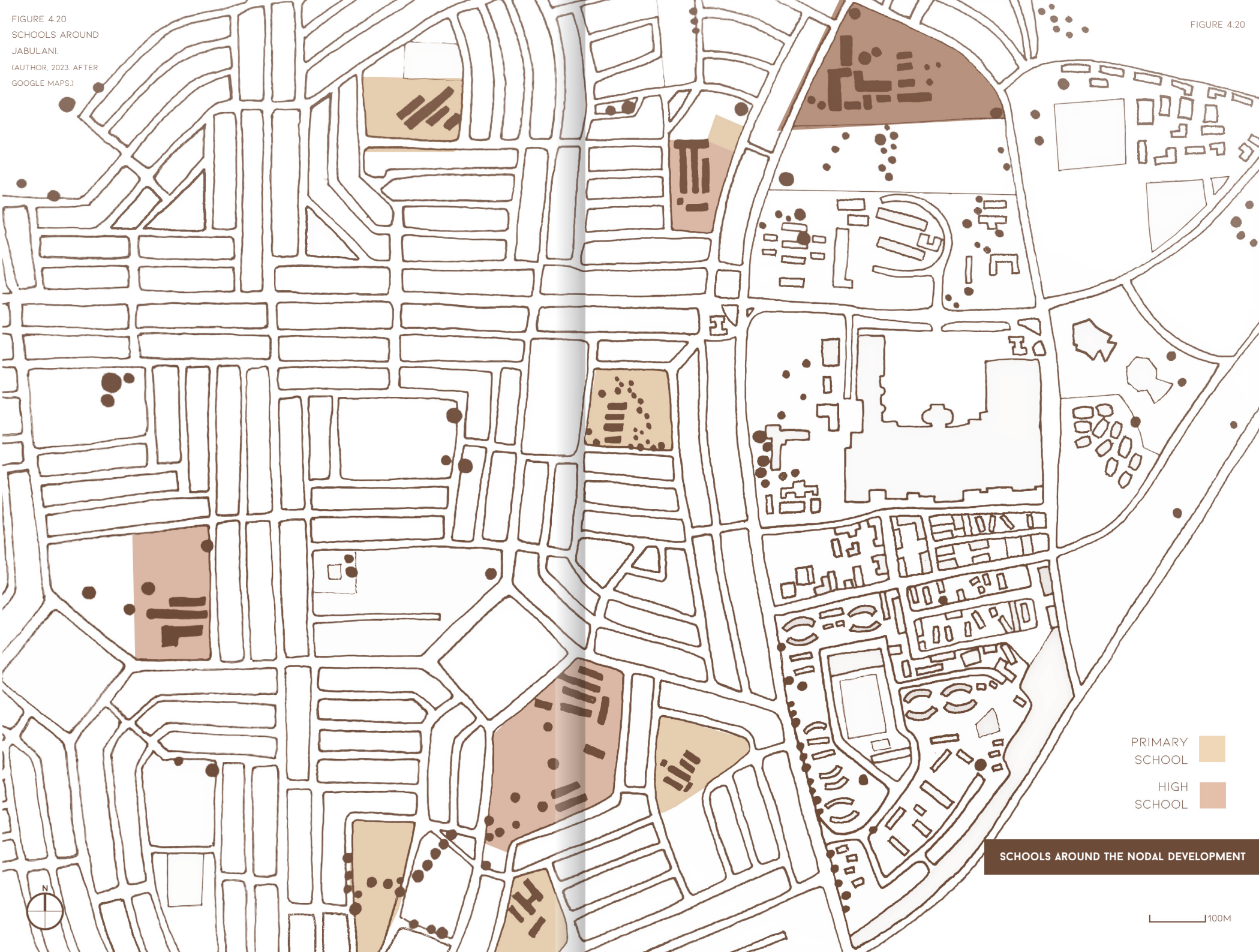
Within the 1km radius of the Jabulani node there are no library spaces or alternate spaces where populations can access educational resources. The Jabulani Safe Hub had aimed to provide a "Digital Library", however, by the time of completion, this was downgraded as an Early Child Development Day-Care. A further investigation into the nature of educational infrastructure was therefore required to identify if perhaps this access was being addressed through the local schools. When mapping the number of schools which exist within a 1km radius of the nodal development, there is a total of 20 education facilities, of which, 14 are primary schools, 4 are secondary schools and 2 are tertiary institutions (one of which being the Jabulani Technical College).

MOCHOCHONONO PRIMARY SCHOOL



FIGURE 4.19

FIGURE 4.20
SCHOOLS AROUND JABULANI.
(AUTHOR, 2023. AFTER GOOGLE MAPS.)



MICRO EVALUATION

For greater insight, interviews were arranged with principals and head of department staff members from select primary and secondary schools. Given that the development scheme barely addressed the facet of 'access to information' the interviews conducted were focused around understanding the facilities which currently existed in schools and what spaces were needed. What was gained through this interview process was an understanding of the successes and failures of government programs and its impact on the spatial order of the primary schools within Jabulani.

The inquiry into this information began by asking staff members, "Does this school have any library spaces?"

"I have a school here...the library, because of lack of facilities, I mean this school was built in 1975...and we all know who built it and for what purpose. This block is supposed to have been an admin block; it is my office, the AA office and there was supposed to be another office here that we converted to the feeding scheme, because we don't have facilities. Now the library is there but we don't have the deputy's office, so it was converted to their office. Now learners cannot use that. Now what does that say. When we get our financial allocation for learner/teacher support material, 10% thereof should go towards the purchasing of library equipment now if you don't have a library, we are not going to buy that so instead we just put it back into buying stationary. Now, what's the purpose of a library? Is to empower...we are living in the 21st century so we should be thinking library with technology." (Interview B, 2023)

The participant shared that their frustration towards the lack of usable space for teaching goes all the way to the construction of the school during apartheid. This school, to the participant, was always designed with little regard to the experience of the childen. In the modern context this school has further suffered, in order to incorporate the government's Feeding Scheme, which successfully provides breakfast and lunch to students every day, a room had to be converted into a kitchen space. This resulted in the repurposing of an admin office space to accommodate for the feeding scheme, with the library being converted to compensate for the loss of admin space. This not only reduced the facilities provided within the school but resulted in a redundancy in funding allocation since there is no physical library to accomodate the budgeted new books.

During the same interview, in response to the aim of this research report introducing new infrastructure within the community, the participant shared their own concerns around safety which led to a further discussion on lost spaces.

"The crime rate in this country is so high that at the end of the day this place (referring to the intervention) might end up vandalised. I'm not sure if you're aware of this 'Gauteng Online' thing, the provincial government have a project called 'Gauteng Online' where

FIGURE 4.21
LOSS OF SPACE IN PRIMARY SCHOOLS SKECTH PLAN. OPPOSITE.
(AUTHOR, 2023.)

they build computer labs in all schools in the province. Unfortunately, they didn't actually build, I'll show you what they actually did. All the schools had that. But nothing happened, the idea was good but there was no plan to maintain and ensure it is well looked after. They put in the computers, and their aim was that they would incorporate computer lessons in each school. By the way those computers were also supposed to be accessed by the community, but that part never happened. Instead, criminals ended up breaking into schools and stealing these computers and the whole problem just fell from there. You cannot put laptops in a school, and you don't provide security and if you do, criminals are armed, and schools are gun free zones. So, while you're addressing this, the context is the security and the crime rate... We need technology, and we also need to encourage this nation to be a reading nation and we need to invest a lot of money."
(Interview B, 2023)

Here the participant explains how the government initiative known as, Gauteng Online, had introduced computer labs to schools in disadvantaged areas which led to security risks and improper execution of the intended scope of the program. In the example of this primary school an additional room was now left crowded with computers which didn't function, further limiting their usable space. An emphasis on awareness to the security measures required to successfully introduce technological facilities was shared to prevent the mistakes experienced in this initiative from being repeated. The loss of primary school space because of these two government programs is represented in the figure below.

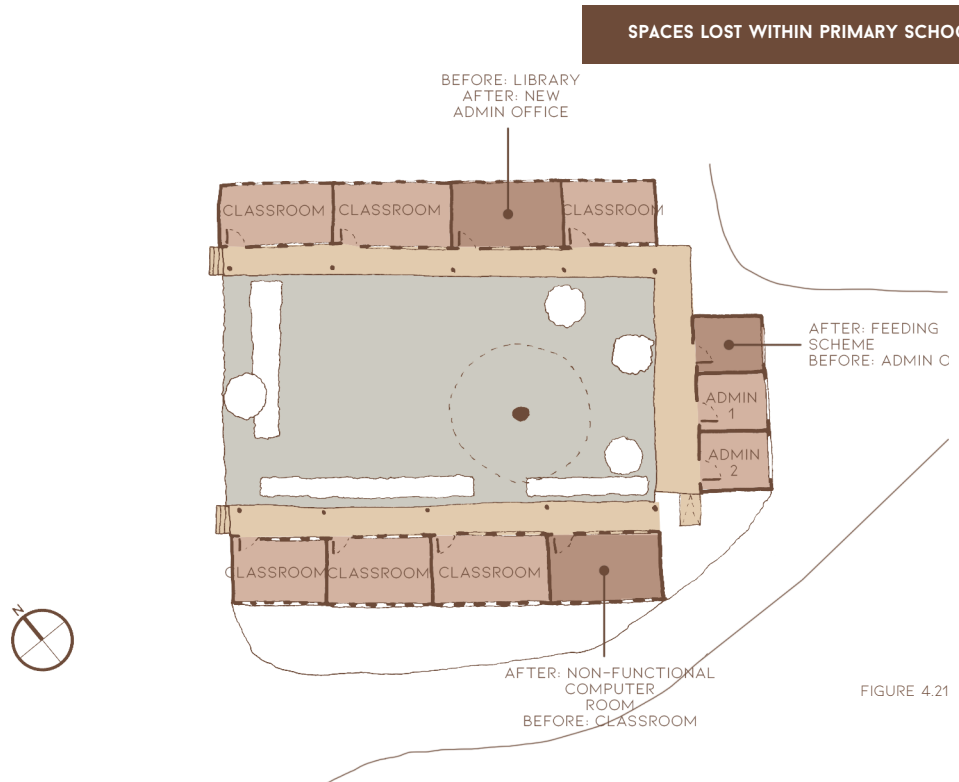


FIGURE 4.21

ability, was that while the Jabulani Technical College is successful in providing the opportunity for tertiary education to be accessed within the community, there are many gaps within the resources available to the primary schools of Jabulani which have been neglected in the development of the community.

The success of the government's Feeding Scheme and the failure of Gauteng Online has resulted in spaces lost within primary schools which should have been utilised as libraries and functional access to technology. The failure to acknowledge the loss of these resources in schools in conjunction to the absence of public spaces facilitating access to information within the community, leads to the conclusion that the spaces which represent the facet of education and access to information are greatly lacking within the order of the community.

Therefore, the design intervention will prioritise the facilitating of both the local schools' and community's access to library space and technological resources, with sensitive consideration of the security measures required to make these spaces safe and feasible.



FIGURE 4.22
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

SOCIAL COHESION

FIGURE 4.23
SOCIAL COHESION
MAPPING.
OPPOSITE.
(AUTHOR, 2023.)

The facet of social cohesion will be identified as the spaces which aim to create the opportunity for communal connection to be formed. There are many forms and functions around which these social spaces can exist within the order of a community (such as religious spaces and economic hubs), however, to keep this evaluation focused on the influence of the nodal development scheme this section will investigate the communal spaces and recreational spaces it has introduced. The implementation of architecture into any community requires incredible sensitivity with regards to the representation of identity, this is less of a crucial consideration with regards to necessary infrastructure such as police stations and hospitals, but an important one when designing spaces to encourage social cohesion. Given the importance of this aesthetic consideration, the evaluation will additionally investigate the architectural language and the public perception it fosters.



COMMUNAL SPACE: THE SOWETO THEATRE MACRO-EVALUATION

FIGURE 4.24
SOWETO THEATER SKETCH.
(AUTHOR, 2023.)

The Soweto Theatre, created in 2012, is one of the development node's most iconic infrastructures and aimed to create a space for the arts and culture of Soweto to be celebrated within Jabulani. Within this space, plays, talks and concerts are held, with the brief calling for 3 performance spaces seating 430, 180 and 90 people each. (ArchDaily, 2012) The architects of the theatre, Afritects, express that the impetus for the project is founded in the facilitating of performance space post-apartheid. The challenge they were faced with was the formalising of performance space within a cultural context where these spaces were previously temporary, makeshift and constantly changing.

"In the absence of a formal theatre space, what did manage to develop was a performance-atmosphere that was relaxed, accessible and unintimidating with the focus being on entertainment: precisely the desired escape, or reprieve, needed from the reality and regulations of the time." (ArchDaily, 2012)

The theatre was constructed on a site north of the Jabavu Amphitheatre, a space of heritage which during the 1980s of Apartheid served as a site of political, and cultural meetings. The way in which the architects aimed to "demystify and beguile the community to this much needed, yet foreign facility" was through the humble celebration of the performance space through design. The three performance spaces were designed to be defined and identifiable both outside and inside the theatre with the intention of humbly representing primarily the function itself rather than the foreign typology.

SOWETO THEATER. JABULANI, SOWETO.



MICRO–EVALUATION

From talks with fellow architecture students and lecturers it seems that many academics view the Soweto Theatre as a "white elephant", something which requires a lot of money without yielding much profit, with the explanation being rooted in its striking design and a lack of local identity being represented in its language. Interviews with community members revealed a different angle from which the Soweto Theatre's success could be understood.

When interviewing a primary school teacher, the participant was asked, "How do you feel about the Soweto Theatre?" In their response they expressed what, to them, made the Soweto Theatre the white elephant its known as, it was not simply the architectural language but instead the disconnect it represented with the culture of Soweto.

"I remember when I was young, when I was still at school, we would go and visit the market theatre. Theatre was not a thing for me, but because there was this white lady that loved theatre, you know at the time when you try to conform...I would rather go to a movie than a theatre. Now you come to Soweto, and you build a theatre...number one what do children know. I mean, I can call one learner now because in one of their subjects they are doing life skills. In life skills there is a portion that talks about drama...and I can tell you they would rather do the drawing part or the singing part rather than anything to do with theatre. Now you have a theatre there, what is the mentality? What are the experiences of this community, or the Soweto community for that matter, in theatre? Their experiences do not put them in a space to appreciate theatre. I mean if people were keen that would be like the Jabulani mall with people coming in and out, people would rather go to Jabulani mall than the theatre but precisely because it's not them. They've never been orientated or exposed to theatre." (Interview C, 2023)

Interviewer: "Do you feel that disconnect when looking at the theatre from the outside?"

"You go there its beautiful, the structure its nice, its beautiful, that's all I appreciate. One day for me to say, "Let's organise a trip there", what are we going to do? Just look at the building. Do they open opportunities for learners? I have a little daughter who can tell you a thing about Coca-Cola because it is a brand that is known. But theatre, no, it's a white elephant seated there, nice building many rands spent to maintain it but what is it doing for the community? Nothing. Schools are struggling and schools would jump at the opportunity of saying let's take our children there for life skills, for drama there." (Interview C, 2023)

Interviewer: “Do you think that if the Soweto Theatre were to connect more with schools this perception could change?”

“Life skills is divided into three, you have the content, you have the physical education, and you have arts and culture. Now if this part of arts and culture, because it needs someone who is a specialist in arts and culture, and we don’t have teachers that are specialised. You would rather have someone who has a BA in culture but not qualified as a teacher. So, if they would then have a link with schools to say we have people there and would be willing to take your learners there where we will address this specific part where teachers are found wanting... I taught life skills, and I can tell you I didn’t know anything, I would rather let them do something else but in the process, I am disadvantaging them because there is an artist amongst these learners. Theres no plan to link that with the community. What best than having schools because when you plant a seed in a child that seed will grow, that child will grow a love for theatre because they were exposed early”. (Interview C, 2023)

This singular interview had dissected a feeling that was echoed in other interviews. While the architects were aware of the challenge of introducing the foreign typology of the theatre within the context Soweto, regardless of a history of performance, the task of formalising these activities within a building without a structured manner of sparking communal engagement has ultimately led to its status as a white elephant. Additionally worth noting within this interview was an issue echoed in another, that the lack of specialist access within schools created a poor fulfilment of conveying the syllabus to learners. In this case, the lack of arts and culture specialists has resulted in a portion of the life skills syllabus being neglected.

FIGURE 4.25
JABULANI SAFE HUB
SKETCH.
(AUTHOR, 2023.)

RECREATIONAL SPACE:
PARKS AND SPORTS FACILITIES

The neighbourhood of Jabulani is spotted with green spaces which function as parks, these spaces experience regular grass maintenance and are frequently populated with people throughout the day, peaking around school closure times. In addition, within the 1km radius, a notable facility is the Moletsane Sports Complex, which features 2 basketball courts, 2 five-a-side soccer pitches and a swimming pool. During a site visit the basketball courts were being refurbished, offering a coincidental insight into the successful maintenance of this facility.

THE JABULANI SAFE HUB
MACRO-EVALUATION

The Jabulani Safe Hub, a recent addition as a part of phase 6B of the nodal development completed on the 9th of September 2021, launched by the Department of Community Development. The public facilities provided within the safe hub include: a full-size soccer pitch, indoor netball gymnasium, swimming pool, an Early Child Development play area, a cafeteria and workshop spaces for local businesses to operate out of. The architecture of the building represents a familiar language within the area's context with its metal roofing, steel frames and brick façade finishes, speaking to the materiality of Soweto construction.

JABULANI SAFE HUB. JABULANI, SOWETO.



FIGURE 4.26
SAFE HUB DIS-CONNECT SKETCH PLAN.
(AUTHOR, 2023. AFTER GOOGLE MAPS.)

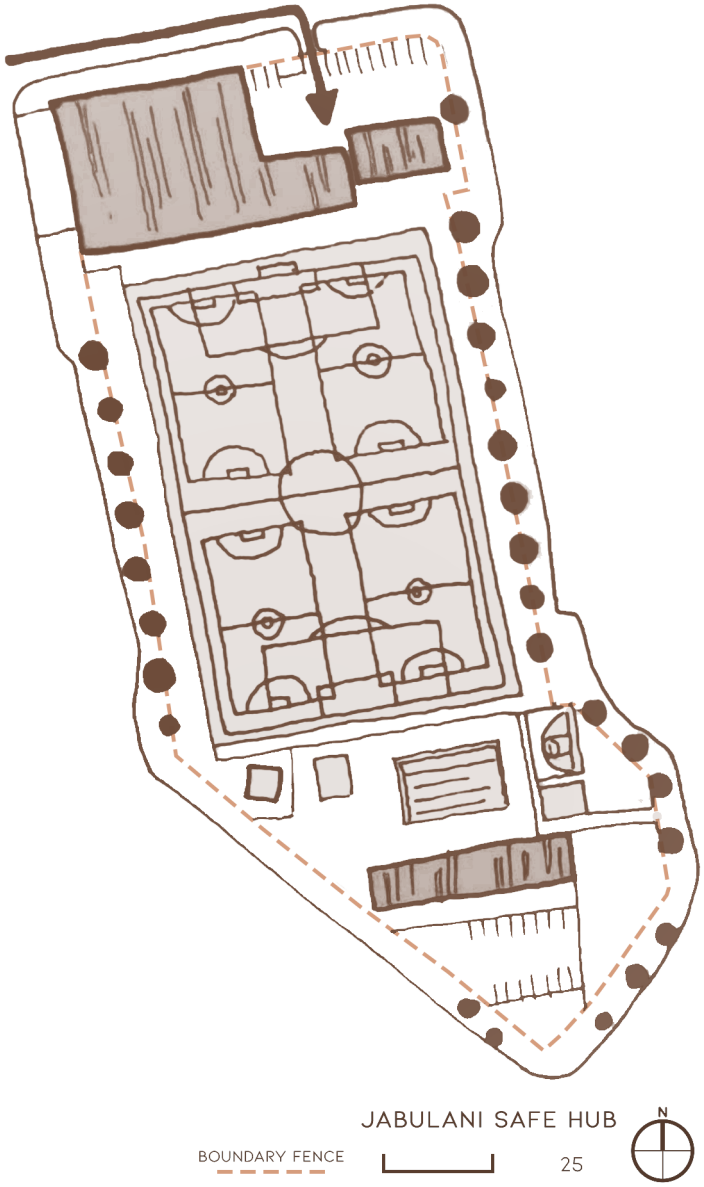
MICRO-EVALUATION

From site visits one can understand that the safe hub is one of the most progressive developments comprised within the node, its high security perimeter provides a sense of thoughtful safety, its sports facilities are used by local teams for training, weekly workshops and activities such as Karate lessons are held in its gymnasium and its cafeteria is used by mothers while their children use the play area. These successes overshadow its failures which include: the incompletion of the digital library which would've provided access to literature and digital information to the public and the poor implementation of the workshop spaces, which had been non-operational on several site visits.

The reason behind the failure of these workshop spaces may have been identified during interviews where participants were asked, "How do you feel about the Jabulani Safe Hub?" Many participants seemed to not know about the facility at all, despite some working just a few roads down from the site.

"It's not the Jabulani Flats? If you were referring to this one (Moletsane Park), this one I know. You know why I wouldn't know that fact that you're saying it operating as semi-private and if it is built within the Jabulani Flats. I think somehow the community around there will sort of make it an exclusive area so that no other community can have access to it because it's like it was built for them. I'd say this one (Moletsane Park) is more accessible to the public." (Interview B)

JABULANI SAFE HUB PLAN. JABULANI, SOWETO.



While successful in the architectural language which celebrates local materiality while presenting modern forms into the context of Jabulani as well as introducing professional facilities to the athletes of the surrounding communities, the intervention shows little success in public awareness. While this could be attributed to its relatively recent completion, community members feel that the space does not operate and present itself as a publicly accessible space, resulting in the workshop spaces receiving limited exposure to potential customers causing them to be unused today. This poor accessibility can be accredited to the prioritising of safety with the use of a perimeter fence which offers no opportunity for public engagement on its street edges.

The attention to creating and maintaining spaces to facilitate social cohesion within the order of the nodal development can be understood as successful, however, from the analysis of the Soweto Theatre and the Jabulani Safe Hub two main lesson can be gain which limited their success.

The first is function, as identified with the Soweto Theatre, its greatest weakness that has led to it being a white elephant is the disconnect with the functional needs of the community compounded with the lack of programs aimed at igniting populations such as students. Attached to this lesson was the insight into the limited capabilities of the staff within schools to communicate the syllabus such as art and culture, and therefore the design intervention will aim to create the opportunity for schools to assess specialists to aid in teaching sections of the syllabus.

The second lesson is highlighted in the evaluation of the Jabulani Safe Hub, its poor public presence and access, can be attributed to a prioritising of safety while closing off the public with perimeter fences. This brings about the importance of harmony between safety and accessibility, while the intervention needs to be aware of the need for high security, the manner in which this is achieved should not obstruct public interaction on urban edges.

CONCLUSION

FIGURE 4.27
DESIGN DRIVERS.
OPPOSITE.
(AUTHOR, 2023.)

From the assessment of all six facets which contribute to social sustainability, present in the Jabulani Nodal Development, three facets revealed the unique needs of the community which require additional consideration or have been neglected completely within the development include:

HEALTH AND WELLBEING

• Populations are lacking the assess to mental health specialist, therefore lacking the opportunity for professional mediators and counsellors to aid in resolving household conflicts and struggles. This issue was highlighted by principles of local schools who had been taking on these responsibilities without any skills training around these subjects. The importance of this facet is further represented in the poor mental health statistics recorded in Jabulani. This requirement will be addressed through the creation of a wellbeing centre which provides spaces to connect community member to professional mediators and counsellors.

EDUCATION AND ACCESS TO INFORMATION

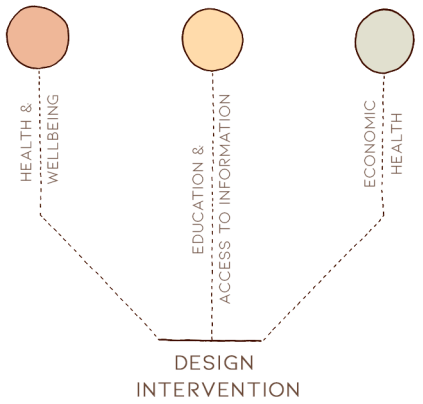
• A dramatic absence of public spaces where literature and information can be accessed was identified within the assessment. This need is further compounded given that many schools have sacrificed library spaces for other programming and have been equipped with nonfunctional computer labs. Therefore, the access to literature and technological resources needs to be provided for both the community and school populations will be addressed through the creation of a public library equipped with well-secured computer labs.

• During the assessment of the Soweto Theatre, as part of the social cohesion facet, the issue of poorly trained educators to sufficiently convey the entire syllabus to students was raised. This will be addressed through the facilitating of teaching space which allows for schools to connect learners to specialist on the subjects covered and for the opportunity for educators to received training from specialists.
These two functions will take form within the creation of an educational centre as part of the design intervention.

ECONOMIC CONDITIONS

• The importance of local business within the order of the community is essential to Jabulani's economic health and, through the assessment, has shown to be undermined by the introduction of the Jabulani Mall. In order to address the lack of empowerment of local businesses, the intervention will aim to celebrate local economy through spaces which accomodate existing economic activity and providing the opportunity for expansion into formalised market spaces within the design.

DRIVERS OF THE DESIGN INTERVENTION



Chapter 5

EDUCATIONAL SPACES

Given the nature of the intervention incorporating an educational centre, an exploration into Soweto's history of educational spaces and current representation of them today is required to ensure an understanding of both historic and present context leads the design process.



FIGURE 5.0
JABULANI NODAL DE-VELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

THE HISTORY OF EDUCATIONAL SPACES IN SOWETO

FIGURE 5.1
THE DEATH OF HECTOR PIETER-SON.
(HI-FI, 2014.)

The Soweto Student Uprising of 1976 is an event which is immortalised in the history of South Africa, as it signified an end to the political silence, ushered in by the violent use of police force during the Sharpeville massacre, and the start of a new force within the resistance movement as the youth of Soweto connected within educational spaces and exchanged political ideologies.

From the late 1950s the Apartheid government had began implementing key aspects of their policies which ushered in a period known as 'high apartheid'. The National Party had a vision of undermining, controlling and then benefitting from the majority African population for the gain of the minority white rule. As a result, the Promotion of Bantu Self-Governing Act in 1959 was introduced with the sole purpose of reversing African urbanisation. The government aimed to increase African populations in "ethnic homelands", with the intention of "draining the urban white areas of non-white citizens." (Nieftagodien, 2021) This change greatly influenced the nature and future of educational spaces within townships such as Soweto.

To ensure that the African population was forced and kept within a lower status of society the Bantu Education Act of 1953 was introduced. Prior to this 90% of black schools were state-aided mission schools led by churches. (SAHO, 2011) It was within one of these mission schools where Nelson Mandela attended primary school and was given the Christian name Nelson in accordance with custom. (Nelson Mandela Foundation, 2013) The new policy forced provincial and mission schools in townships to register with Bantu Education Department to ensure that the education was kept inferior. As a result, almost all mission schools had closed.



FIGURE 5.1

THE MURDER OF HECTOR PIETERSON

In conjunction with this policy, the Group Areas Act of 1950 banned the presence of African people from urban white areas unless they possessed a pass. Due to these policies the population of African people within these 'ethnic homelands' increased. This began the process of attaching African populations to a 'tribal' community and authority, allowing for separate development to take place. During the 1960s the National Party stopped building schools in Soweto. This meant that not only were African populations restricted from attending schools outside of 'homelands' but within these homelands educational spaces were incredibly underequipped. Jonathan Hyslop comments that, "...higher education was strangled, so as to drive young people to seek other future in Bantustans." (Nieftagodien, 2021: p.13)

The learner population rose in Soweto from 90 000 students, in 1960, to 170 000, in 1976. This resulted in an average teacher to student ratio of 58:1. The increase of students were met with an increase of underqualified teachers causing the matric pass rate to suffer a decline of 54% to 33%. To instil the intention of these policies, the government ceased the construction of schools during the 1960s, and despite the construction of 40 basic school infrastructure in the early 1970s, the rapid growth of student population was overwhelming. While the enforcement of such conditions was inhumane it aggravated the population of Soweto into taking greater action, as the increase in African students, compounded by the poor conditions, led to the ignition of a new political force amongst the young students.

While initially efforts were fragmented and at a small scale, overtime "groups of classmates, clusters of street friends, teammates in soccer clubs, members of debating societies or of cultural or religious groups," began to engage in resistance politics. (Nieftagodien, 2021: p.19) These groups slowly became overtly political, meeting more frequently within schools and developing informal networks of activists. Political conversation took place around the reading of international political literature from other populations who struggled with oppression, such as works on Marxism, anti-colonial struggles, and the civil rights campaigns in the United States. The student's access and exchange of political literature become the catalyst for indirectly expressing political thoughts, gathering within small groups while engaging in poetry readings.

It was around the educational spaces of Soweto and through the exploration of literature that would lead to the creation of organisations such as the South African Students Movement (SASM), the National Youth Organisation (NAYO) and the African Students' Movement (ASM). (SAHO, 2013) The SASM, launched at the University of the North in July 1969, began to define the essence of Black Consciousness, under the leadership of Steve Biko, and their political manifesto began to spread through these series of social ties created within the educational spaces. Across Soweto students understood that the main aim was the liberation of the black man, first from the psychological oppression and then from the physical. The spread of ideologies and the growth of these social ties climaxed in a protest, turned riot, against the National Party's

FIGURE 5.2
TO HELL WITH AFRIKAANS.
(AUTHOR, 2023. AFTER POHLANDT-MCCORMICK, 2010.)

imposing of Afrikaans as a medium of instruction within urban African schools, enforcing the understanding of the Afrikaans language and undermining the many home languages of the populations.

On the 13th of July 1976 the SASM formed the Action Committee and organised the peaceful protest in the form of mass marches to be carried out on the 16th of July 1976. Given the tight schedule the organisation of this protest shouldn't have had the great reach that it did, however through the vast networks that had formed between schools, in conjunction with the vehement opposition of the new language policy, students were informed of the movement and of the importance of secrecy. Parents were unaware of the planned protest, while students intentionally neglected taking their schoolbooks with them on the morning of the protest. The protest had begun in the peaceful fashion intended with students brandishing signs with messages such as "To Hell with Afrikaans". (Nieftagodien, 2021) When news of the incoming police presence was spread a leader of the Action Committee, Tietsi Mashinini, climbed onto a tractor to address the march which had come to a halt. "Brothers and Sisters, I appeal to you-keep calm and cool. We have just received a report that the police are coming. Don't taunt them, don't do anything to them. Be cool and calm. We are not fighting."

Despite the composure of the students, who faced police while waving signs and singing, police officers began to fire at the children. By the end of the first day 23 people had been killed, however, due to police efforts to cover up actual figures, some believe this number to be closer to 200. (Nieftagodien, 2021) The use of violence by the police further aggravated the students who began to burn and plunder schools, municipal offices and beerhalls. The protest in Soweto would inspire student action to spread across Johannesburg around the shared struggles, although the movement had a greater victory as it internationally revealed the shameful morality of the National Party who were willing to use their police force against children.



PROTEST SIGNAGE FROM THE UPRISING

The events of the Student Uprising, while displaying the cruel and violent intent of the National Party, more greatly displayed the strength and importance of mass organisation. The marches were the largest demonstration since the movements which preceded the Sharpeville Massacre and reminded the people of South Africa that the fight for psychological and physical liberation was greater than fear. It was a historic event which planted its roots within the disproportionate educational spaces of Soweto and grew to be a moment of political unity which is forever immortalised nationally in the celebration of Youth Day on the 16th of July.

Understanding the historic context of educational spaces within Soweto, centres an understanding of the unique symbolism which this typology has with the township. It highlights the important functions these spaces served in providing the exchange of thought and individual enlightenment, through the acts of debate, exchange and exploration of radical literature. Within the execution of the educational centre, these activities and the access to political and historic literature, will be accommodated.

FIGURE 5.3
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

JABULANI SCHOOL DESIGN

FIGURE 5.4
SPATIAL ORDER OF PRIMARY SCHOOLS
(AUTHOR, 2023. AFTER GOOGLE MAPS.)

Many of the primary schools operating within Jabulani remain in the same spatial conditions since their construction by The Bantu Education Department. Their spaces are limited and has caused their available facilities to be limited as well.

PROGRAMMING

This design can be identified repeated in primary schools across Jabulani, with their central administration block flanked with rows of classroom blocks. The sites of these schools are large, especially when compared to the scale of the school buildings. This creates a large surrounding buffer between the residential space which surrounds them, which is typically used as communal garden space, playground areas or use by students for playing.

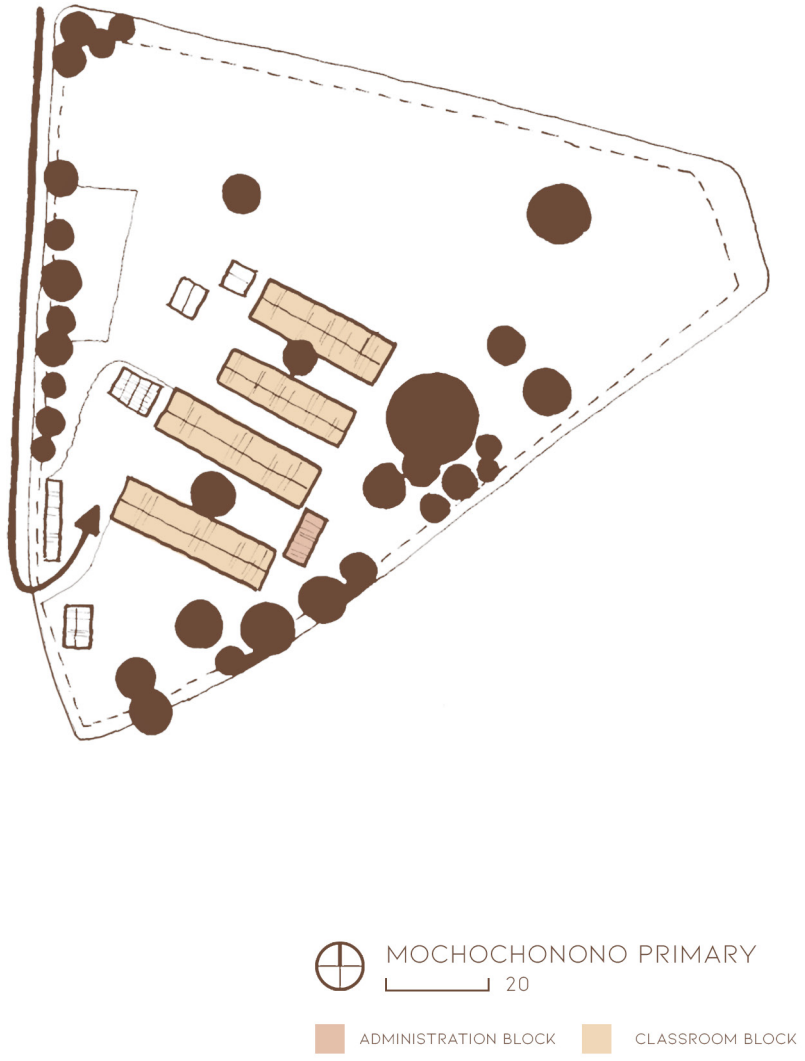
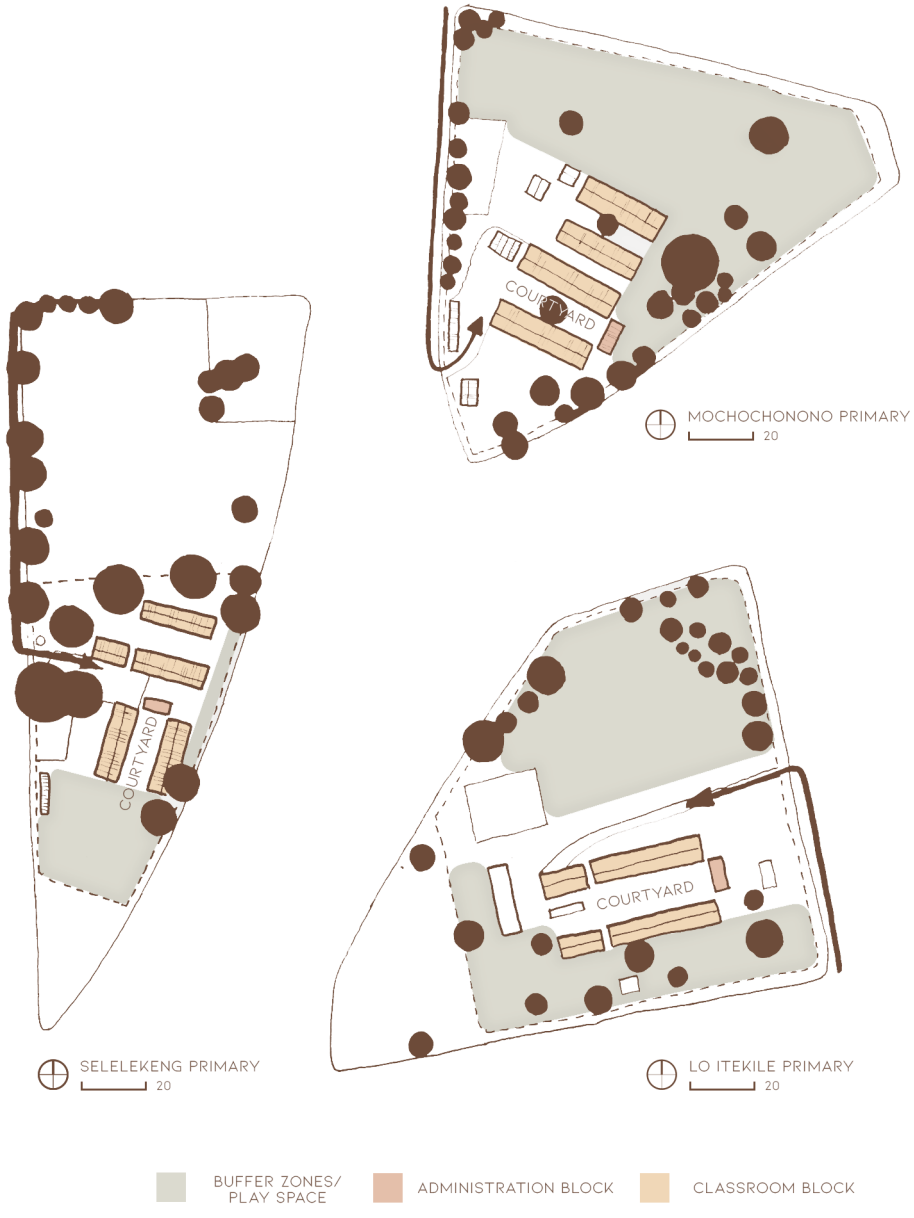


FIGURE 5.5
BUFFER ZONES OF PRIMARY SCHOOLS
(AUTHOR, 2023. AFTER GOOGLE MAPS.)

The horse-shoe plan of the school creates internal courtyards within which the classroom corridors look onto. This form forces the spaces to interact internally, while blocking out the residential areas around. While in theory these internal courtyards would be the primary spaces of play and interaction between the students, however, it is instead a stark contrast as students prefer playing in the buffer between residential and the school.

The students' appropriation of the buffer space for the use of play serves as a more open and effective function between the public urban edges of the site and the private activities of the school and can be understood as an effective manner of creating a spatial hierarchy between function. The inward-focused order of programming within schools hides away from the community surrounding and therefore visually creates a disconnection within its urban environment. When approaching the design development of the education and wellbeing centre the method observed in creating a programmatic hierarchy with the use of recreation space as a buffer between the street edge and the private functions will be applied and the design will learn for the failures of the inward-focused order and aim to create a presence which celebrates its position within the community.



CLASSROOM DESIGN

FIGURE 5.6
ORDER OF THE CLASSROOM
(AUTHOR, 2023.)

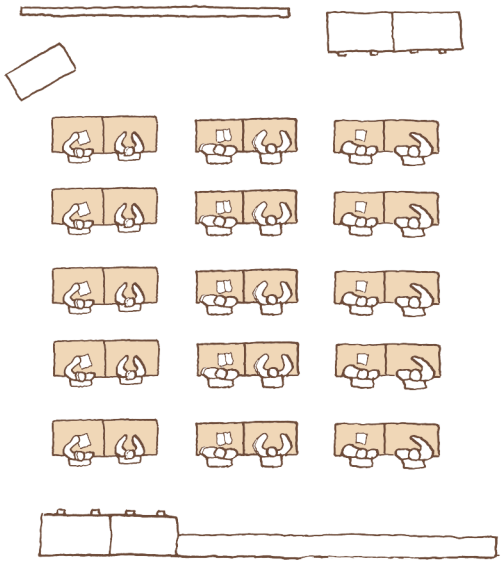
FIGURE 5.7
ORDER OF THE PRODUCTION LINE
(AUTHOR, 2023.)

The classrooms of Jabulani's primary schools exhibit no difference in their order of arrangement than what is commonly witnessed in schools both nationally and internationally. The classroom serves as a great example of the pattern of essential infrastructure becoming "stuck in their original orders", as its over 150-year-old design remains unchanged in schools today. (Fukuyama, 2011)

The origins of the classroom can be traced back to the second industrial revolution which begun in 1870, where rapid scientific discovery led to mass production and industrialisation. As a result, "the lessons learned by the orderly and efficient design of the work force had been adopted into schools." (BC Campus, 2011) This can be identified in the similarities between the rowed order of workstations verses the rows of students within a classroom. The adherence to this spatial order was encouraged by urbanisation and the increased populations within schools, therefore requiring more spatially efficient seating arrangements. Within the limited spaces of the primary schools in Jabulani, this order is necessary to accommodate for the average student population of between 500-600 students. (Interviews A, B, C, 2023)

To break away from the rigidity of this original classroom design, the design intervention will reimagine the order of the educational space by prioritising the learning experience, the exchange of information, rather than spatial efficiency.

SPATIAL ARRANGEMENT OF THE CLASSROOM



SPATIAL ARRANGEMENT OF THE THE CLOTHING MANUFACTURING LINE

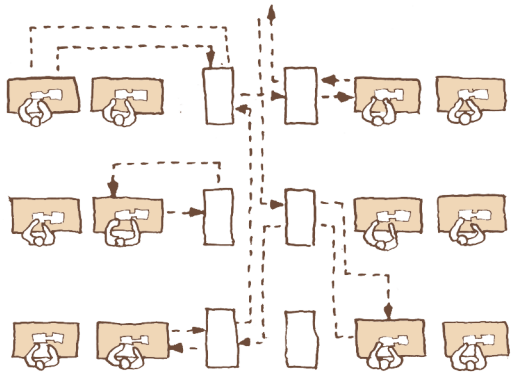


FIGURE 5.8
MATERIALITY OF PRIMARY SCHOOLS
(AUTHOR, 2023.)

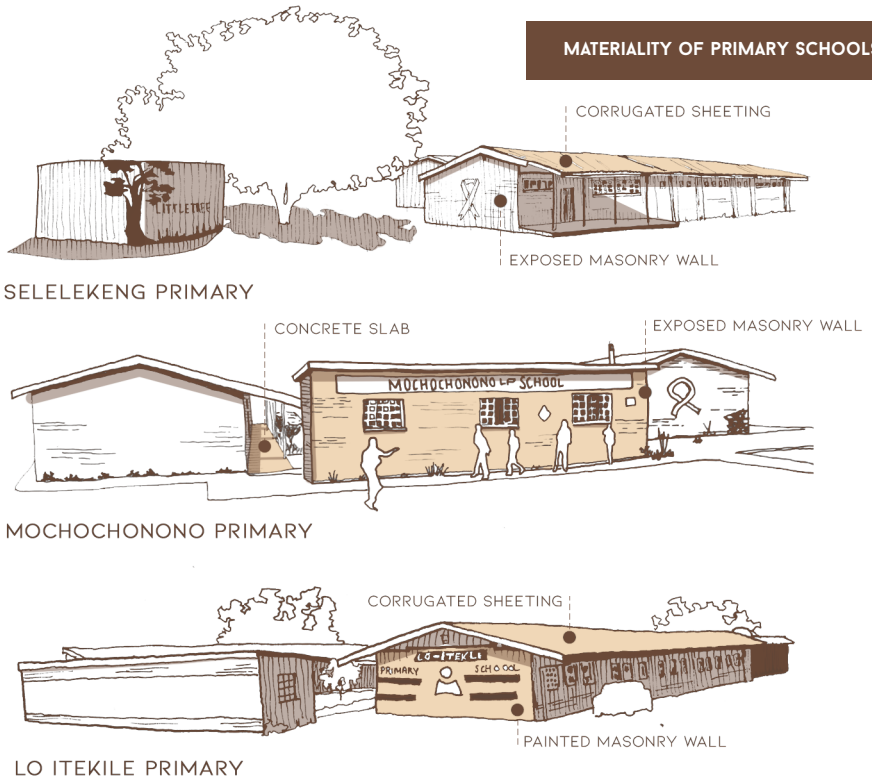
MATERIALITY

During the National Party's enforcement of the Bantu Education Act, the funding allocated to the development of schools in non-white areas was grossly limited. "The government was spending far more on White education than on Black education; R644 was spent annually for each White student, while only R42 was budgeted for a Black school child." (SAHO, 2011) This resulted in the use of locally produced, therefore relatively cheap, materials for the construction of schools in areas like Jabulani.

From a visual analysis of primary schools constructed by the Bantu Education Department these materials can be identified as, concrete slabs used for walkways and exposed flooring, masonry used for the construction of walls, and timber trusses supporting corrugated sheeting used for roofing.

To reimagine the architectural language in a manner more appropriate for primary school students, many of these schools today paint over their walls with more vibrant colours such as yellow or blue, as well as introducing painted artworks.

While the architectural language of the apartheid regime is not an identity one would aim to recreate today, the materiality of these schools possesses a connection with the students who attend them every day. When designing the education and wellbeing centre these materials will be used with the intention of celebrating the materially familiar and associated with the schools of Jabulani.



This exploration of the historic context of educational spaces within Jabulani highlights the unique activities, which created political connections during the Soweto Uprising, to be accommodated within the design such as:

- Debates.
- Exchange and exploration of political literature.

The present context revealed useful insights such as:

- The strategic use of programming to create a hierarchy of privacy.
- The importance of outwardly representing design.
- The need for the reimagining of the classroom.
- The material identifies of educational spaces which will be celebrated.

Chapter 6

DESIGNING EQUITY

FIGURE 6.0
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2020)

DESIGN BRIEF

FIGURE 6.1
DESIGN BRIEF
(AUTHOR, 2023.

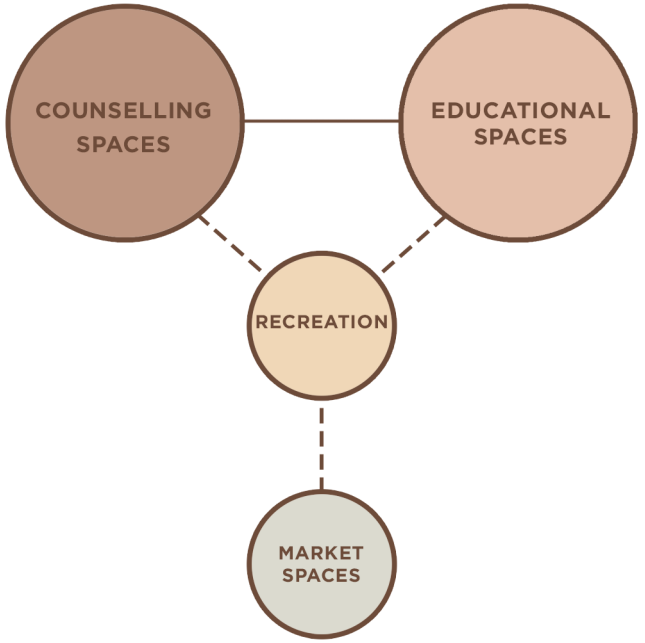
The research assessment has revealed that in the aim of making Jabulani equal to other townships, the attention to educational infrastructure has been neglected.

The primary facilities which will be addressed include a new public library, teaching spaces connecting students and staff to specialists, computer lab spaces, and a wellbeing centre which connects community members, students, parents and staff members to counsellors and mediator specialist.

In addition to these primary facilities being addressed there are secondary considerations which come with the nature of the site context. These secondary facilities will include formal market spaces which will accommodate the existing informal businesses which operate along the street edges and to ensure that these markets receive sufficient traffic and customer engagement, sports recreational facilities will be introduced to allow for the intervention to be of use to more than just the learner population in its primary facilities.

In order to create an intervention which approaches amending this issue through the approach of equity the design will:

- Consider the specific requirements highlighted through interviews.
- Focus on maximising opening the site for public use.
- Protect and encourage existing function.



PRIMARY AND SECONDARY ACTIVITIES

CLIENT

FIGURE 6.2
CLIENT
(AUTHOR, 2023)

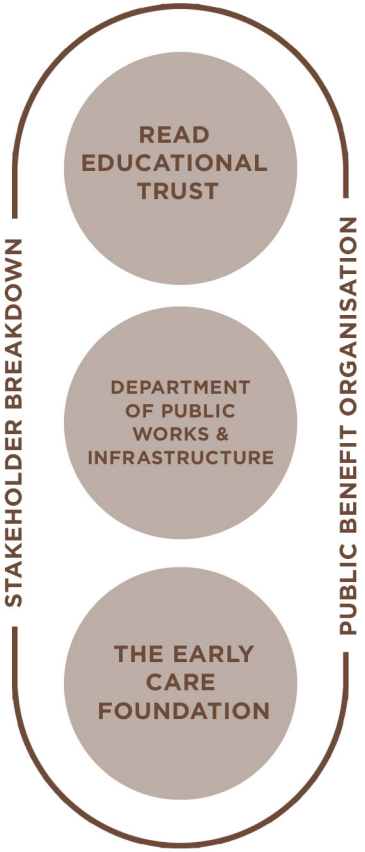
In order to keep aligned with the goals of the intervention the initiative will be undertaken as a joint venture by the following stakeholders:

1. The Department of Public Works and Infrastructure.

As one of the ministries of the South African government, it is the role of the Department of Public Works to create and preserve public infrastructure including providing accommodation and property management for the other ministries. The introduction of this new public infrastructure would fall under their responsibilities in order to oversee the appropriate accommodation of the environmental health services, chamber of councilors and customer service facilities.

2. READ Educational Trust
As a literary training NPO with the mission of developing reading, writing, learning, information and communication skills in South Africa, their aims align with that of the intervention of the civic center and is crucial to properly guide its implementation. The NPO achieves this goal by training teachers and hosting READATHON events where books are freely distributed. This intervention will act as a point of gathering for READ to host these events with the aim of involving multiple schools at once.

3. The Early Care Foundation
The foundation aims to facilitate children's access to quality education especially during the ages of 0-5 years of age. Their means to their goals align with that of READ in that they priorities developing the skillset of pre-school teachers.



PRIMARY AND SECONDARY ACTIVITIES

USERS

FIGURE 6.3
USERS
(AUTHOR, 2023.

NPOs
There are many Nonprofit organisations excluding the client which focus in and around the educational spaces of townships. NPOs such as READ would be provided with these teaching spaces to access more than one school at a time within this central location to conduct their training programs to teachers. In addition, multi-purpose office spaces will provide members of the NPO to operate out of the intervention for brief periods at a time.

Students
These users will be transported via bus, as per the requirements of the Gauteng Department of Education to the intervention where, at the ground level both them and their educators will be directed to their scheduled and private teaching space. Students will be able to access the public library on the first floor during the operating hours of 7am-6pm on weekdays and 7am-5pm on weekends.

Educators
Educators, through the administration of the centre, will be able to arrange teaching sessions from guest educators, arts and culture specialists and other needed experts relevant to their curriculum. This service will not be limited to learners and will include the conducting of training workshops for staff members.

EDUCATION

STUDENTS/EDUCATORS/SPECIALIST/NPOS

- TEACHING SPACES
- COMPUTER ACCESS
-PUBLIC LIBRARY



WELLBEING

RESIDENTS/WORKING CLASS/MENTAL HEALTH SPECIALISTS

- COUNSELLING SPACE

RECREATION

STUDENTS/RESIDENTS/ATHLETES

- BASKETBALL COURTS
-FIVE-A-SIDE FOOTBALL PITCH
-BRAAI AREAS

ECONOMIC

MARKET RENTER/USERS

- FOOD STALLS
-SERVICE STALLS

CHILDCARE

CHILDREN/CHILD CARE SPECIALISTS

- DAY CARE CENTER
-CHILDREN'S LIBRARY

FIGURE 6.3
USERS
(AUTHOR, 2023.

Specialists and Administrators
The specialists and administration of the intervention will park and access the intervention via their own designated entrance which connects to the wellness and administration aspect of the building. Within these spaces they are granted a higher level of privacy to allow work to be conducted until they are required within one of the teaching spaces.

Kiosk Renters
Local business owners will be provided the opportunity to rent out formal kiosk spaces, at a nominal fee to allow for feasible maintenance of these spaces. Here utilities such as water, stove-tops and electricity allow for business owners to continue to bring their prepared inventory from their households to cook, display and sell them out of the formal market structures. These spaces will be opened and closed at the start and end of the working day by the intervention's administration.

Sheltered structures will provide the opportunity for other vendors to still set up operations, however, without the access to kiosk utilities.

Market Users
The market users would comprise of surrounding working class community members, passersby, as well as students within the area. Products such as food could be purchased during lunch breaks and enjoyed within the social spaces created before returning to work or education spaces.

EDUCATION

STUDENTS/EDUCATORS/SPECIALIST/NPOS

- TEACHING SPACES
- COMPUTER ACCESS
-PUBLIC LIBRARY



WELLBEING

RESIDENTS/WORKING CLASS/MENTAL HEALTH SPECIALISTS

- COUNSELLING SPACE

RECREATION

STUDENTS/RESIDENTS/ATHLETES

- BASKETBALL COURTS
-FIVE-A-SIDE FOOTBALL PITCH
-BRAAI AREAS

ECONOMIC

MARKET RENTER/USERS

- FOOD STALLS
-SERVICE STALLS

CHILDCARE

CHILDREN/CHILD CARE SPECIALISTS

- DAY CARE CENTER
-CHILDREN'S LIBRARY

PROGRAM

FIGURE 6.4
PROGRAM
(AUTHOR, 2023)

The intervention will address five main activities:

• Teaching Spaces

Comprising of an amphitheatre to accommodate talks, multi-purpose teaching spaces which connect learners with onsite specialists in arts and culture that will additionally be used for the teaching of skills training to school staff members.

• Counselling Spaces

Multi-purpose counselling rooms where populations engage with mediator specialists, these spaces will also serve as temporary office spaces for the specialists and NPO members who would utilitise the facility.

• Library Space

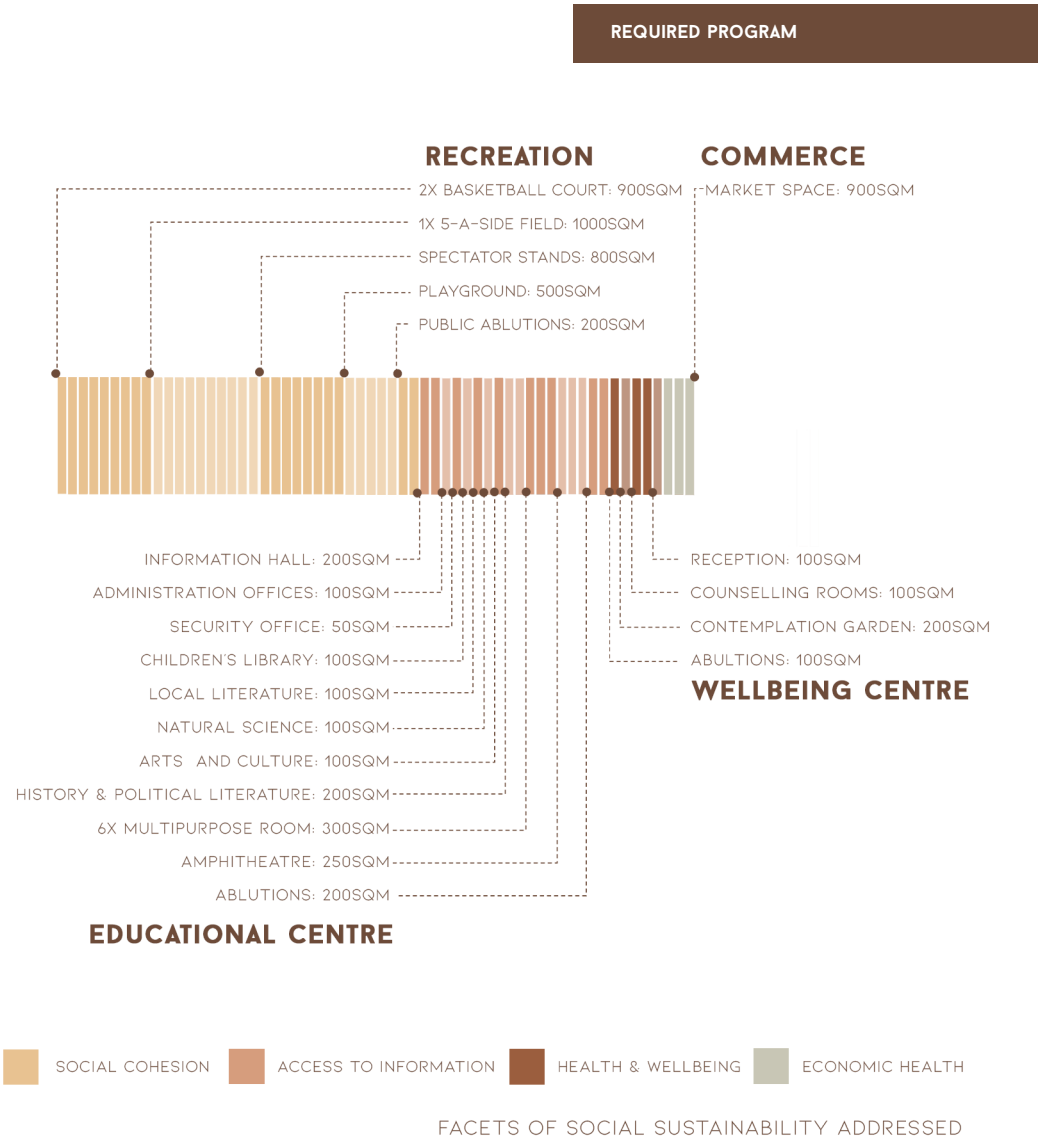
Comprising of a children's library with an outdoor roof playground. The public library will accommodate the genres of local literature, natural science, arts and culture, history and political literature, and computer labs.

• Market Space

Formal market stalls with social spaces between for the use of customers and the public.

• Recreation Space

This will include two multi-purpose courts.



DESIGN GOALS

FIGURE 6.5
DESIGN GOALS
(AUTHOR, 2023.

Connection: Facilitating the opportunity for social connection around the primary activities of exchanging information and pursuing improved wellbeing and the secondary activities of commerce and recreation.

Wellbeing: Providing the access to mental health specialists and counsellors to the community members. Information Exchange: Creating access to literature and technological resources as well as connection to specialists for students and educators. Fostering spaces around which community members can discuss new ideas.

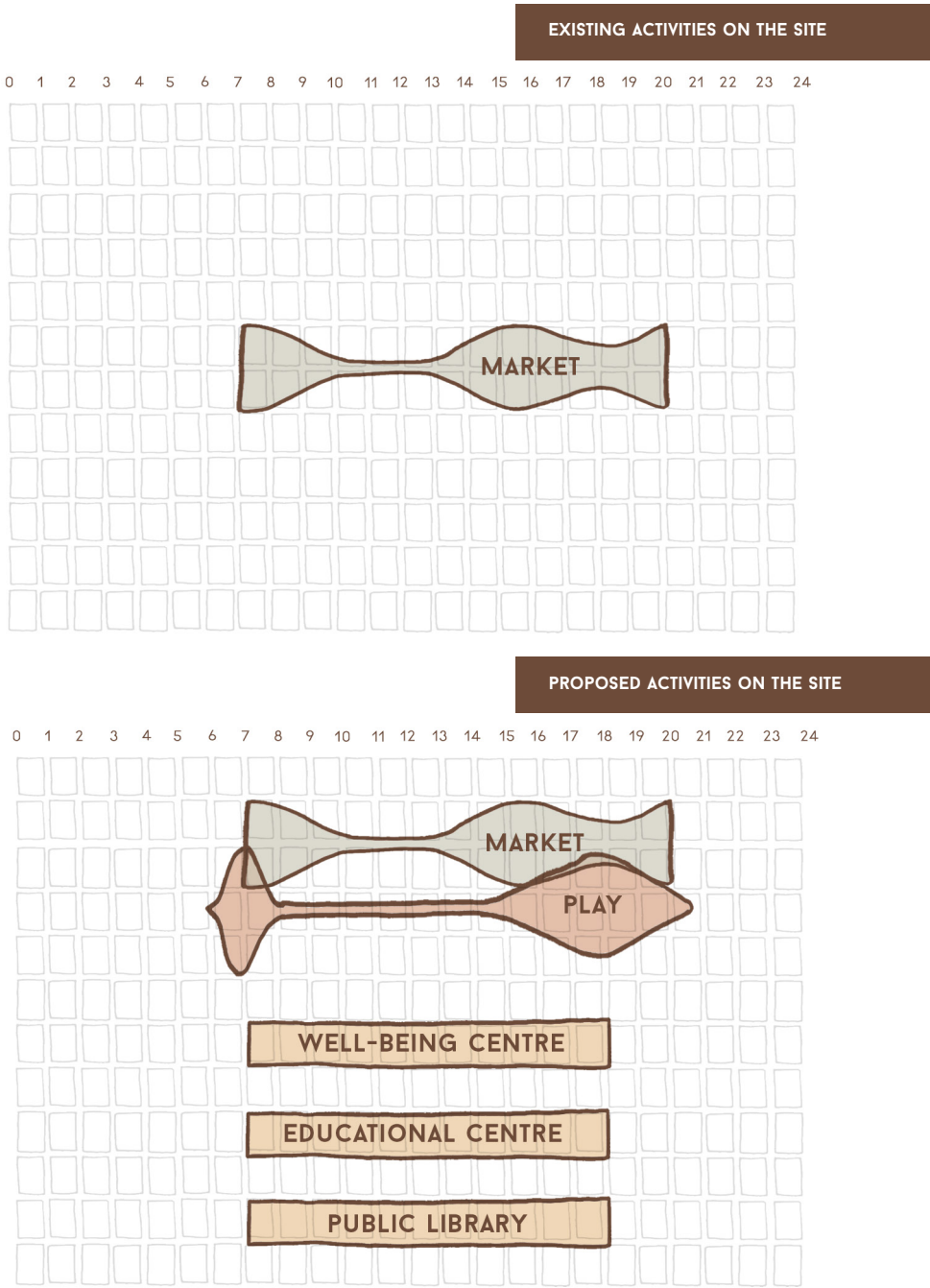
Play: Sensitivity to the local children's needs and dreams to provide secure playgrounds and sports fields away from roadways.

Opportunity: Creating a thriving public space wherein local businesses can prosper.

Safety: Awareness of factors such as lighting, proximity and visibility to ensure security and comfort around all hours for users.

Flexibility: Adaptable internal to allow for varying crowd sizes to be welcome within the intervention.

Sustainability: Self-sufficiency allows for maintenance costs to remain low and for the facility to operate without municipal supplies during water-shedding and loadshedding.



SITE

FIGURE 66
SITE
(AUTHOR, 2023.
AFTER GOOGLE MAPS, 2023)

The site appropriate for this intervention in the vacant plot at the corner of Koma street and Bolani road, north of the existing Jabulani Civic Centre. This site serves as an effective location given its central relation to surrounding neighbourhoods as well as its immediate relationship with other public serving infrastructure. By using the empty plot, north of the Jabulani Civic Centre, the intervention extends on the existing symbolism of community serving space.

In addition to this the central orientation within Jabulani allows for the site to be easily accessible to the surrounding schools, this connection can be seen in the figure shown on the following page.



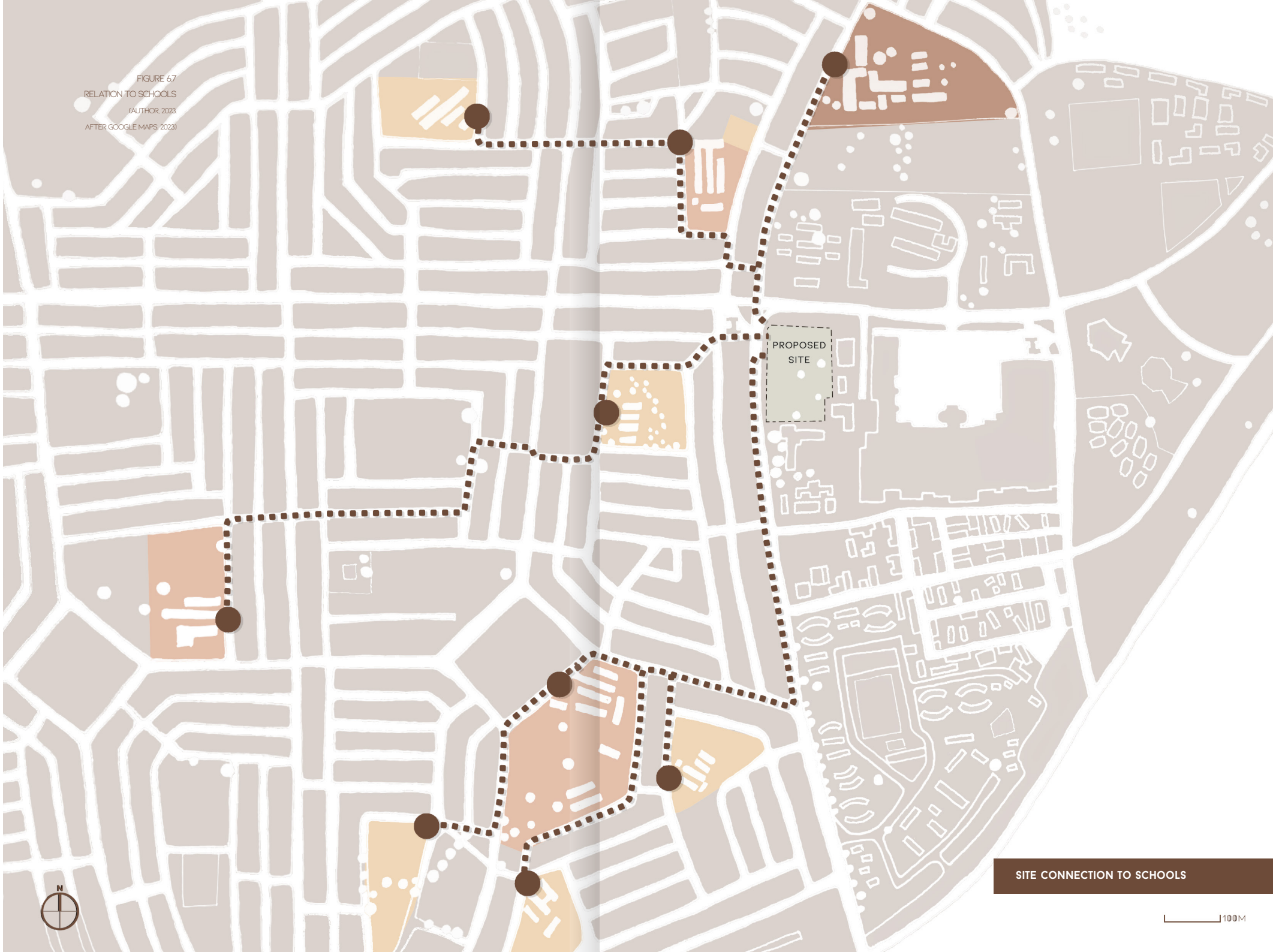


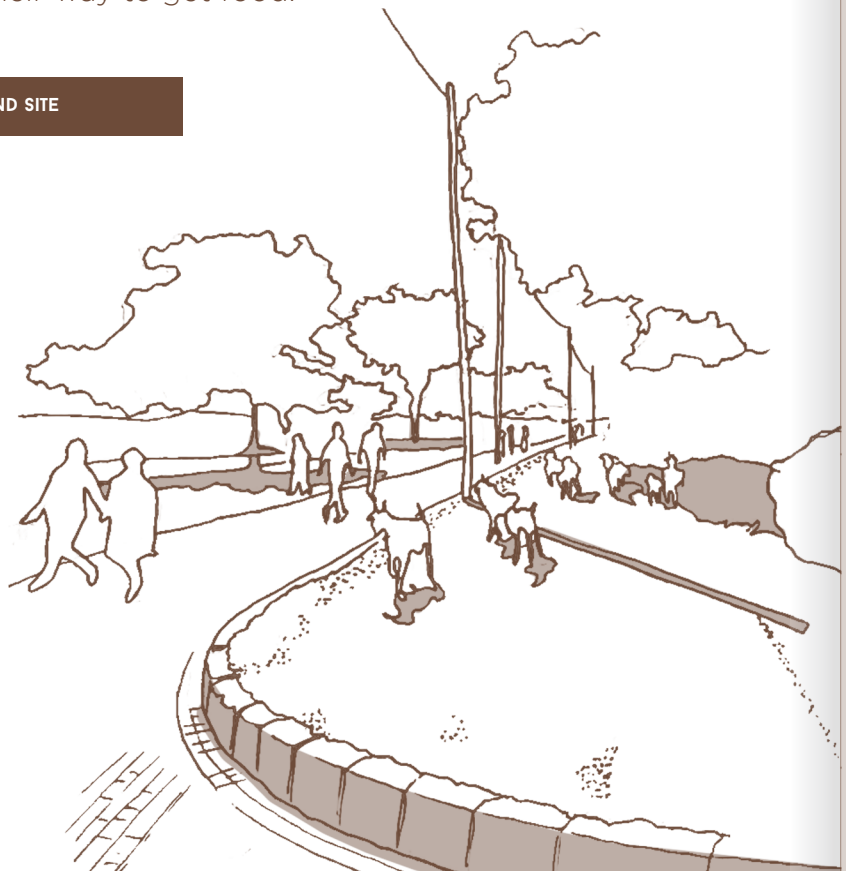
FIGURE 6.7
RELATION TO SCHOOLS
(AUTHOR, 2023.
AFTER GOOGLE MAPS, 2023)

EXISTING MOVEMENTS

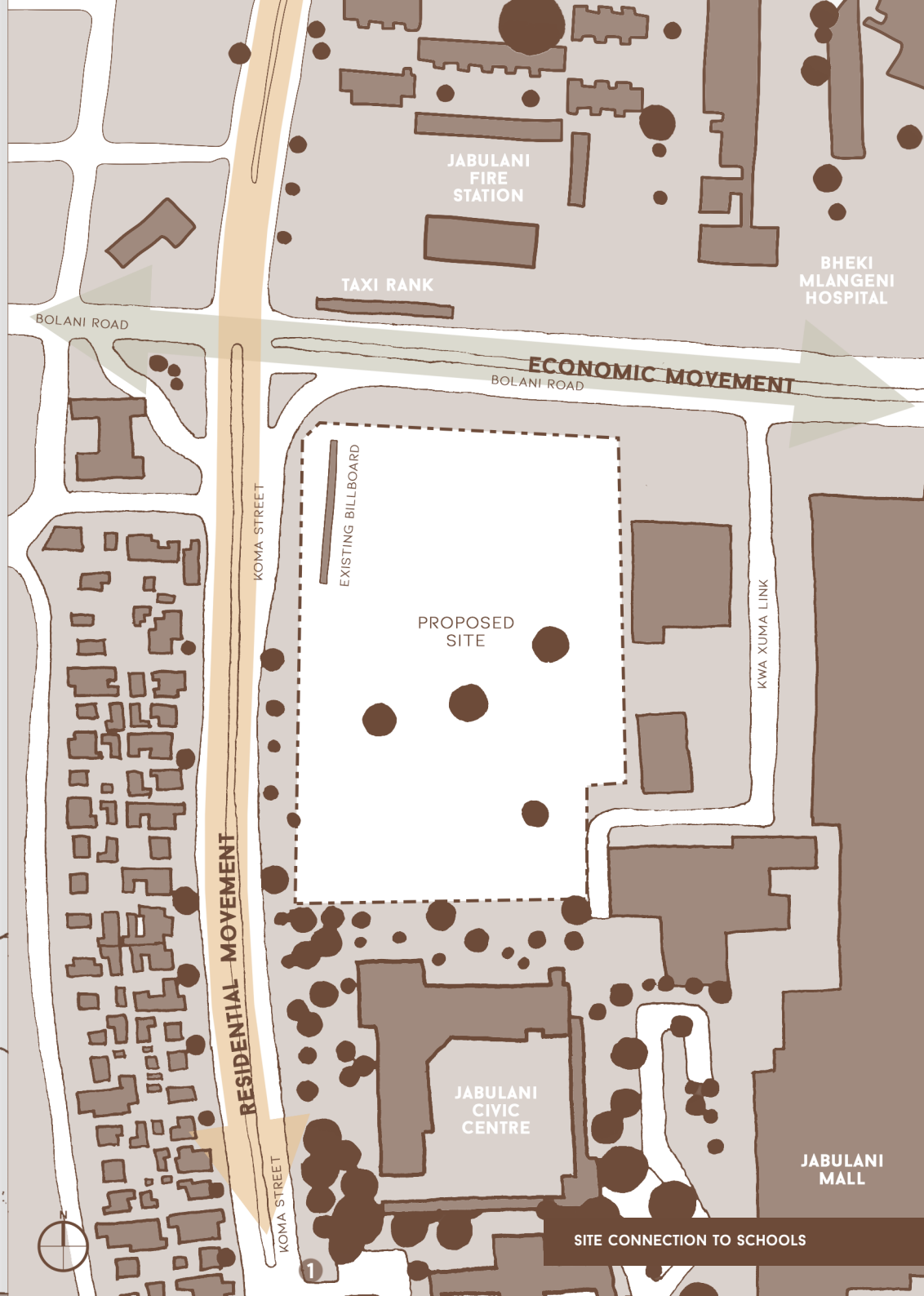
FIGURE 6.8
URBAN EDGES
(AUTHOR, 2023.
AFTER GOOGLE MAPS, 2023)
FIGURE 6.9
MOVEMENT ON SITE
(AUTHOR, 2023.)

Jabulani is a proudly pedestrian township with more streets animated with the movement of adults and students, than those found empty. Around the site two main axes can be identified; the lateral movement, largely influenced by the economic hub of the mall, and the longitudinal movement used by residents to travel between the locations of their day.

As a daily occurance the 4m width sidewalks around the site can be seen accomodating the herding of live stock between passing student friend-groups, walking home from school, or working class individuals on their way to get food.



LIVESTOCK HERDING AROUND SITE



SITE CONNECTION TO SCHOOLS

EXISTING FUNCTION

FIGURE 6.10
ACTIVITY ON SITE
(AUTHOR, 2023.
AFTER GOOGLE MAPS, 2023.)

Given the high activity of the intersection of Bolani Road and Koma Street; the two main existing functions can be seen around the site:

1. Taxi Off-loading
Due to the insufficient accomodation at the taxi rank across the Bolani road, the taxis require additional parking spaces and drop off points.

2. Independent Vendors
The lateral economic movement, created from pedestrians travelling to the Jabulani Mall has influenced the creation of dense independent markets along both streets of the site.

The nature of organisation of these vendors differ between the two streets as different vendors find different means of setting up their business.

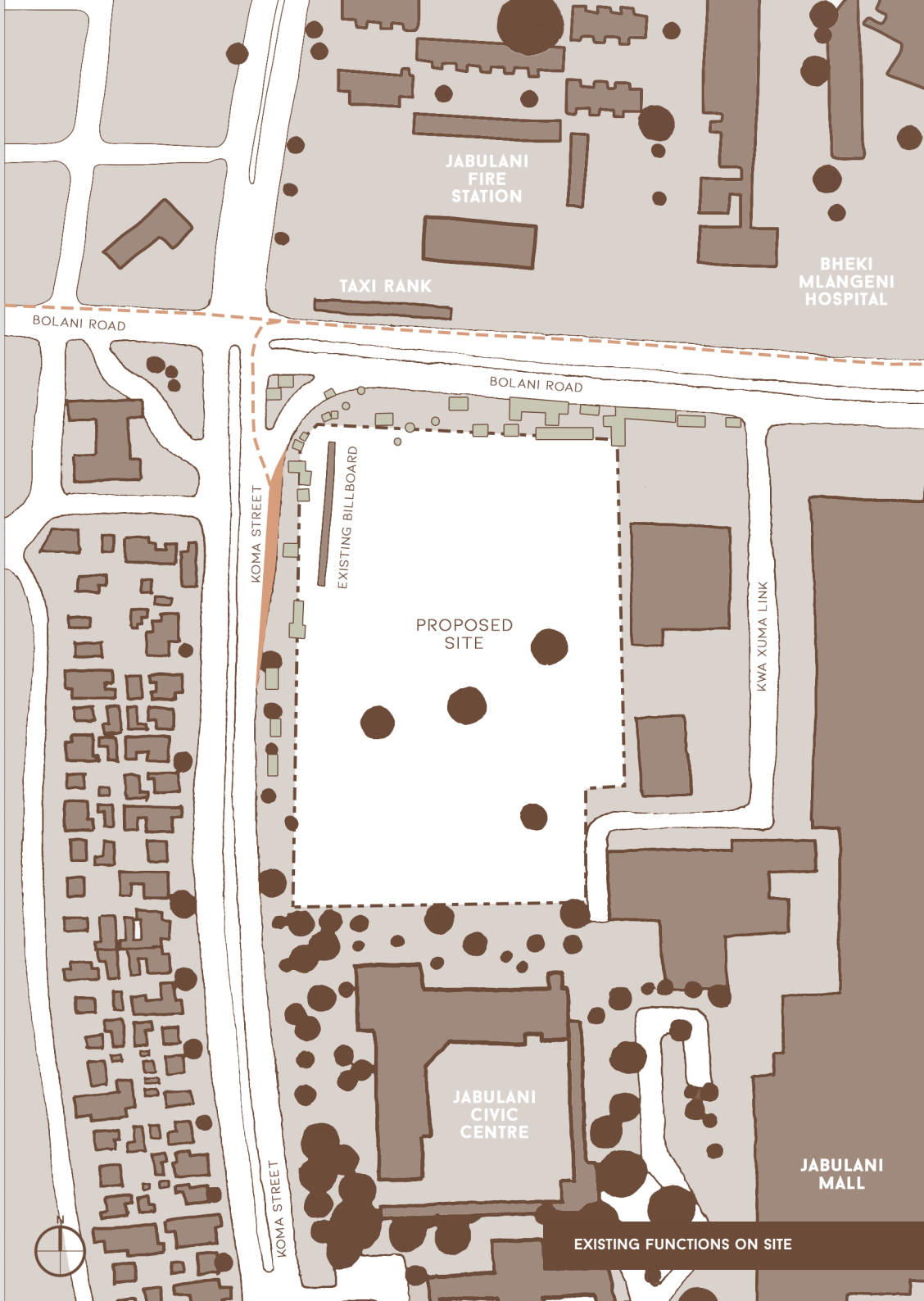


FIGURE 6.11
VENDOR SKETCHES
(AUTHOR, 2023.

On Koma Street

The western street to the site possesses publically accessible trees along its side walk. This may seem to be a minor difference in edge conditions but it has sparked inspiration to local vendors who can be seen capitalising on the shade the trees offer for their business operation.

Some vendors have quantities of merchanise that is displayed in an open spread so customers can browse their stock. Others only require a few containers to store there one item for sale.



PRODUCE VENDOR SET UP



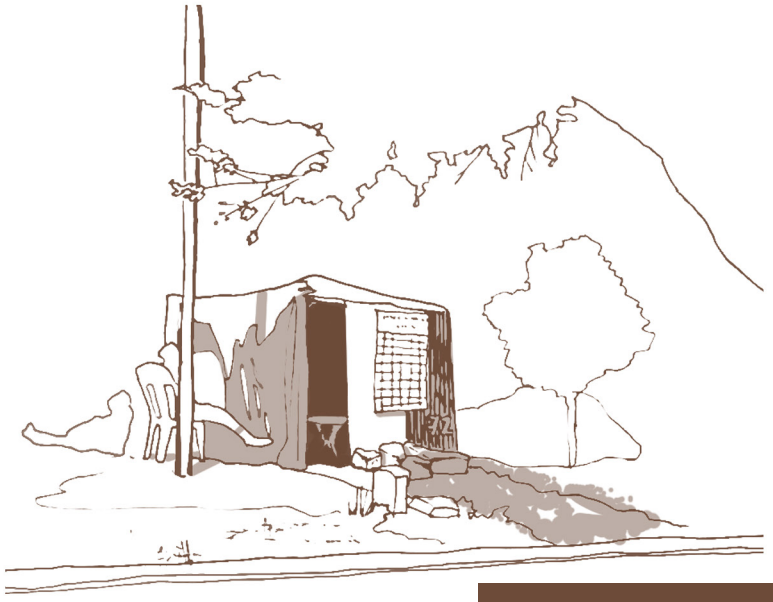
CLOTHING VENDOR SET UP

FIGURE 6.12
VENDOR SKETCHES
(AUTHOR, 2023)

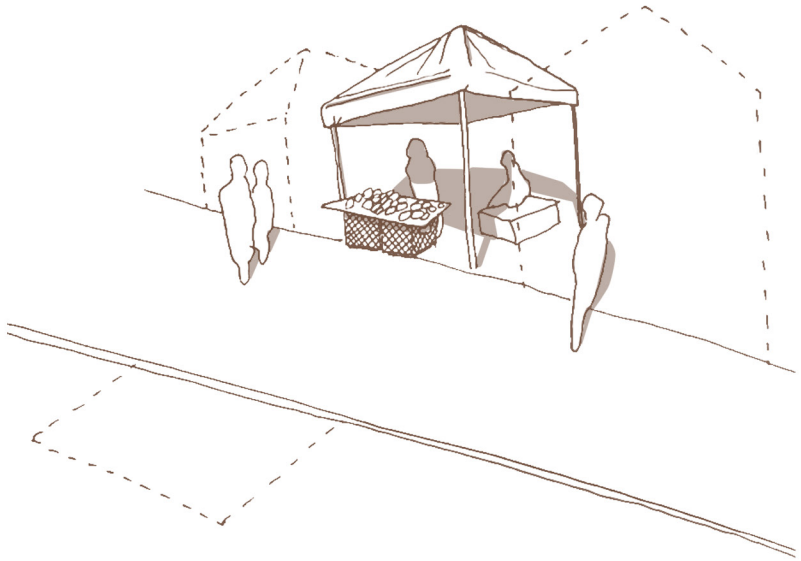
On Bolani Road

The northern street to the site has been converted into a dense market, with two rows of vending stalls which operate on either side of the sidewalk. Many of these vendors use 3x3m outdoor tents to shade themselves from the direct sunlight.

While some of these tents operate with their sides open, to allow for pedestrains and customers to have a clear view of the their merchandise, others utilise the enclosed tent to operate services such as hair dressing to allow for their customers to be sheltered from the heat and provide more privacy.



HAIR SALON SET UP



PRODUCE VENDOR SET UP

CONCEPT

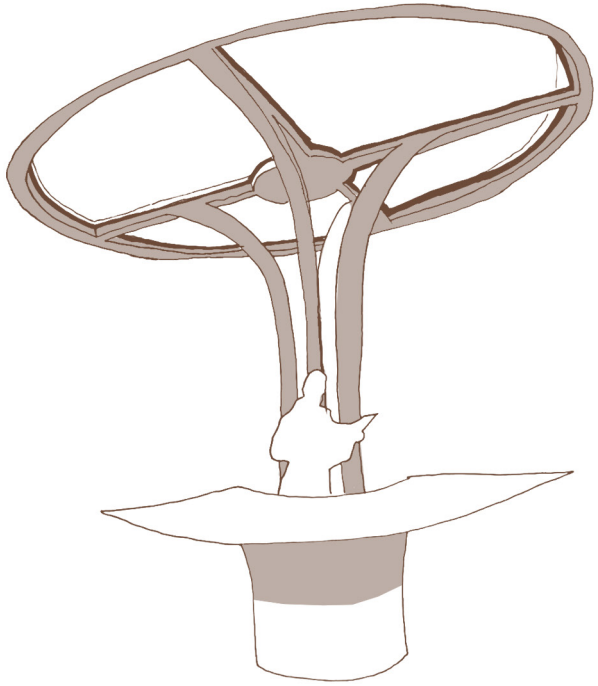
FIGURE 6.13
CONCEPT SKETCHES
(AUTHOR, 2023.

In the spirit of celebrating the exchange of information and ideas toward individual growth, the concept which will drive the design decisions and the spaces created will be centred around the African philosophical tradition that, “The elders sit under the big trees, and talk until they agree” (Wiredu, 2000, p. 374)

This saying represents the traditional and pure nature through which information was shared and still is today, through discussion within an environment which was open and humble. Therefore, the spaces of teaching, couselling and socialising will be formed with the intention of recreating this atmosphere of openness and discussion.

This will be translated in the construction of the intervention by designing the structural columns with the intention of evoking the experience of sitting beneath the tree. To take this symbolism further the systems for water drainage will be centred within these trunk columns.

Important programs, such as teaching and study spaces, will be orientated around these trunk columns and will encourage discussion to take place between users around the tree, as they will be positioned to easily view their peers. This aims to juxtapose the current classroom orientation wherein all students face forward.



CONCEPT SKETCH: BENEATH THE TREE

Chapter 7

CONSIDERING COMMUNAL SPACE

To ensure that the design intervention achieves its aims of promoting social connection, this chapter will explore theories on defining social connection, the requirements which make them successful and precedents which explore the creation of communal space.



FIGURE 7.0

JABULANI NODAL DEVELOPMENT INVERSE

(AUTHOR 2023 AFTER GOOGLE IMAGES, 2021)

ENCOURAGING SOCIAL CONNECTION

FIGURE 7.1
STRONG VS WEAK SOCIAL TIES
(AUTHOR, 2023.)

The concept of this design intervention focuses on creating space within which learners and community members can exchange thought and therefore further connect. Before addressing the spaces, which aid in promoting this interaction, the nature of social connection needs to be explored and related to the historic and present-day conditions identified within Jabulani, Soweto.

SOCIAL TIES

In order to make tangible a concept as abstract as social connection Granovetter defines the social structure of a community as a series of strong and weak ties. The strong ties can be understood as close relationships which are developed through the amount of time shared, the emotional intensity, the level of intimacy and the exchange of services. These strong ties can therefore be identified as those shared between family members and close friends. The cluster created between these strong ties Granovetter calls “social sectors” (a phrase more commonly referred to as “social bubbles” in the modern context). (Granovetter, 1973) In isolation these social bubbles can be harmful for the transverse of new information as members of this social bubble have access to similar sources.

The more important social link is therefore weaker ties, understood as connections which do not progress to a more personal level, which allow social bubbles to bridge between each other around common connections to individuals. This allows for diverse sources of information to travel greater distances within a community. The resultant benefit which Granovetter suggests is that a greater connection to weak ties allows for a greater likelihood of encountering novel ideas, job opportunities and other valuable resources. (Granovetter, 1973)

STRONG VS WEAK TIES

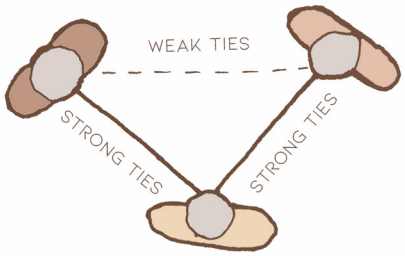
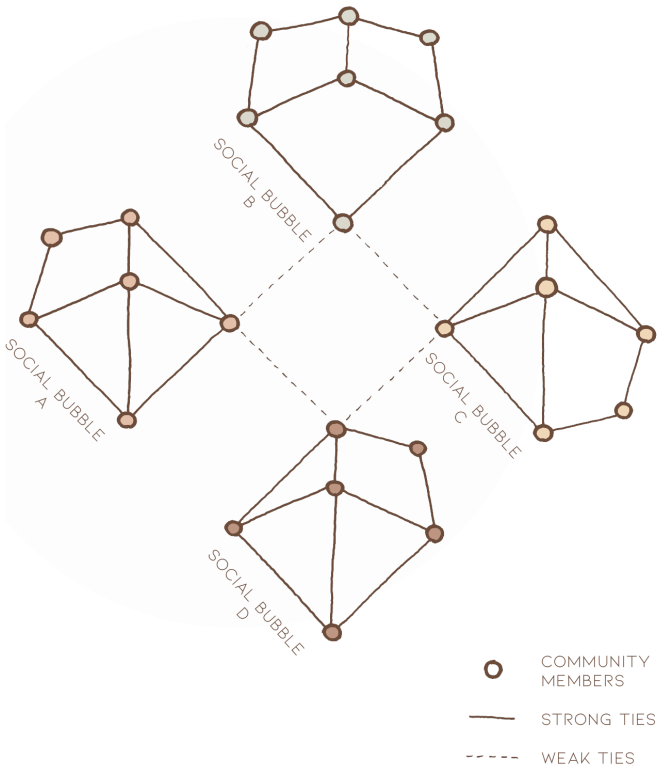


FIGURE 7.2
NETWORK OF SOCIAL TIES
(AUTHOR, 2023. AFTER GRANOVETTER 1973.)

Given the difficulty to collect quantitative data to accurately represent something as convoluted and often ephemeral as social ties, Granovetters model serves as a useful explanation to the existence of social fragmentation within communities, allowing one to understand the mechanics of social relations which begin to take place when rapid urbanisation introduces a loss of social ties and the additon of newer ones. This phenomenon therefore creates a greater likelihood of social bubbles and therefore greater isolation, and with-it feelings of depression and hopelessness.

This theory therefore highlights the importance of facilitating the opportunity for weak ties to be created as a means of negating the isolation of members within communities and therefore combating the poor mental health statistics recorded in Jabulani. The facilitating of weak ties additionally provides a theoretical insight into how the facet of social cohesion should be approached.

NETWORK OF SOCIAL TIES



POLITICAL STABILITY AND WEAK TIES

Granovetter goes on to address his belief that it is the healthy existence of weak social ties which may directly inform the effectiveness of mass gather within a community. If communities were separated into social bubbles, then to orchestrate a gathering information would take the form of advertisements or through media promotion which individuals respond poorly to do a lack of trust towards its legitimacy. (Granovetter, 1973, p.1350) Trust to a leader or position of authority, through his theory, would be a result of social ties which could vouch for the leader's trustworthiness. Thus, when there are more frequent weak social ties within a community, they are more likely to organise around a common cause or leader.

This phenomenon was witnessed leading up the Soweto Student Uprising as students within educational spaces began forming weak ties around the common interest of political theory against oppression. (Nieftagodien, 2021) This theory additionally aligns with what Seekings identifies in Soweto following PW Botha's creation of policies in 1980 to urbanise the township in the aim of cooling down the heated political threat by creating a "black middle class buffer between the radicalised youth". (Harrison, 2014) If this ignition of urbanisation were to disrupt the order of social ties which had allowed for Soweto to organise around the Student Uprising in 1976 then this could explain the relative political silence which has been noted by Seekings in the years to follow. (Seekings,1988)

This theoretical explanation of the influence of weak ties on the mass gathering of members of a community provides an insight into the manner through which political stability amongst members has been achieved in Soweto's history and the nature in which political stability is achieved, amongst the population, within the social sustainability model.

THE SOCIO-ECONOMIC RELATIONSHIP OF LOCAL BUSINESS

The modern perception of economics is that it is a sector which acts separate or independently from the other facets of society. Granovetter challenges this perception while building on his earlier theories on social ties. These thoughts are particularly valuable when looking at the introduction of economic hubs in nodal development plans. In the instance of the Jabulani Mall the presence of large brands began to drain income which previously kept local businesses afloat however this is not due to the insignificance of these local businesses but more so the presentation and competitive prices which attract customers away from them.

What Granvotter proposes is, as a space of weak social tie creation, the relationship which is formed between the business owner, or employees, and the customer is a valuable bond of trust, that is further reinforced by the customer's relationship with close friends who can verify this trust, allowing local businesses to form long lasting connections to the community. (Granovetter, 1985) This can be visually identified amongst the businesses which have survived after the introduction of the Jabulani Mall, many of which are services such as nail salons, day cares and car repair, with the remaining majority being food retailers. Regardless of being operated out of households or alongside sidewalks these businesses create trust through the personal relationships that are created in the act of trading. These local businesses therefore represent a crucial pillar to the identity of the community and the social connections which structure it.

This exploration of the socio-economic relationship of the local business emphasises the importance of their preservation and empowerment within communities. This importance is not limited to the attending to the facet of economic health but represents a crucial component of the social connection within a community.

Granovetter's theories on social ties reveals the importance weak, impersonal, interactions between community members have in facilitating a greater communal unity and mental health experienced.
Within the design intervention these weak social ties will be created primarily around:

• EDUCATION AND ACCESS TO INFORMATION
Of which the accommodation of political literature, around which members would connect, can be understood as serving a greater purpose of encouraging political stability.

• ECONOMIC ACTIVITIES
By maximising the opportunity for weak social ties to be formed between local businesses and community members, a greater success should, in theory, be experienced within the market spaces introduced. Therefore, encouraging greater economic health.

Weak ties will be formed secondarily around:

• RECREATION
The catering of activities beyond the main programs of the intervention prevents the social ties created from being limited to the primary users and should therefore increase the connections formed between local business owners and students using the intervention.

This conclusion is however limited by being theoretical and therefore the spaces within which social tie creation is encouraged needs to be explored.

ENCOURAGING WEAK SOCIAL TIES

FIGURE 7.3
PUBLIC SURVEIL-
LANCE
(AUTHOR, 2023.)

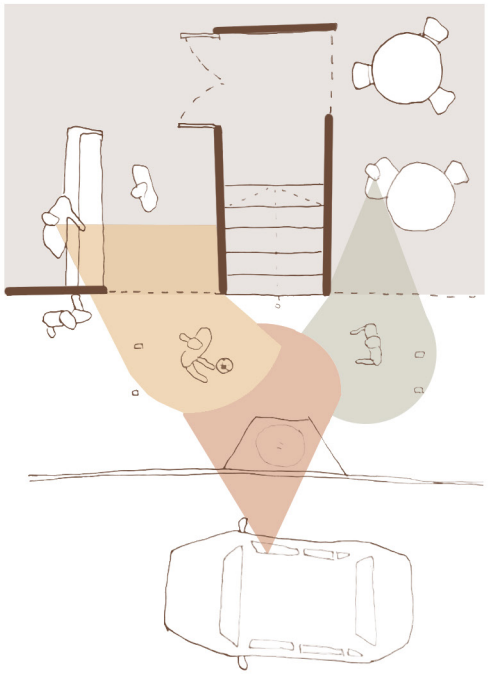
The creation of weak social ties takes place primarily in the public spaces within and around the site. Therefore, this section will analyse the spatial and programmatic conditions which make them successful.

THE IMPORTANCE OF THE SIDEWALK

The proposed site, being situated at the corner Bolani Road and Koma Street experiences high activity from the two main economic and residential movements along its sidewalks. The defining of community can be understood as starting with this simplest of infrastructure. It is within this overlooked public space where all demographics with varying goals and directions share in the activity of passage, and it is therefore within these sidewalk spaces that the most significant weak social ties are formed.

While these in-between spaces primarily serve the function of circulation, they tend to define perception of a city or community. “If the streets and sidewalks are dull, then we perceive the city as the same,” perhaps because these are the spaces through which we interact with a city. (Jacobs, 1961, p.36) Dynamic programming of these urban edges can create greater communal activity. The mechanism which Jacobs accredits to achieving this is mainly the inclusion of economic activity allowing for diverse individuals of varying goals to use common facilities and at different times. This allows for the street edges to be animated with the use of individuals throughout the day promoting a greater opportunity for social tie creation and economic growth.

In this public space it is also the active participation of the community members which make them safe, providing spontaneous protection from pedestrians or users within buildings. Jacobs states that, “it is the active surveillance which takes place on these sidewalks makes them safer than the playgrounds,” which separate children from the community protection. (Jacobs, 1961, p.38) The importance of surveillance within and outside of buildings, allowed for by clear lines of sight, is therefore a crucial spatial requirement to allow for the activities which take place along the sidewalk to be conducted with a sense of security.



PUBLIC SURVEILLANCE

DYNAMIC PUBLIC SPACE

The proposed design program includes the creation of public spaces in-between the activities of recreation and market space. Jacobs notes that the dynamic programming of the sidewalk results in greater social interaction, however, this principle can be applied to other forms of public space and can be broken down into the facilitating of three main categories: “necessary-, optional- and social activities.” (Gehl, 2011)

The necessary activities are classified as those which a user has no option but to experience. These are main circulation paths which the site accommodates simply given its geographical location in relation to other points of interest such as the sidewalk. On the site of the intervention the necessary activities can be understood as the main longitudinal movement between homes and workspaces and the main lateral movement towards the economic hub.

The optional activities of the site can be understood as those which an individual is “provided the space and time to act on willingly such as taking a walk, enjoying nature, relaxing or sitting.” (Gehl, 2011) In the context of the site, the optional activity which will be introduced can be considered as the market spaces and recreational sports facilities.

The last activity is referred to as resultant or social activities which are influenced by the other two types of activities and can be understood as children at play, conversations and communal acts. This will be accommodated through the programming of social space around the activities of the market and sports facilities.

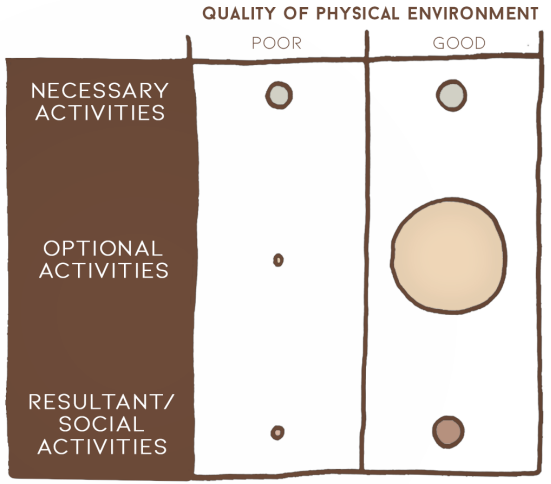
FIGURE 7.4
QUALITY OF SPACE
(AUTHOR, 2023.
AFTER GEHL, 2011.)

FIGURE 7.5
ACTIVITY VS SO-
CIALISING
(AUTHOR, 2023.
AFTER GEHL, 2011.)

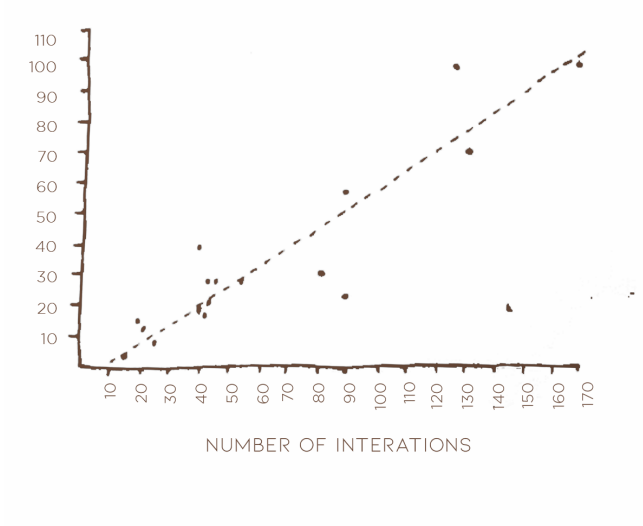
When the physical environment is poor there is a direct impact on the observed number of optional and resultant activities, the necessary as one can imagine remains constant given its function. In addition to this it was recorded that when programming aimed to create dynamic activities within the public realm more interactions, resultant activities, were noted.

In conclusion, greater social interaction will be facilitated through a revitalisation of the sidewalk spaces around the site, it is along this public space which the market space will be positioned following Jacob's conclusion that this economic activity will bolster social tie creation. The public spaces within the urban edge will encourage social tie creation through the facilitating of dynamic programming by introducing optional activities, the market and the sports facilities, and attractive spaces which accommodate resultant social activities.

PHYSICAL ENVIRONMENT VS ACTIVITY



ACTIVITIES VS SOCIALISING



PRECEDENT STUDY

FIGURE 7.6
SUCCESSFUL PUBLIC SPACE
(AUTHOR, 2023.)

When designing with the intention of serving the community there are several factors which contribute to its successful integration within the context. This can be accredited to failures in the design of the intervention such as, sensitivity to representation within their context resulting in a project which drastically contrasts with its surrounding community, and poor sensitivity to the everyday needs of a population. These projects therefore fail to create the interaction envisioned resulting in their social spaces being empty and underused.

Lefebvre suggests that the success of a social space can be understood as the culmination of three main aspects: the actual, the discursive and the lived components. (Lefebvre, 1991, p.2) Lefebvre introduces this spatial triad as a means of assessing a social space with variables which consider the community's acceptance of the work.

The actual refers to the materialisation of the spatial vision of the architects, developers or clients.

The literal structure and the form and materials which create its aesthetic experience.

The discourse refers to the discussion around the work, the involvement of community input and the symbolism which is created around this process.

MODEL OF SUCCESSFUL PUBLIC SPACE

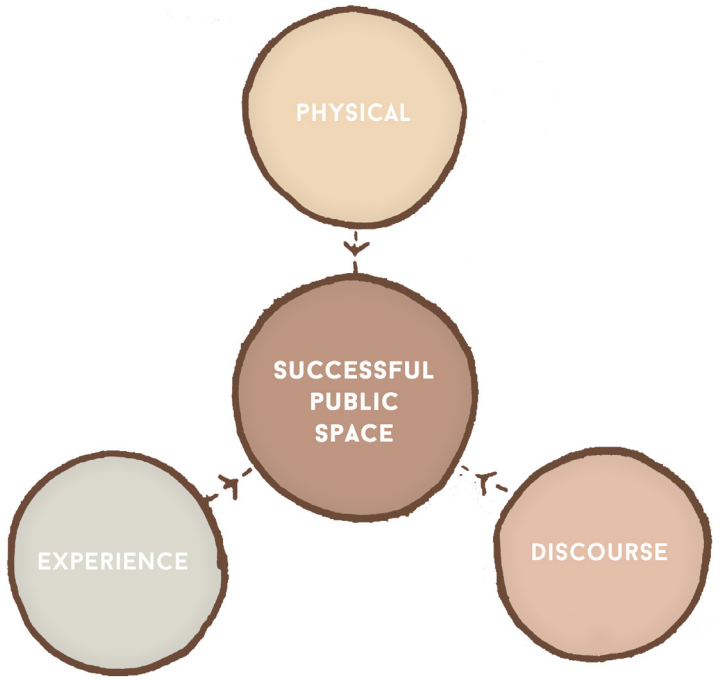


FIGURE 7.7
LEFEBVRE TABLE
(AUTHOR, 2023.)

To elaborate on this, if the project is aesthetically successful it may still be rejected by a population due to the controversy around its construction or their disbelief in its necessity. Lastly the lived experience of a project refers to the phenomenological relationship between the work and the population. This last variable is often influenced by the previous two but implies the possibility of projects which despite being aesthetically foreign or controversial, if it services needs in a manner which creates a pleasant user experience it will be inhabited, perhaps even begrudgingly so, by the surrounding population.

Lefebvre's model will be utilised as necessary consideration when approaching the design and as a measure of success when analysing the following precedents of community focused typologies. This allows for the community's relation to the process and outcome of a project to be included in the architectural assessment of the works. The table shown will be used to categorise the observations made within this spatial triad.

TABLE FOR PRECEDENT ASSESSMENT

	POOR	GOOD	GREAT
Physical			
Discourse			
Experience			
Success %			

LOCAL PRECEDENTS

SHAPA Soweto
Architects: c76, 2021
Location: Soweto, Johannesburg

FIGURE 7.8
SHAPA SKETCH 1
(AUTHOR, 2023.)

FIGURE 7.9
SHAPA SOWETO
SITE
(AUTHOR, 2023. AFTER
C76, 2021.)

The reimagining of the Nike Training Centre sought out to create a freely accessible asset to the community of Soweto that offered more than connection around sports. The use of low boundary walls allows for the active street edges to not be separated from the activity within, engaging with the sidewalk and inviting pedestrians to connect with the site.

The area represented in plan exhibits the facility's public interface. The activities accommodated celebrate the enhancement of athletic skill and includes a skatepark, an outdoor basketball court, outdoor gym areas, 5-a-side football fields and food kiosks.

VIEW A: ENTRANCE

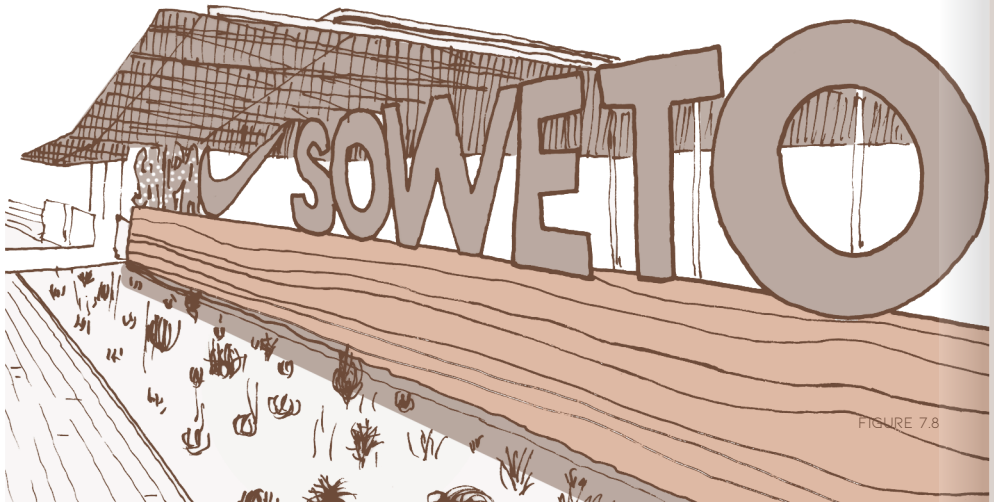
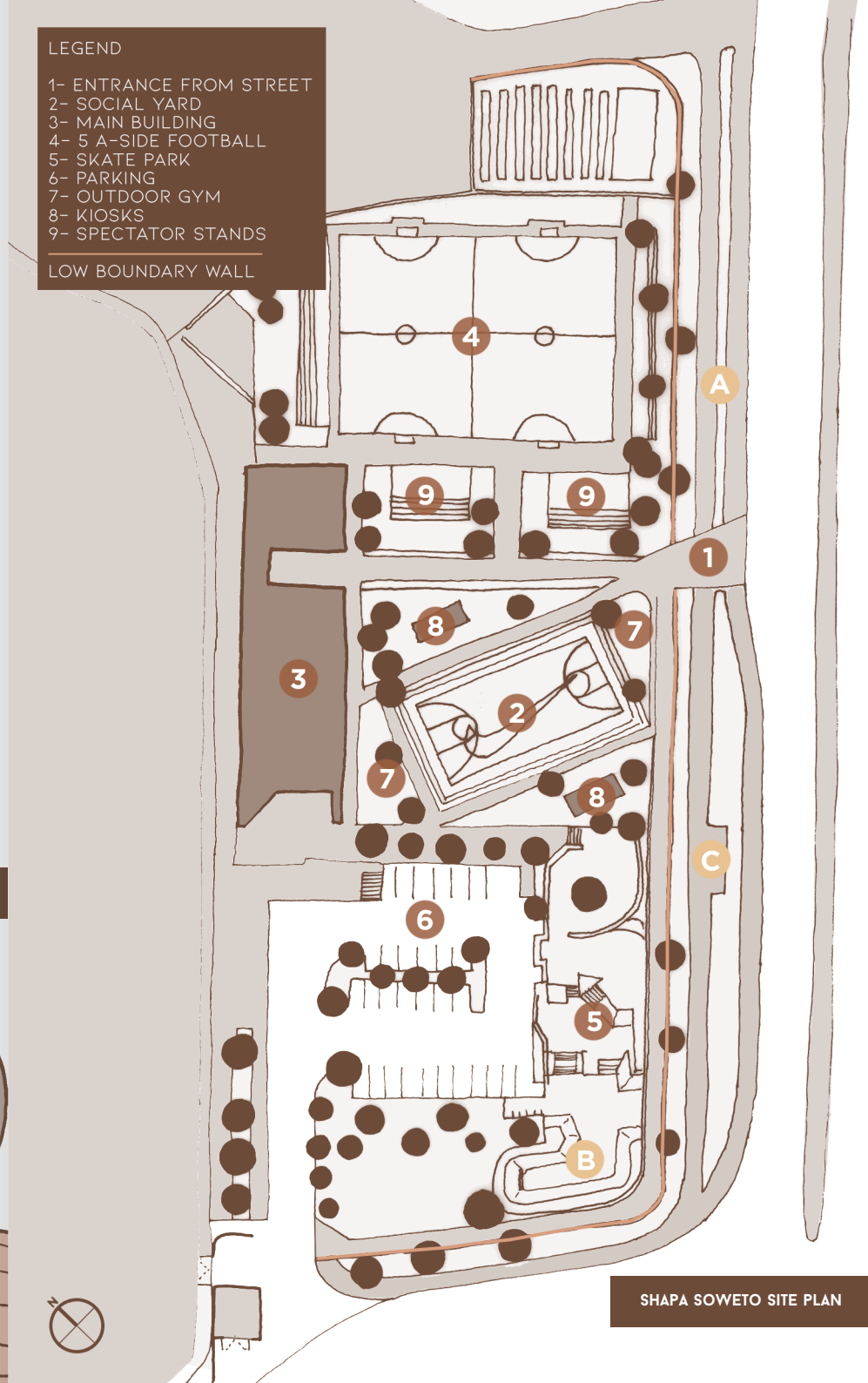


FIGURE 7.8

FIGURE 7.9



SHAPA SOWETO SITE PLAN

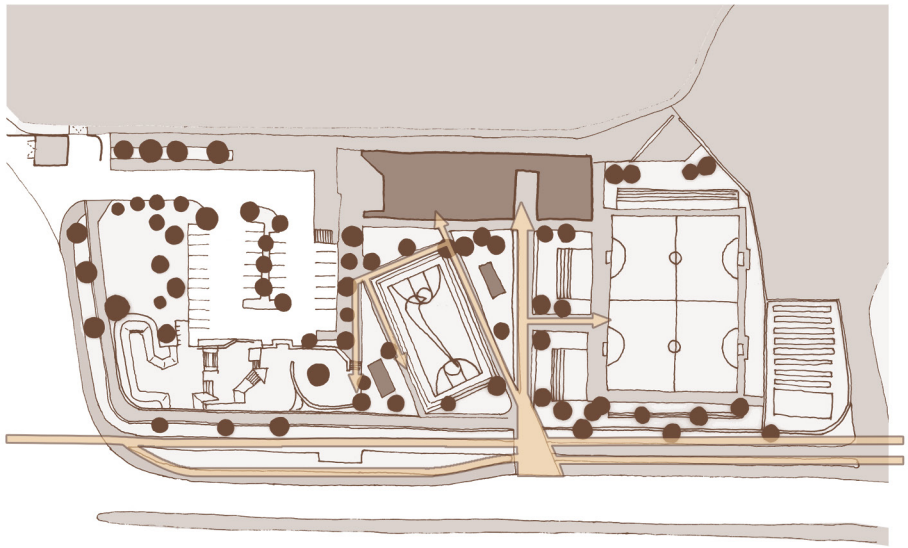


FIGURE 7.10

FIGURE 7.10SHA-PA SOWETO SITE PATHS (AUTHOR, 2023. AFTER C76, 2021.)

To order the dynamic programming facilitated the activities are divided by circulation paths which allows for them to be contained within their geometries allowing for the spaces to visually read as one but function independently.

DIVIDING CIRCULATION PATHS

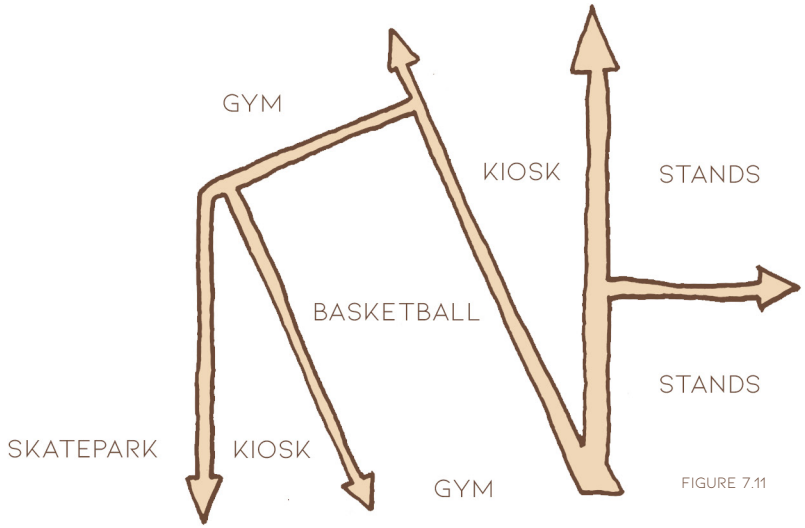


FIGURE 7.11

FIGURE 7.11 CIRCUTION SKETCH (AUTHOR, 2023.)

FIGURE 7.12
SHAPA SKETCH 2
(AUTHOR, 2023.)

FIGURE 7.13
SHAPA RAMMED EARTH
(AUTHOR, 2023.)

The use of familiar materials becomes an essential aesthetic driver when aiming to add to the existing site language. Instead of attempting to emulate an African idiom c76 instead sought to form an authentic and unique identity. (c76, 2021)

This was achieved by incorporating local materials and exploring the textures of concrete, rammed earth and stone. These materials are used to create functional focal points throughout the design. The rammed earth is used as both a focal point for the skatepark and the low boundary wall surrounding the public edge. Although its function is simple its textured finish allows for a more dynamic earth pattern and colour which compliments the red steel.

VIEW B: SKATE PARK

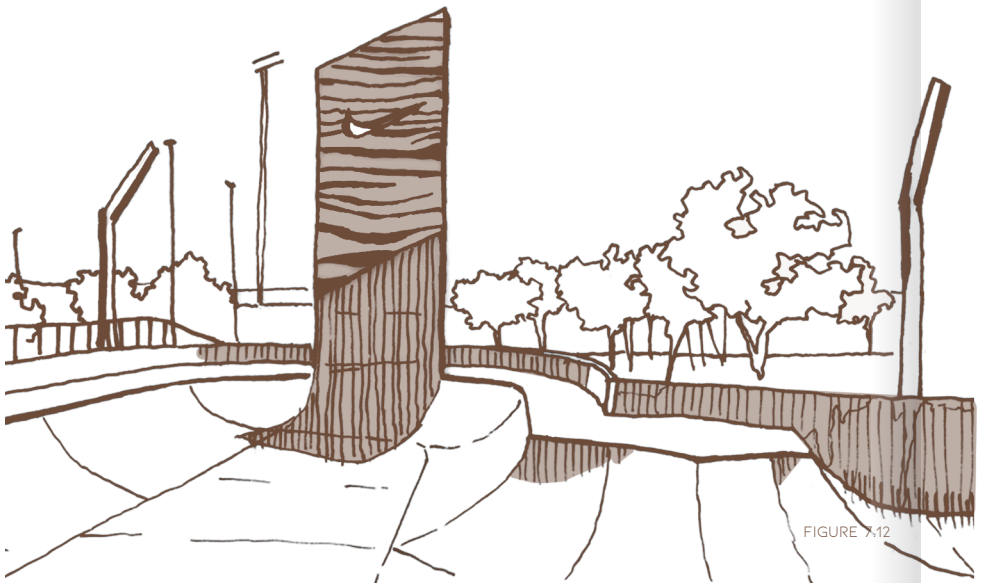


FIGURE 7.12

RAMMED EARTH FOCAL POINT

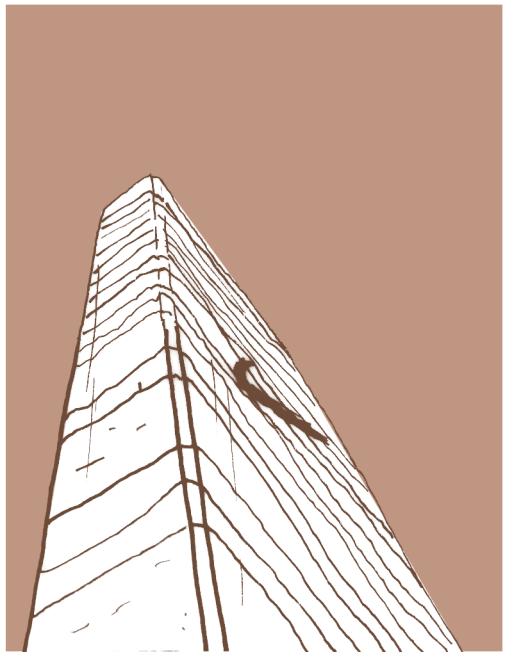


FIGURE 7.13

FIGURE 7.14
SHAPA SKETCH 3
(AUTHOR, 2023.)
FIGURE 7.15
SHAPA REBAR
(AUTHOR, 2023.)

In addition to materiality the technical design of details was informed by local traditional design. (c76, 2021) The public interface's shading device was designed after the weaving of baskets and executed with bent rebar welded together.

The red painted bent rebar geometry creates a recognisable pattern while creating dense shadows to shield the outdoor play spaces. Signage is additionally formed with red painted steel angles creating a unified aesthetic between structure and decor.

VIEW C: SIDEWALK

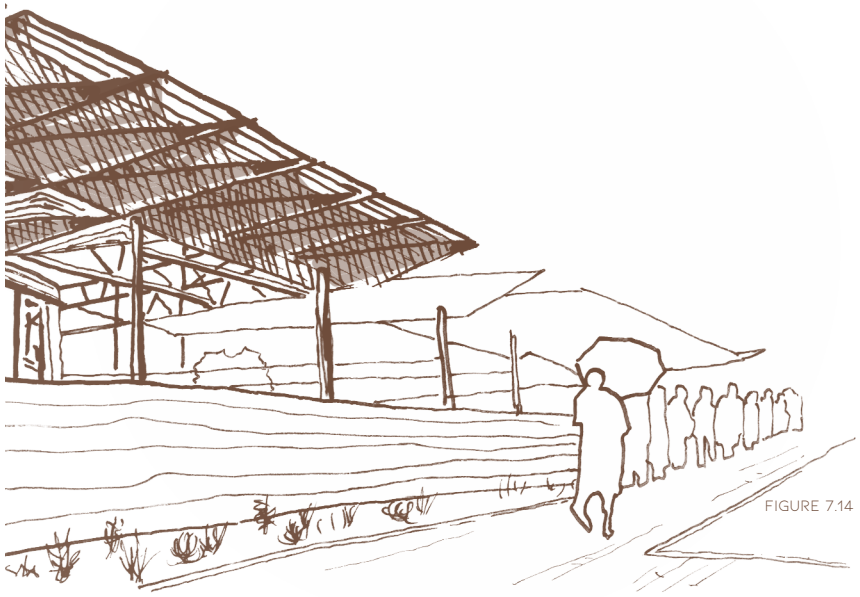


FIGURE 7.14

BENT REBAR SHADING DEVICE

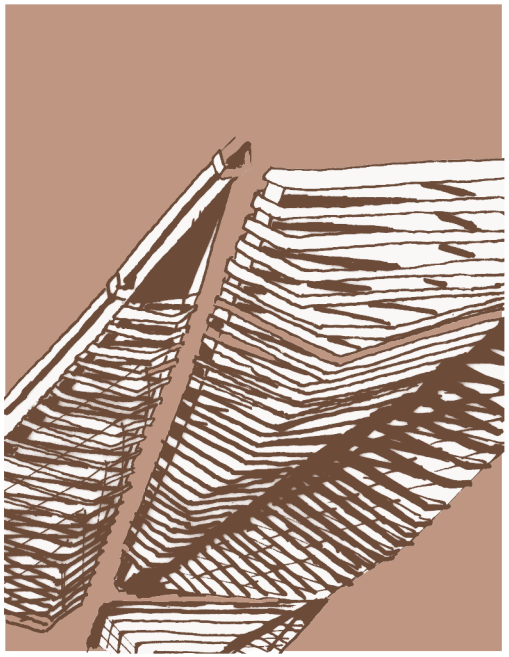


FIGURE 7.15

FIGURE 7.16
SHAPA SUCCESS
(AUTHOR, 2023.)

The strong and unique architectural language achieved in the physical representation of the design, he sensitivity to materiality and symbolism within forms and the inclusion of local contractors and publicly accessible facilities results in the overall success of this project.

The projects successful creation of a public space buffer before the private spaces of the training facility, which utilises low boundary walls to not exclude passersby on its urban edges as well as its approach to utilising while reimagining local materials will be used to inform the design intervention of this research report.

PUBLIC SPACE ASSESSMENT

	POOR	GOOD	GREAT
Physical			✓
Discourse		✓	
Experience			✓
Success %	**89%**		



FIGURE 7.14
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

Alexandra Heritage Centre
Architects: Peter Rich Architects.
Location: Alexandra, Johannesburg.

FIGURE 7.17
HERITAGE CENTRE
SKETCH
(AUTHOR, 2023.)

The interpretation Centre is designed to pay tribute to the township which served as the first home, diagonal to the site, of Nelson Mandela in Johannesburg. As an initiative of the Alexandra Renewal Project, the process leading to the design involved the documentation of the oral history within Alexandra. This process of research resulted in the design intervention of the Alexandra Heritage Centre. (Peter Rich Architects, 2010)

The program introduced within the centre includes an exhibition space, which forms its primary geometry bridging across the street below. Additionally, a museum is provided which archives the history of Alexandra, assessed both through computers within the exhibition and community archive areas. (Peter Rich Architects, 2010)

HERITAGE CENTRE ELEVATION

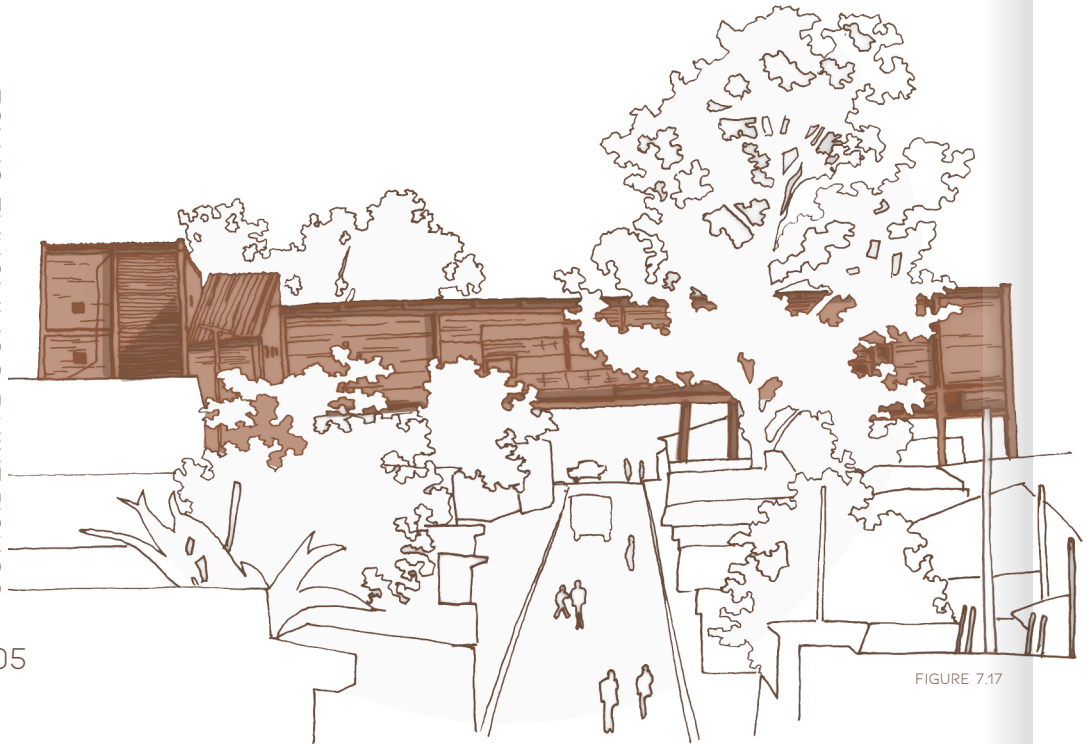


FIGURE 7.17

The bridge connects at ground level to define two civic spaces accompanied by public servicing facilities and stores which accommodate community activities and attracts the pedestrians passing by.

EXPLODED AXONOMETRIC

FIGURE 7.18
EXPLODED SKETCH
(PETER RICH ARCHITECTS, 2010.)

FIGURE 7.19
HERITAGE CENTRE PLAN
(PETER RICH ARCHITECTS, 2010.)

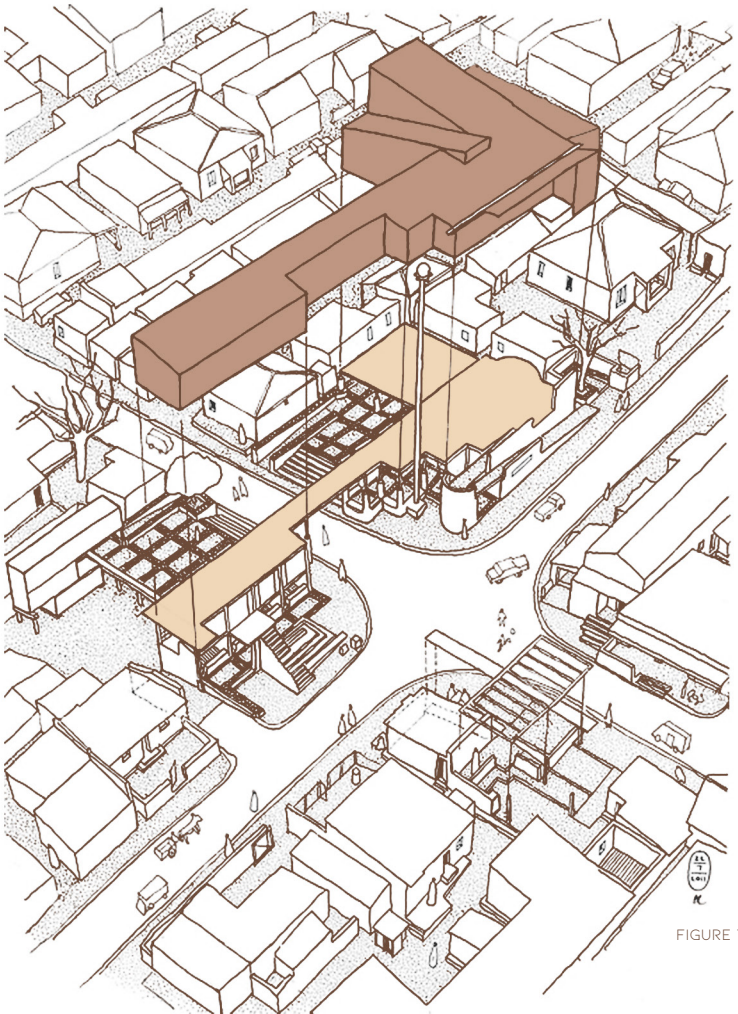


FIGURE 7.18

HERTIGAE CENTRE PLAN



FIGURE 7.19

FIGURE 7.20
HERITAGE CENTRE
GEOMETRY
(AUTHOR, 2023.)
FIGURE 7.21
HERITAGE CENTRE
SUCCESS
(AUTHOR, 2023.)

The building's materiality is comprised of soil bricks, formed using Hydroform presses and local soil, steel framework, metal sheeting and coloured polycarbonate sheeting. These materials celebrate the vernacular architecture of Alexandra, with the polycarbonate sheeting mimicking the language of sheeted roofs.

The geometries within which these materials come together the pitched roofs and square forms familiar to the context.

The successful representation of the design drivers within the final intervention, the use of local materials and architectural language as well as the process of research and construction which engaged communal participation result in the successful implementation of the public serving heritage centre.

PUBLIC SPACE ASSESSMENT

	POOR	GOOD	GREAT
Physical		✓	
Discourse			✓
Experience			✓
Success %	**88%**		

RECTANGULAR FORMS

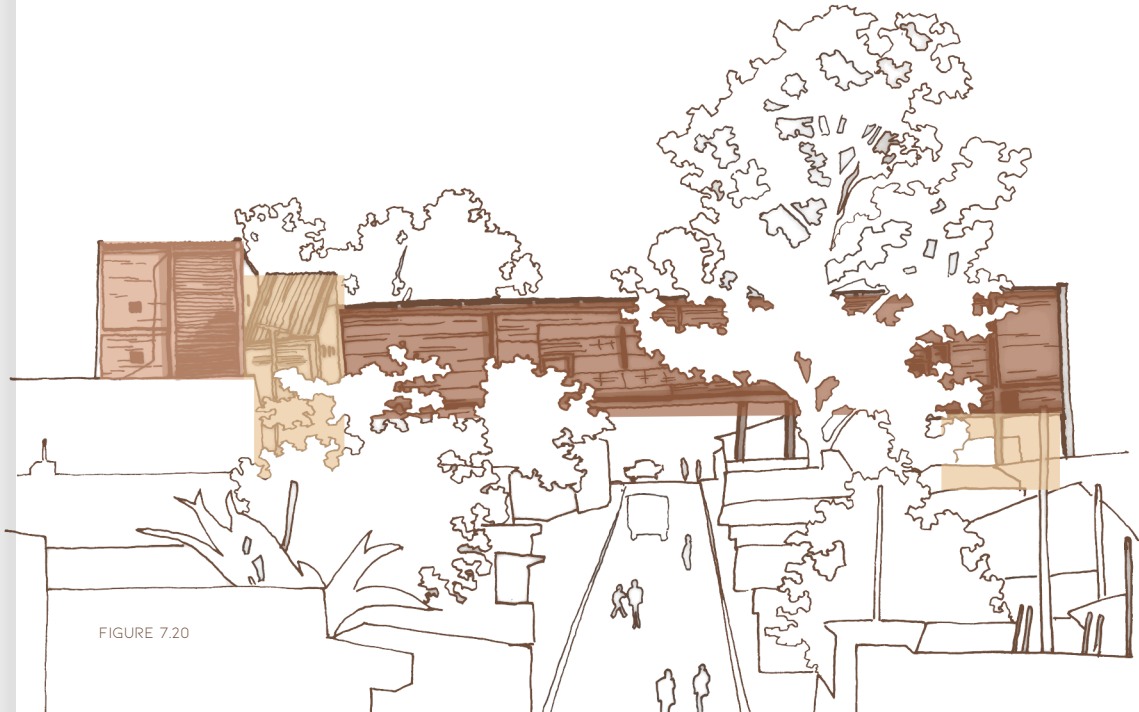


FIGURE 7.20

INTERNATIONAL PRECEDENTS

The Kamwokya Community Centre
Architects: Kere Architecture, 2016-2022
Location: Kampala, Uganda

The Kamwokya Community Centre designed, focused primarily on uplifting the communities of Kampala in partnership with local non-profit Kamwokya Christian Caring Community. Its program revolves around the main activity of the centre which is play. Here social interaction revolves around the play and education of children within open spaces. This also informs the main circulation which branches off and around the main sports field.

FIGURE 7.22
KAMWOYKA SKETCH
(AUTHOR, 2023.)

FIGURE 7.23
KAMWOYKA SITE PLAN
(AUTHOR, 2023. AFTER KERE ARCHITECTURE, 2022)

VIEW A: IN-BETWEEN SPACE



FIGURE 7.22

FIGURE 7.23

LEGEND

1- MULTIPURPOSE BUILDING
2- INTERNET CAFE
3- GATHERING SPACE
4- MULTIPURPOSE SPORTS FIELD
5- RAISED PLAY SPACE
6- COMMUNITY HALL
7- CHANGING ROOMS
8- TOILETS
9- WATER TOWER
10- RAIN WATER HARVESTING

COMMUNITY CENTRE GROUND FLOOR PLAN

FIGURE 7.24
KAMWOYKA SKETCH
(AUTHOR, 2023. AFTER KERE ARCHITECTURE, 2022)

FIGURE 7.25
KAMWOYKA CIRCULATION
(AUTHOR, 2023. AFTER KERE ARCHITECTURE, 2022)

To ensure that dynamic inclusion of activities do not infringe with each other, as well as to combat the heavy rainfall of the region, activities are divided amongst 4 level changes which additionally allows for water to collect into one area. Rainwater is collected and made usable on site for the centre's operations. In addition to this the architects aimed to preserve the free flowing and open environment which existed on the site, and which contrasted the dense urban surroundings. This was achieved through the intentional spacing between programs, further divided by the generous circulation path.

VIEW B: CIRCULATION PATH

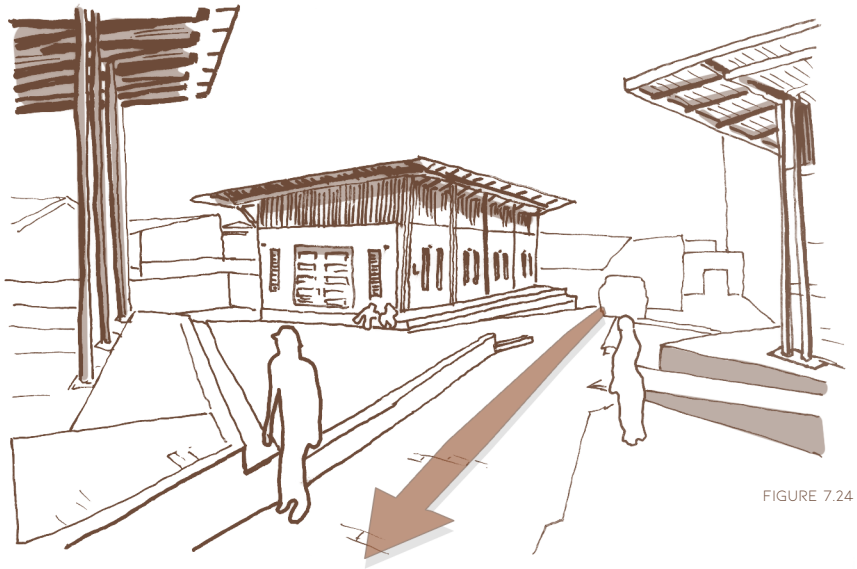


FIGURE 7.24

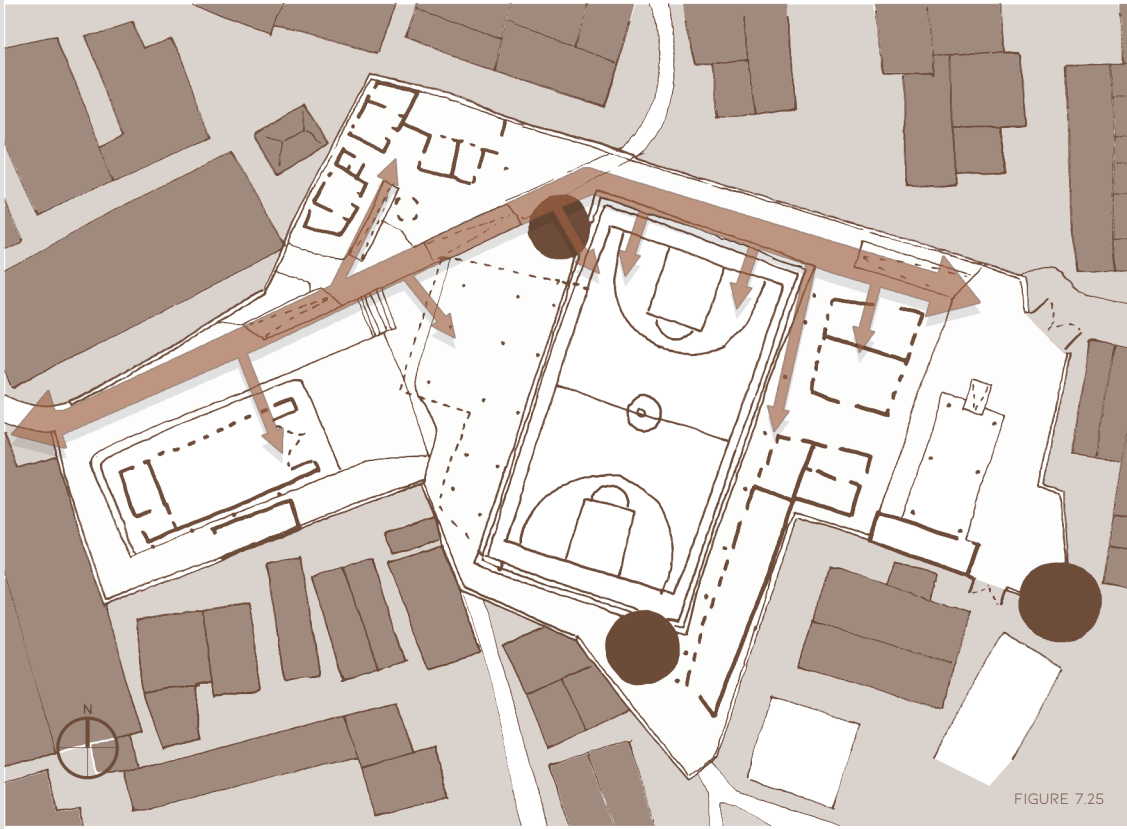


FIGURE 7.25

CONNECTING ACTIVITIES

The use of a steel butterfly roof and the celebration of the water collection towers within the design create a unique architectural identity, while the other structures aim to represent the familiar forms and materiality which can be seen within the context.

FIGURE 7.26
KAMWOYKA SUCCESS
(AUTHOR, 2023.)

The architectural language introduced, while being sensitive to the existing language and the perseverance of preexisting flows through the site achieve a community driven intervention.

The projects use of level changes to divide the many activities provides will be utilised within the design intervention of this research report to create hierarchy between the public and more private activities which are to be accommodated.

	POOR	GOOD	GREAT
Physical		✓	
Discourse			✓
Experience			✓
Success %	**89%**		



FIGURE 7.27
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

Casa Nueva Esperanza Community Centre
Architects: Proyecto Reacciona, 2022
Location: Monterrey, Mexico

The Casa Nueva Esperanza Community Centre was the fifth project of the Crear Comunidad-program, which aimed to locate libraries and municipal infrastructure which needed revitalisation through community participation. The centre was previously an abandoned school, now reformed to accommodate the secretary of the municipality.

FIGURE 7.28
NUEVA SKETCH 1
(AUTHOR, 2023, AFTER PROYECTO REACCIONA, 2022.)

FIGURE 7.29
NUEVA SITE PLAN
(AUTHOR, 2023, AFTER PROYECTO REACCIONA, 2022.)

VIEW A: ENTRANCE

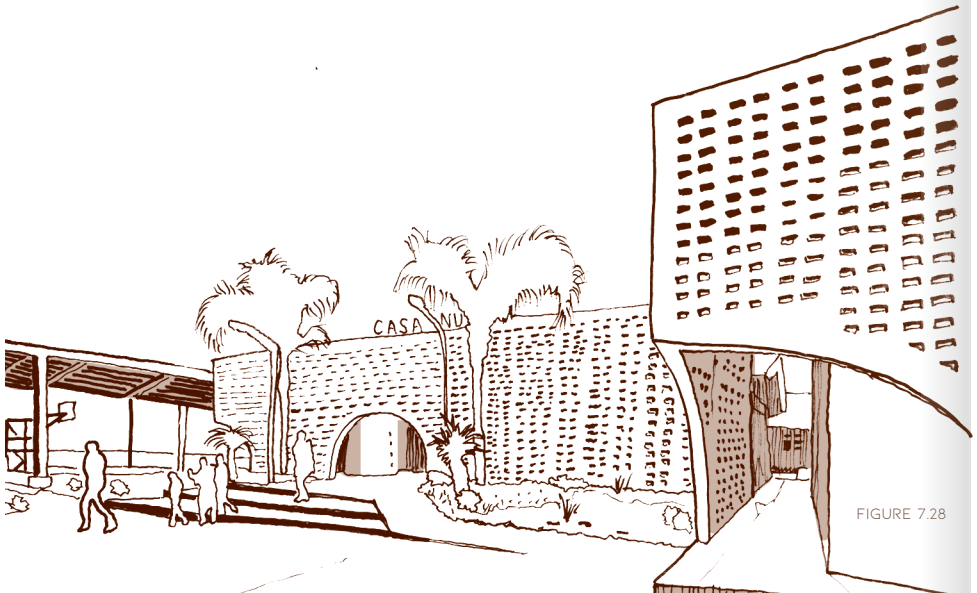
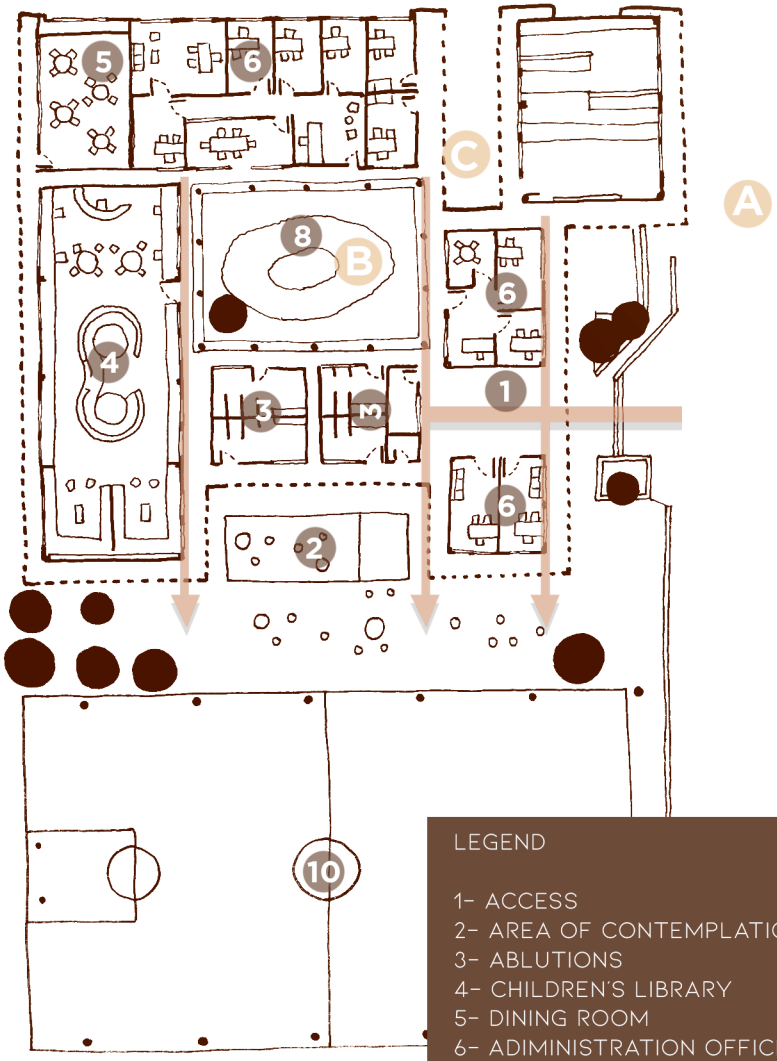


FIGURE 7.28



LEGEND

1- ACCESS
2- AREA OF CONTEMPLATION
3- ABLUTIONS
4- CHILDREN'S LIBRARY
5- DINING ROOM
6- ADIMINISTRATION OFFICES
7- COURTYARD
8- GARDEN OF CONTEMPLATION
9- THEATER

COMMUNITY CENTRE FLOOR PLAN

FIGURE 7.30
NUEVA SKECTH 2
(AUTHOR, 2023. AFTER PROYECTO REACCIONA, 2022.)

FIGURE 7.31
NUEVA SKECTH 3
(AUTHOR, 2023. AFTER PROYECTO REACCIONA, 2022.)

As a result of the needs of the secretary focus on mental wellbeing, the design breaks up its array of programs with green spaces provided for the purpose of self-reflection and contemplation.

This breaks up the activities of the building with moments connected with nature and serenity. The application of this concept is effective in allowing both public and administrative users to benefit around these contemplation spaces however overall legibility is lacking, and important spaces are difficult to locate upon entry.

VIEW B: CONTEMPLATION GARDEN

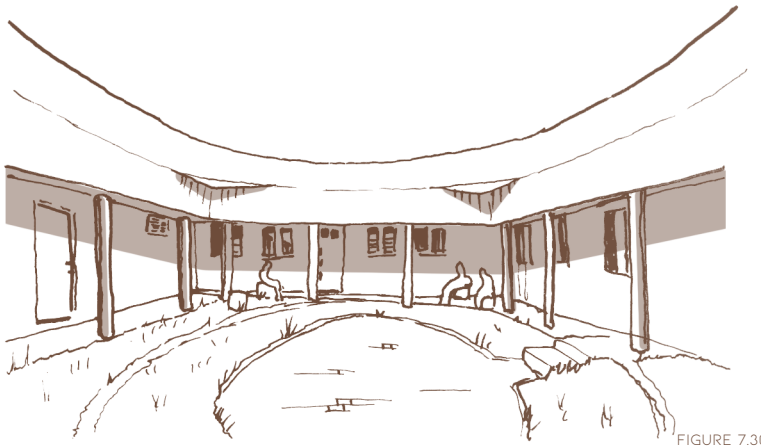


FIGURE 7.30

The use of perforate brick allows for the internal spaces to maintain a sense of privacy from the exterior while allowing light and the external environment to be seen from the circulation paths within.

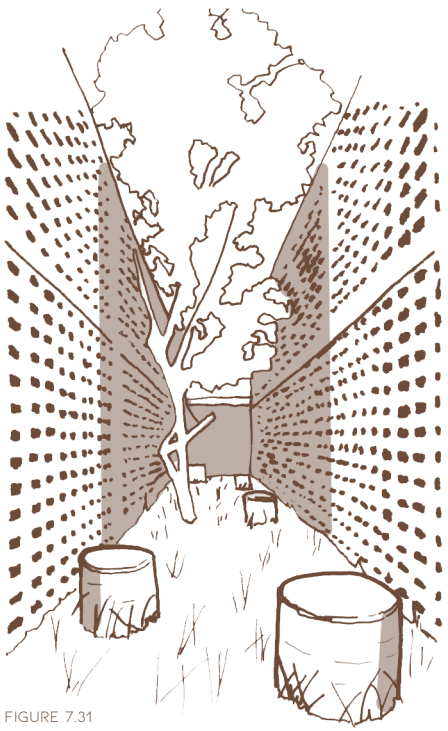


FIGURE 7.31

VIEW C: CONTEMPLATION GARDEN

FIGURE 7.32
NUEVA SUCCESS
(AUTHOR, 2023.)

The project is successful in facilitating a political connection within the community while representing the secretary's goals for improved mental health through the inclusion of serene green spaces which break up the program within.

The use of perforated brick to create a robust urban connection will be applied to the design intervention to all for the ground floor to possess a higher level of security. Additionally the use of contemplation spaces will be applied within the wellbeing centre to be used as outdoor counselling spaces.

PUBLIC SPACE ASSESSMENT

	POOR	GOOD	GREAT
Physical		✓	
Discourse			✓
Experience		✓	
Success %	**78%**		



FIGURE 7.33
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023. AFTER GOOGLE IMAGES, 2021)

Chapter 8

DESIGN DEVELOPMENT

This chapter reflects intial design explorations, showing how ideas have developed, and should not be interpreted as the final version of the design.



FIGURE 8.0
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR 2023 AFTER GOOGLE IMAGES, 2020)

INITIAL DESIGN

FIGURE 8.1
INITIAL MASTERPLAN
(AUTHOR, 2023)

Intention

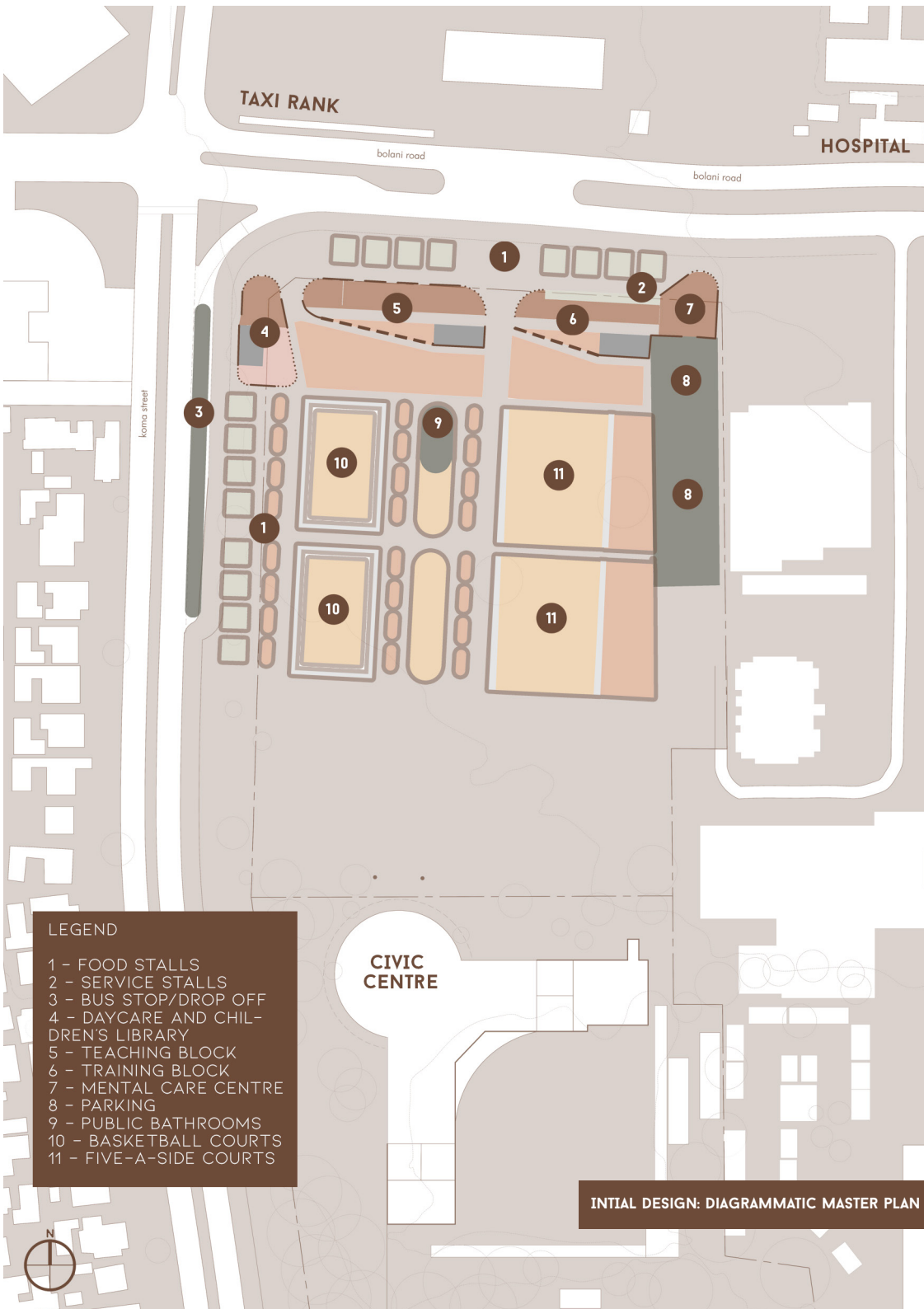
The initial masterplan explored Jacob's theory of the activation of the sidewalks, along Bolani Road and Koma Street, with the mechanism of economic activity by positioning the market spaces along these edges. (At points 1)

The Education and Wellbeing Centre were positioned just behind these food stalls with the intention of creating a passage between the main building and the activity of commerce, with additional service stalls allowing local businesses to be embedded within the main building. (At point 2)

The Day Care Centre was located on the western side of the site to allow for the residential flow to easily access this facility. (At point 4) Along this edge the sidewalk was pulled inward to allow for school buses to drop of students into an information space. (At point 3) The wellbeing center was positioned at the eastern boundary of the site in favor of a closer relationship with the Bheki Mlangeni Hospital for easy referral. (At point 7)

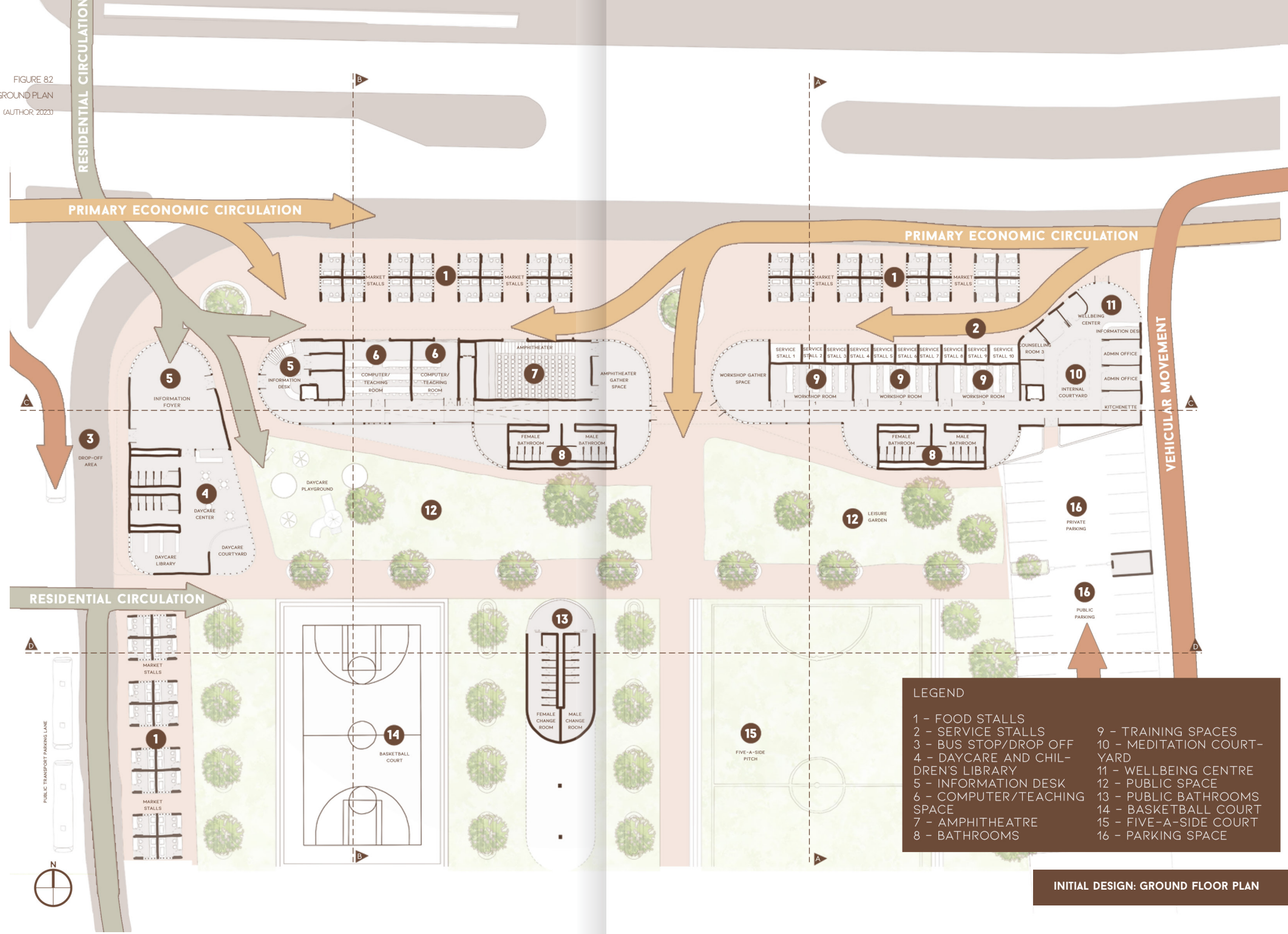
The form was divided in its center to break up the elongated form from creating a harsh barrier along the street.

The recreational spaces were then positioned south of the main building with the aim of capitalizing on the length of the site to accommodate more facilities as well as be easily accessed by the strip of residential blocks, positioned across Koma Street.



INTIAL DESIGN: DIAGRAMMATIC MASTER PLAN

FIGURE 82
INITIAL GROUND PLAN
(AUTHOR, 2023)



LEGEND

1 – FOOD STALLS
2 – SERVICE STALLS
3 – BUS STOP/DROP OFF
4 – DAYCARE AND CHILDREN'S LIBRARY
5 – INFORMATION DESK
6 – COMPUTER/TEACHING SPACE
7 – AMPHITHEATRE
8 – BATHROOMS
9 – TRAINING SPACES
10 – MEDITATION COURTYARD
11 – WELLBEING CENTRE
12 – PUBLIC SPACE
13 – PUBLIC BATHROOMS
14 – BASKETBALL COURT
15 – FIVE-A-SIDE COURT
16 – PARKING SPACE

INITIAL DESIGN: GROUND FLOOR PLAN

This initial design exhibited more flaws than success which can be identified as the following:

FAILURES

• This arrangement lacked a clear legibility between private and public space.
• The building's proximity to the market space created a claustrophobic and overbearing presence on the intended social spaces between.
• The building's form was overly elongated across the site.
• The use of rammed earth on this massive and curved from was not feasible given the aim of minimizing costs.
• The programs introduced possessed a poor relation to each other therefore failing to maximize the opportunity for social ties to be formed between activities.

SUCCESSES

• The positioning of the markets along the street edges.
• The positioning of the wellbeing centre with a close relation to the Bheki Mlangeni Hospital.



FIGURE 8.3
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

RE-DESIGN PHASE

Following the initial design, a return to sketch design was required to reimagine the order of spaces considering the failures of the first attempt. At this point the concept had been finalized and the interviews and analysis of the primary schools of Jabulani had taken place with the lessons learned applied to the redesign.

Changes Made

• The new design aimed to create a buffer between the urban edge and the main building, with the recreational facilities positioned in between, as observed within the order of the primary schools. This created a more legible hierarchy of public to private spaces. The materiality was changed to celebrate the use of masonry and corrugated sheeting used in the schools of Jabulani.

• Inspired by the Kamwokya Community Centre precedent, which used a change of levels to separate different activities, the main building was elevated to create a visual distinction between the public and private space within the relatively flat site.

• Inspired by the Casa Nueva Esperanza Community Centre, the inclusion of green spaces for the use of outdoor counselling sessions was applied to the wellbeing center and perforated brick was introduced to the intervention to create a robust and secure presence at the ground floor which opens up in the public library space of the second floor to create a more open experience.

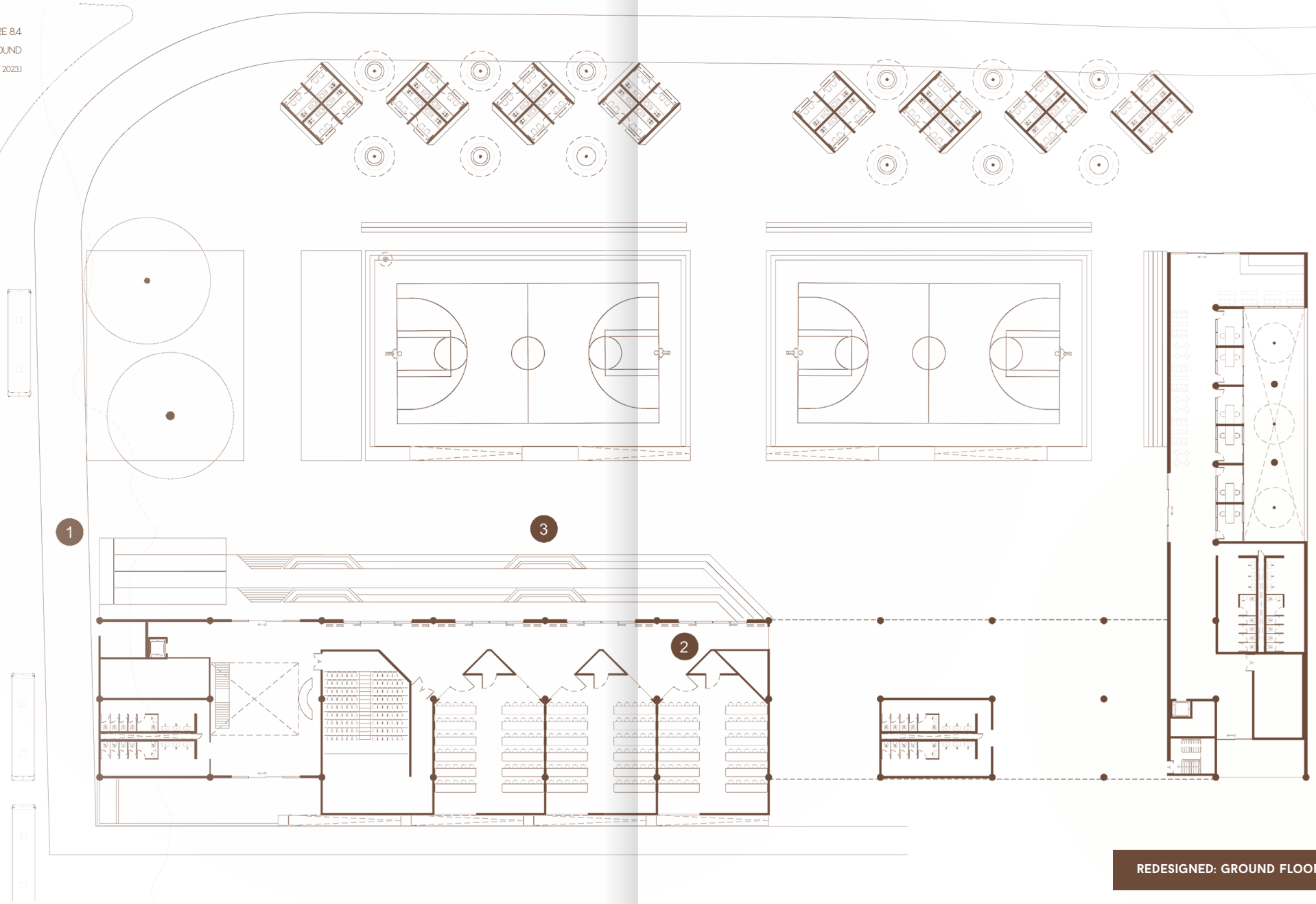
• Inspired by the SHAPA Soweto precedent, the northern urban edge was made public to encourage communal interaction with circulation spaces allowing for the activities to operate within interrupting each other and with the aim of achieving more open experience.

• The parking space was now positioned south of the main building to allow for the drop-off of students within the intervention to function within the safety of this space as well as for the buses to be parked easily afterward.

• The development of concept led to a greater understanding of the design in section with the structural columns being designed to mimic the form of trees. However, the application of this concept failed to translate to plan at this point in the design and will more strategically position and order teaching and studying spaces around these focal points.

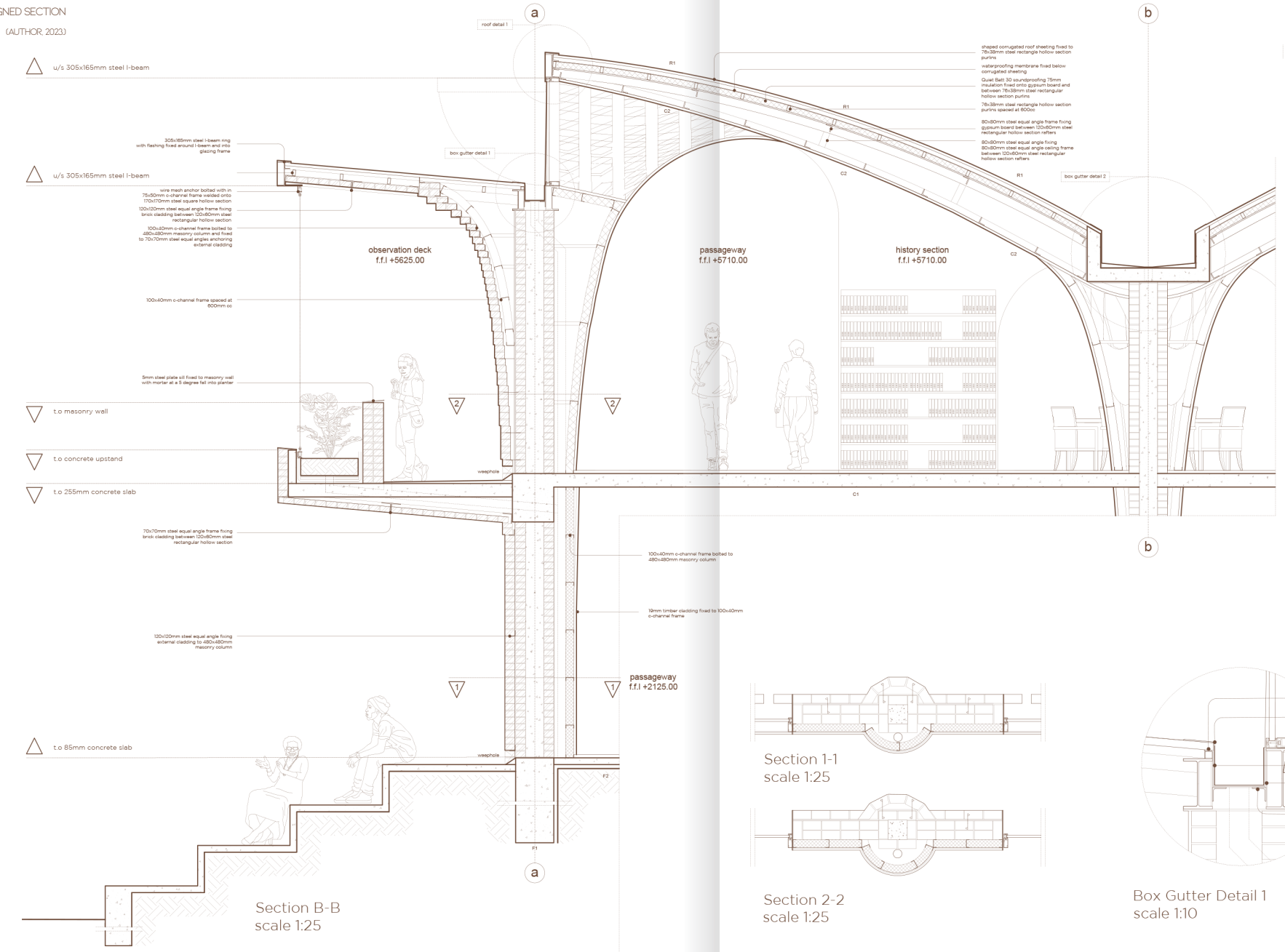
These changes can be observed in the following figures.

FIGURE 8.4
REDESIGNED GROUND PLAN (AUTHOR, 2023)



REDESIGNED: GROUND FLOOR PLAN

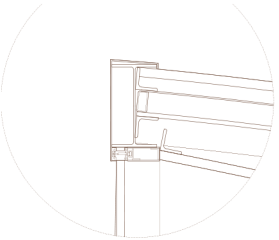
FIGURE 8.5
REDESIGNED SECTION
(AUTHOR, 2023)



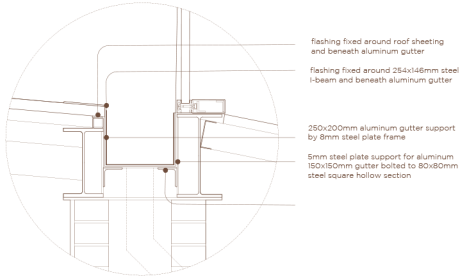
Section B-B
scale 1:25

Section 1-1
scale 1:25

Section 2-2
scale 1:25



Roof Detail
scale 1:10



Box Gutter Detail 1
scale 1:10

DEVELOPING CONCEPT

FIGURE 86
CONCEPT DEVELOPMENT
(AUTHOR, 2023)

During the redesigning process the translation of concept was reapproached. This resulted in the simplification of the tree form to the essence which creates the sheltered experience of being covered but not enclosed.

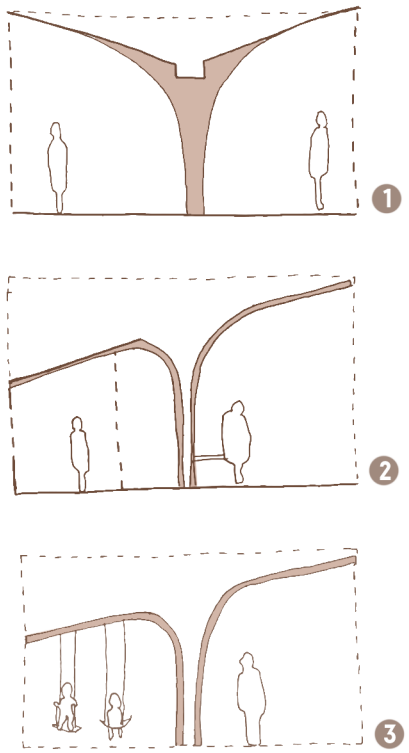
This resulted in the development of a structural focal points with varying uses attached to encourage activity around them. Depending on the environment these focal points are created, the materials are used differently to enhance the function of the space.

Some variations can be seen sketched in the figure across:

1. In the library spaces these focal points are cladded in a timber wrapped feature to enhance the sense of exploration through the library.

2. In the contemplation gardens the steel I-beams are simply left exposed to compliment the humble process of expressing one's feelings and thoughts.

3. The function of the tree is celebrated and directly involved in the play experienced in the children's library with the pergola tree form additionally supporting the swing set.



REDESIGNED: PERIMETER SECTION

PART TWO

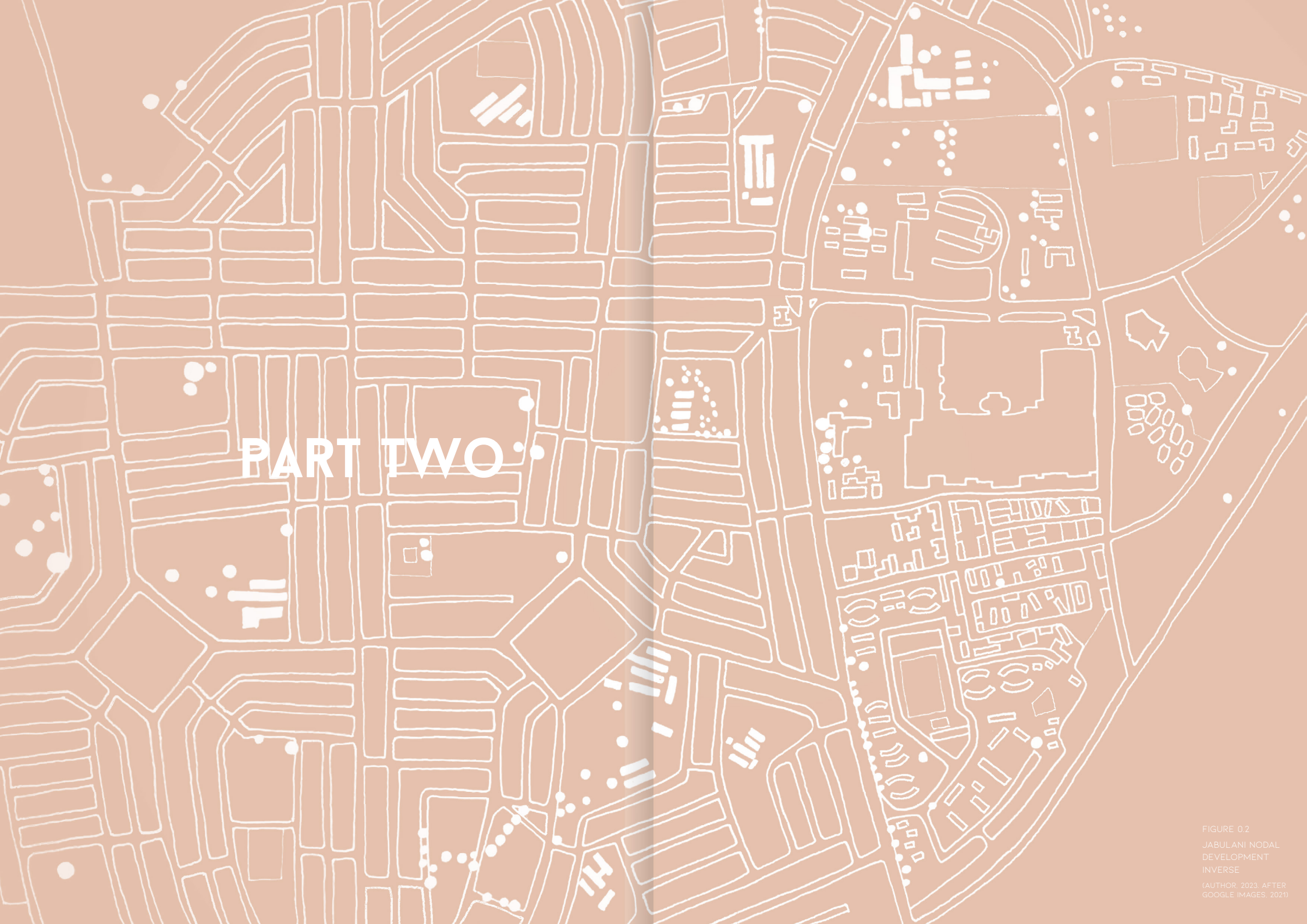


FIGURE 0.2
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR, 2023, AFTER GOOGLE IMAGES, 2021)

Chapter 9

THE GROWTH CENTRE

This chapter reflects the final design intervention, showcasing the application of ideas explored throughout the research report.

FIGURE 60
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR 2023 AFTER GOOGLE IMAGES 2020)

THE JABULANI GROWTH CENTRE



FIGURE 9.1
JABULANI GROWTH CENTRE (AUTHOR, 2023)

PROGRAM PLACEMENT

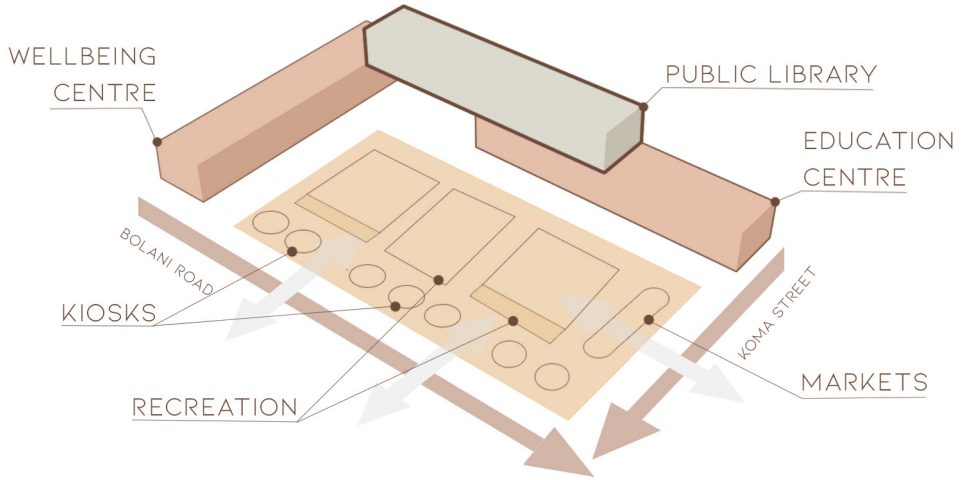
FIGURE 9.2
FORM SKETCH
(AUTHOR, 2023)

The proposed site plan for the Growth Centre revolves around four programs:

PRIMARY ACTIVITIES
- Wellbeing Centre
- Education Centre
- Public Library

SECONDARY ACTIVITIES
- Kiosks and markets
- Recreational Activity
- Social Activity

The primary programs are simplified into three main building forms which connect with each other. These forms house the essential functions of the Growth Centre therefore they are offset from the main Bolani Road to create a buffer between the more private activities while creating a backdrop for the more public activities to be framed.



REDESIGNED: PERIMETER SECTION

FIGURE 9.3
PROPOSED SITE PLAN
(AUTHOR, 2023)

THE WELLBEING CENTRE

Framing the eastern boundary of the site, allows for the Wellness Centre to possess a closer relation to the Bheki Mhlangeni District Hospital for the referal of patients or their family members in need of couselling specialists who can access the building off Bolani Road.

THE EDUCATION CENTRE

Positioning the Education Centre south of the main road allows for greater privacy for the teaching activities within. Users can access the building after being dropped off at the public bustop, at point 15, or students can enter from the private enterance connected to the drop off area, at point 4.

THE PUBLIC LIBRARY

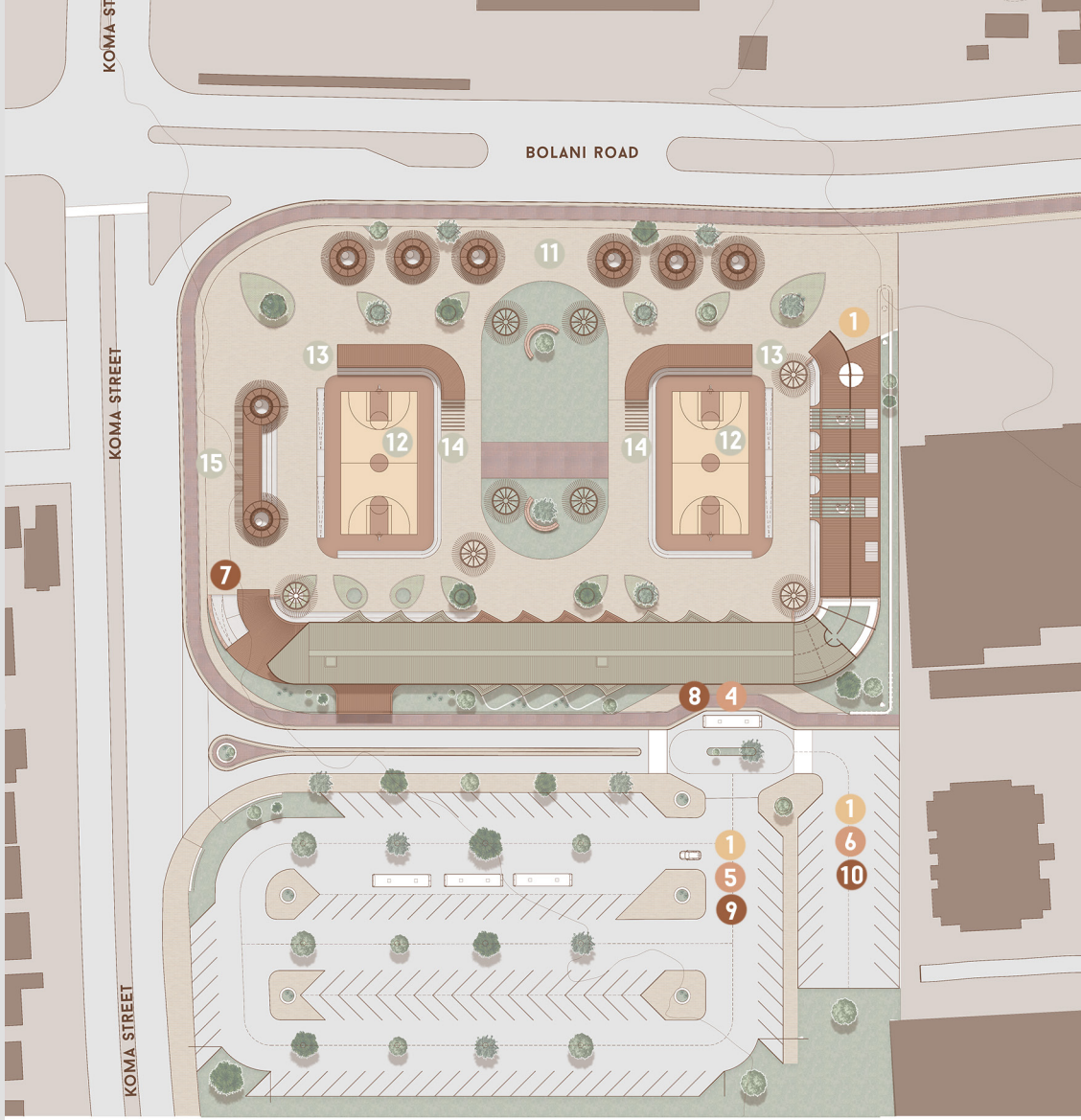
Positioning the library activities above the teaching spaces allows for the computer labs to be more securely protected as well as allowing for the school users in teaching spaces to be granted privacy from the public library.

KIOSKS

The placement along Bolani Road allows for the existing market conditions to be proved access to utilities and for greater shading.

MARKETS

Connected to the bus stop the market space provides a main sheltered covering for vendors who do not rent kiosks to operate.



PROPOSED MASTER PLAN

SCALE 1:1500

WELLBEING CENTRE

1. ENTRANCE
2. PUBLIC PARKING
3. PRIVATE PARKING

EDUCATION CENTRE

4. DROP-OFF ENTRANCE
5. PUBLIC PARKING
6. PRIVATE PARKING

PUBLIC LIBRARY

7. MAIN ENTRANCE
8. CHILDREN'S LIBRARY ENTRANCE
9. PUBLIC PARKING
10. PRIVATE PARKING

PUBLIC SPACE

11. KIOSKS
12. MULTI-PURPOSE COURTS
13. SECURITY OFFICE /PUBLIC BATHROOMS
14. CHANGE ROOMS
15. MARKET & BUS STOP

ON BOLANI ROAD

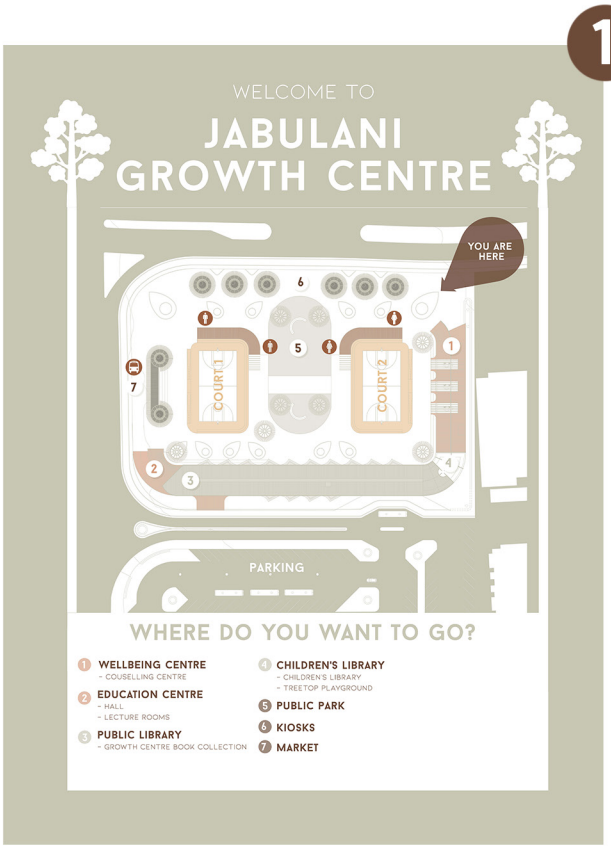
FIGURE 9.4
BOLANI ROAD
(AUTHOR, 2023)

FIGURE 9.5
INFORMATION SIGN
(AUTHOR, 2023)

A pedestrian passerby walking along Bolani Road will find the site boundary animated with the activity of commerce found at the kiosks paralell to the sidewalk.

Gaps between the kiosks reveal the recreational activity and green public spaces beyond.

At both ends of the street natural focal points act as gather and meeting points and display infomation boards highlighting to users the various activities and their locations within the site.





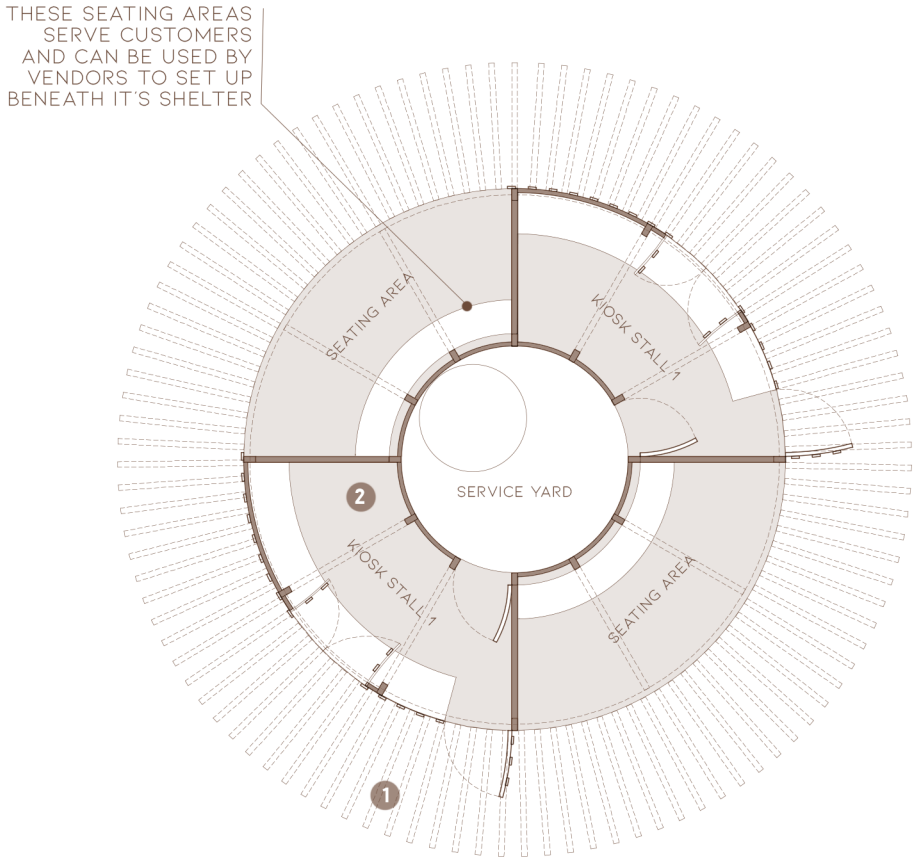
KIOSKS

FIGURE 9.6
KIOSK PLAN
(AUTHOR, 2023)
FIGURE 9.7
KIOSK SECTION
(AUTHOR, 2023)

Along the length of the Bolani Road sidewalk, kiosks are positioned to continue and strengthen the existing culture of commerce which exists with specific intensity on this urban edge.

FUNCTION
Kiosks are to be rented out at a nominal rate, this rate is kept low as the two provided services such as water and electricity are harvested on the site through boreholes and solar panels.

These kiosks are designed with a radial steel structure which allows for program to service in multiple directions. This creates two lanes of commerce, one which faces the street edge and benefits from the traffic of passerbys and another which faces towards the public spaces, therefore benefitting from the activity of the multi-purpose courts.



KIOSK PLAN
SCALE 1:100



SECTION THROUGH KIOSK
SCALE 1:100

FIGURE 9.8
KIOSK RENDERS
(AUTHOR, 2023)

FIGURE 9.9
LONG SECTION
(AUTHOR, 2023)

At the centre of these kiosk structure's a service courtyard stores a water tank, which collects rainwater, and additionally filled by borehole acquired water.

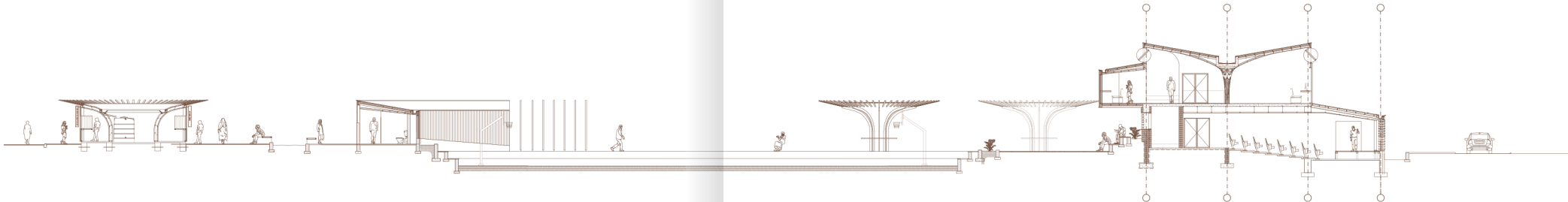
These kiosk spaces are opened and closed everyday by on site security, and the intention with these smaller kiosks is to support the current culture of vendors moving their stock to site everyday. Opened storage allows for crates or boxes of merchanise to be stored below while countertops allow for merchanise to be displayed.

The customers intended to support these kioks include:

- Working class community members who can come to Bolani Road on their commute to work, or between breaks to pick up food from their local vendor and enjoy their meal within one of the public in between spaces within the site.
- Sports players and spectators who need food and refreshments between games.
- Users of the Wellness or Education Centre who need lunch between classes, couselling or studying.







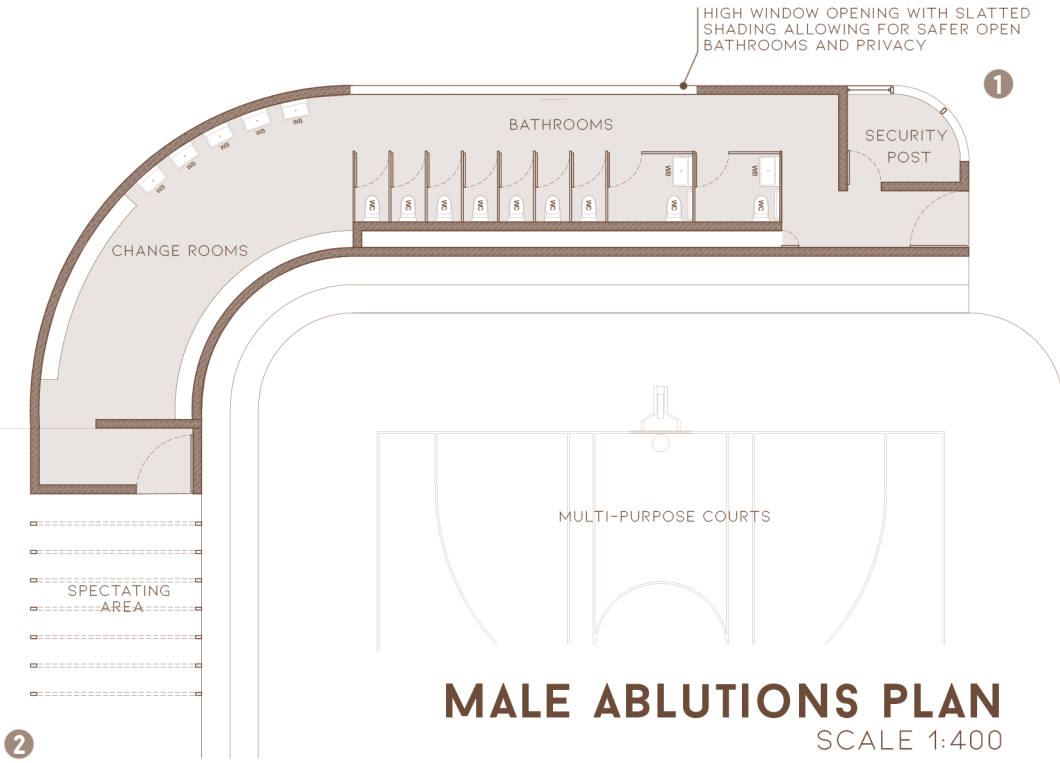
ABLUTIONS & MULTI-PURPOSE COURTS

FIGURE 9.10
ABULTION PLAN
(AUTHOR, 2023)
FIGURE 9.11
ABULTION SECTION
(AUTHOR, 2023)

The multi-purpose courts are designed to be opened and accessible by the public at any point within a week. It also aims to offer these sport facilities to local schools or sports teams to reserve for practises and matches.

FUNCTION

In order to accomodate these local schools or sports teams each court is framed with ablutions and change rooms, with the male ablutions attached to Court 1 and the female ablutions attached to Court 2. This also provides a barrier between the kiosk spaces and the courts to prevent their activities from infringing on the other.



MALE ABLUTIONS PLAN
SCALE 1:400



SECTION THROUGH ABLUTIONS
SCALE 1:100

FIGURE 9.12
ABULTION RENDERS
(AUTHOR, 2023)

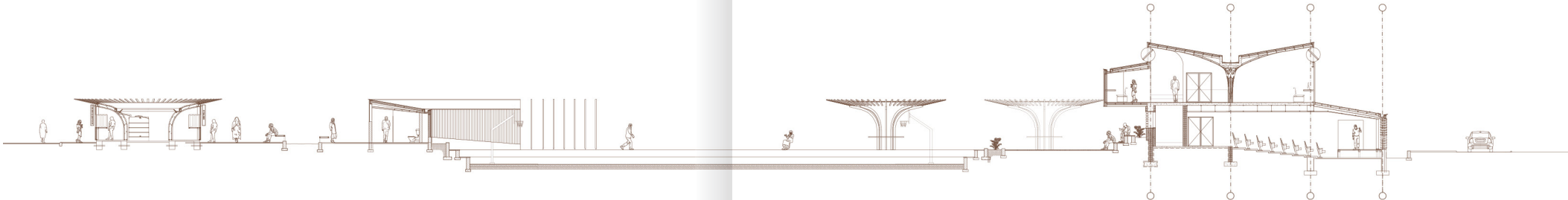
FIGURE 9.13
LONG SECTION
(AUTHOR, 2023)

The two security posts, dedicated to the public spaces are each positioned within these ablution forms. This allows for the Growth Centre's security to be visually connected with the activities of the kiosks as well as remaining in close proximity to maintain awareness and control of the operation of the ablutions.

While the multi-purpose courts are always accessible, the ablutions' gates are controlled by these security posts and are closed and opened in relation to the operating hours of the Growth Centre.







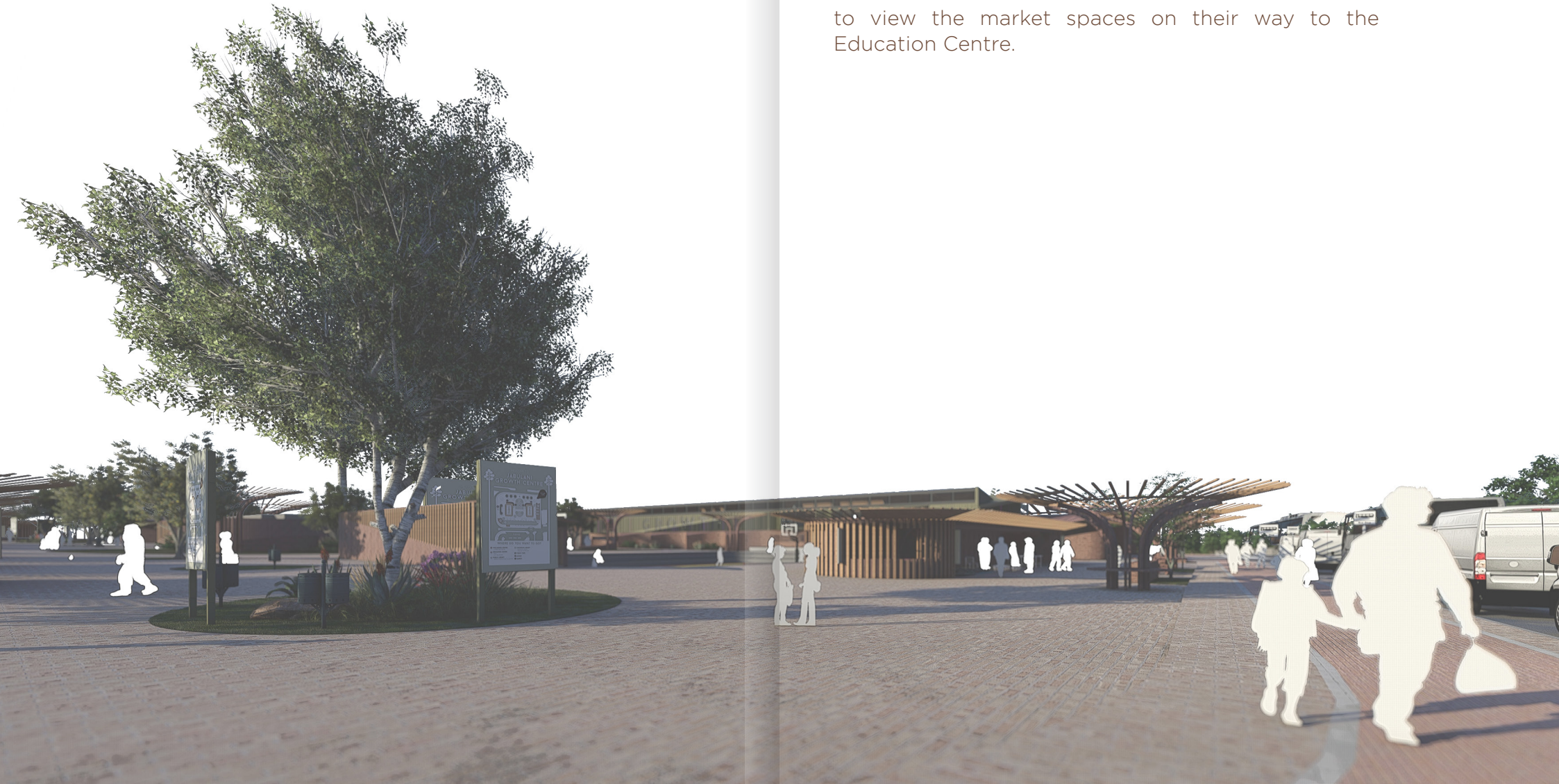
ON KOMA STREET

FIGURE 9.14
KOMA STREET
(AUTHOR, 2023)

A pedestrian passerby walking along Koma Street will find the western site boundary accomodating the vehicular movement currently present on site and market spaces which accomodate non-renting vendors.

Here an increased lane for taxi drop offs is complimented with a bus stop shaded with a combination of natural shading and tree form structures for those waiting for transport.

Pedestrians can walk within the new lane of circulation to view the market spaces on their way to the Education Centre.



MARKET & BUS STOP

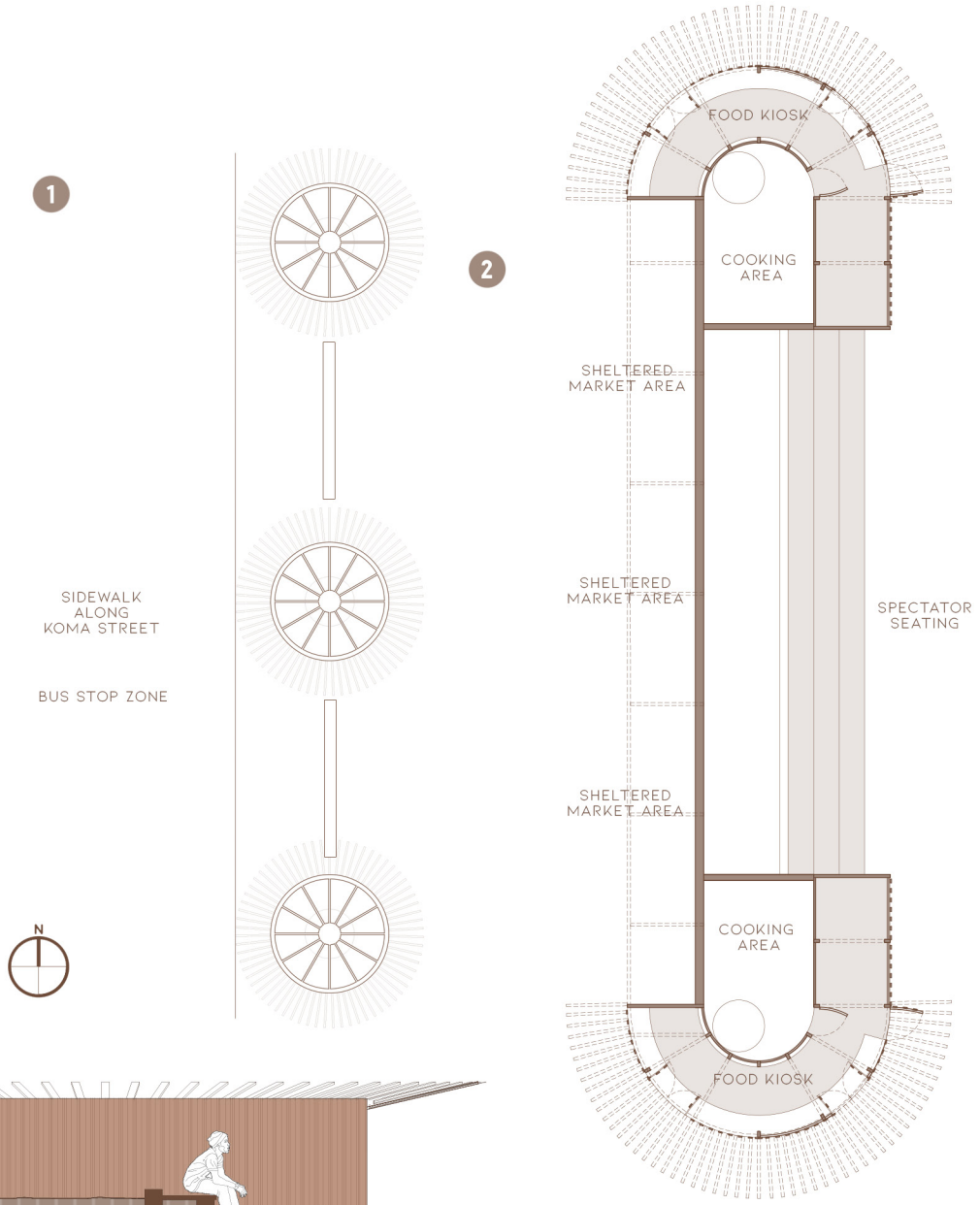
FIGURE 9.15
MARKET PLAN
(AUTHOR, 2023)

FIGURE 9.16
MARKET SECTION
(AUTHOR, 2023)

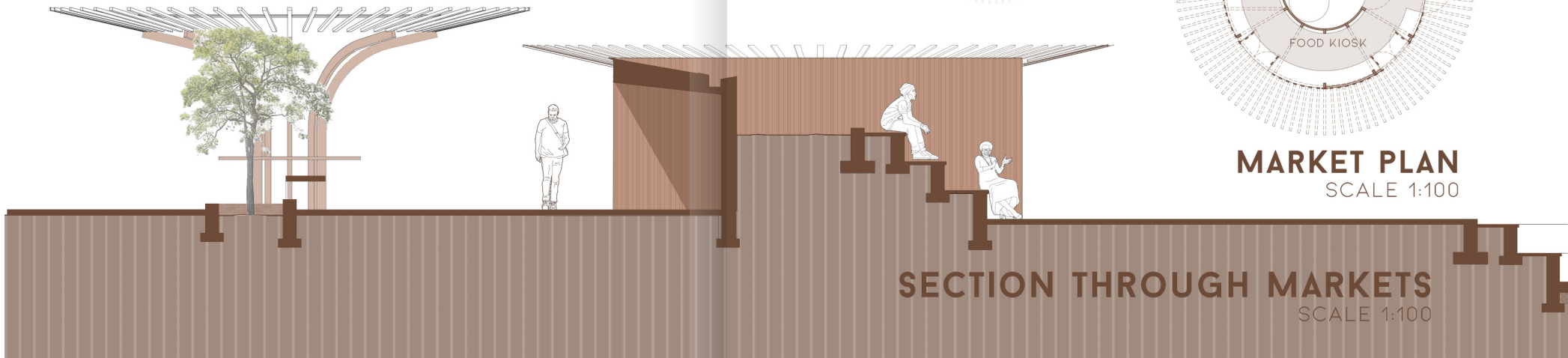
The Market accomodates two larger kiosks which features small courtyards for the outdoor cooking of food goods.

On its east facing side it houses seating for spectators viewing the multi-purpose courts.

Its west facing facade accomodates a shelter for vendors, especially those with large, in size and quantity, goods for sale to set up.



MARKET PLAN
SCALE 1:100



SECTION THROUGH MARKETS
SCALE 1:100

FIGURE 9.17
MARKET RENDERS
(AUTHOR, 2023)

Low walls create an inoffensive barrier between the activities of transport and commerce. Equipped with seating for public transport users to wait for their bus or for vendors to set up on either side of the circulation path created.



INBETWEEN SPACES

While the activities of commerce and recreation may compliment each other, their functions (within such a high traffic site) are aided through the creation of inbetween spaces which aim to prevent activities from infringing on the other while still acting as connecting elements between necessary and optional activities, facilitating the opportunity for resultant social activity.

These spaces aim to spark the chance of weak social links being formed between users with differing goals on site.

FIGURE 9.18
PUBLIC SPACES
(AUTHOR, 2023)

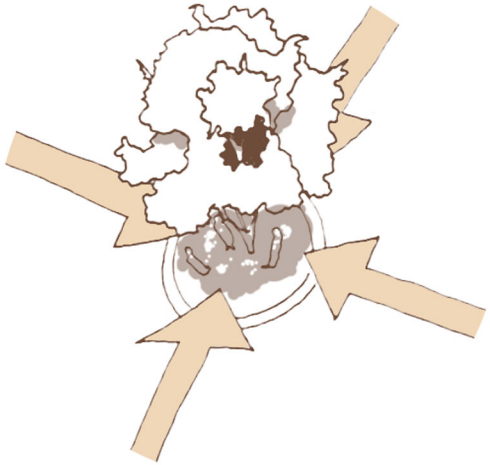
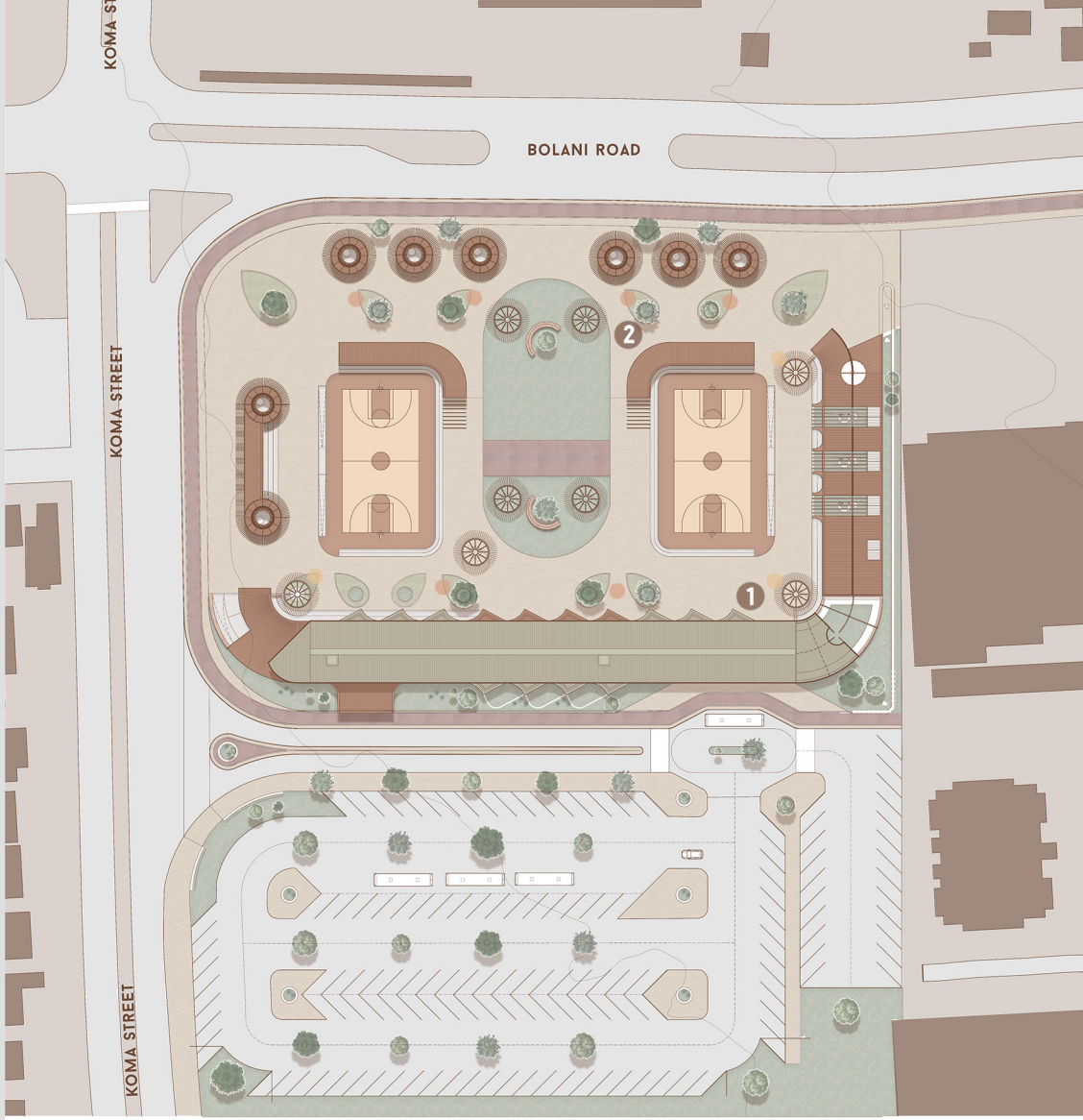


FIGURE 9.19
GATHER POINTS
(AUTHOR, 2023)



SOCIAL SPACES OF THE SITE

SCALE 1:1500



SOCIAL TREES SOCIAL LEAVES

FIGURE 9.20
GATHER POINTS
RENDERS
(AUTHOR, 2023)

Social Trees, which primarily correlate with entrances to the main buildings that wrap around these spaces, aim at encouraging connections with users of the main buildings with the other activities on sight. These partly-enclosed spaces intend to spark the exchange of ideas and differing views.

Social Leaves, positioned around the site, aim to encourage exchange between the recreational space users and the other public spaces which users inhabit for optional activities such as leisure.





WELLBEING CENTRE

FIGURE 9.21
WELLBEING CENTRE
RENDERS
(AUTHOR, 2023.)

Along Bolani Road sits the primary user access for the Growth Centre's Wellbeing Centre.

The creation of the Wellbeing Centre and its inclusion within the central development node, aims to signify the importance of the community's mental wellbeing and intends on tangibly progressing awareness of mental health by becoming an ear to the personal issues experienced by the community.

It is within this component of the Growth Centre where grieving or distressed patients and their family members can be referred to from the Bheki Mhlangeni District Hospital. Here, the Department of Education can aid local teachers and principles in dealing with severe school matters by connecting them with the Growth Centre's therapy and mental health specialist.



FIGURE 9.22
WELLBEING PLANS
(AUTHOR, 2023)

FUNCTION

The program of the Wellbeing Centre transitions from public to more private spaces as you move further away from Bolani Road.

Its public serving entrance, at point 4, provides an access point which connects to the main road. Here users are met with a reception, waiting area and access to a contemplation garden.

The southern head of the form provides the administration access point, connecting with the private parking area. Here the necessary functions of kichenettes, work spaces and private offices can be found, serving administration staff, specialists and NPO staff on site.

Between these two access points the main function, couselling spaces, are positioned.

PUBLIC

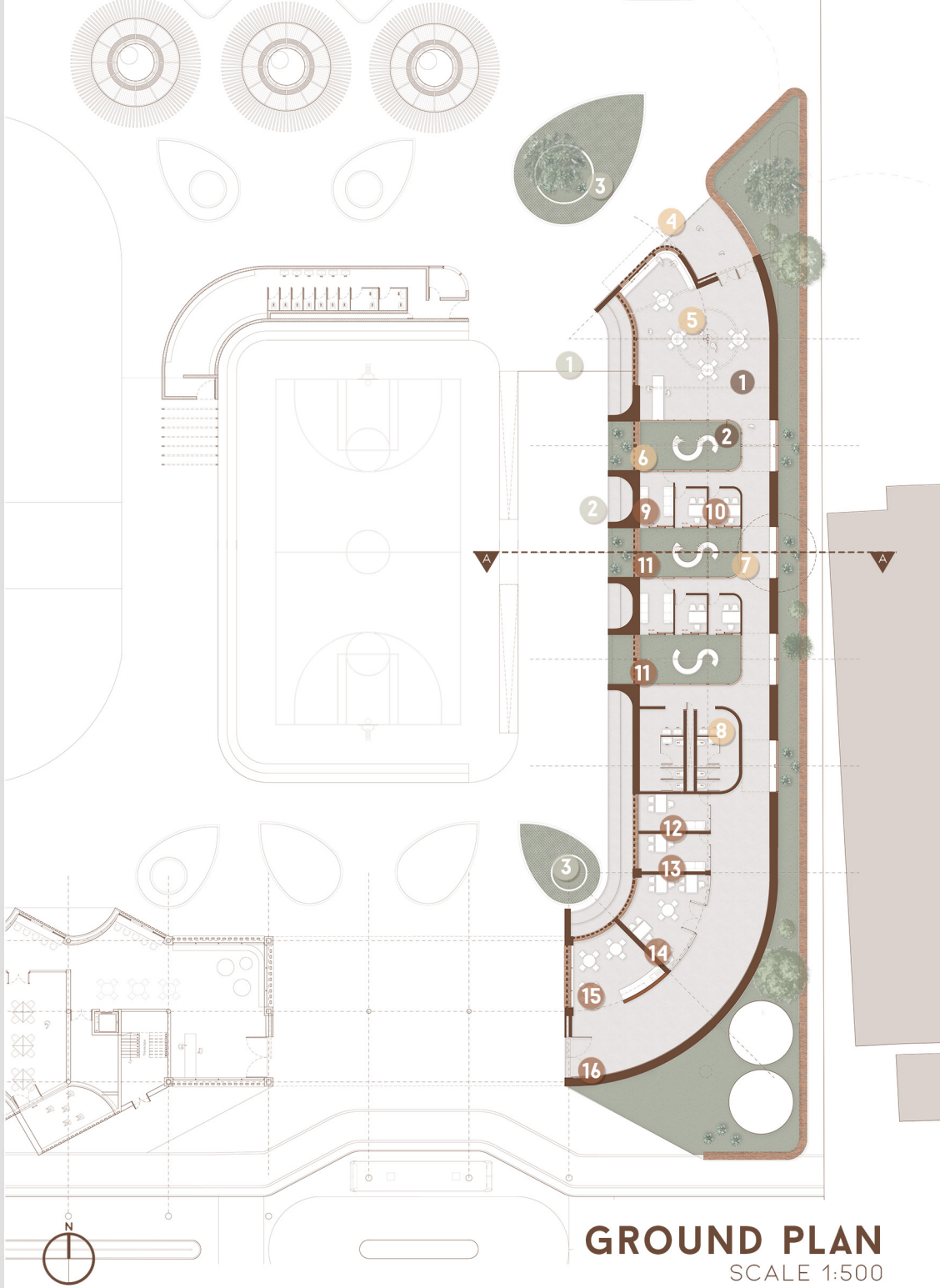
1. DISCUSSION TREE
2. SEATING AREA
3. SOCIAL GARDEN

SEMI-PRIVATE

4 WELLNESS ENTRANCE
5. WAITING AREA/RECEPTION
6. COURTYARD
7. WINDOW SEAT
8. BATHROOMS

PRIVATE

9. GROUP COUNSELLING
10. COUPLE'S COUNSELLING
11. CONTEMPLATION GARDEN
12. DIRECTOR'S OFFICE
13. MANAGER OFFICE.
14. SHARED WORK SPACE
15. KITCHENETTE
16. ADMINISTRATION ENTRANCE



GROUND PLAN
SCALE 1:500

FIGURE 9.23
COUSELLING SPACES
(AUTHOR, 2023)

The couselling spaces accomodated within the design aims at facilitating dynamic approaches to couselling.

Informal couselling
1. The window seating allows for discussions to take place in a more public environment. This allows for discussion to feel less threatening for apprehensive individuals.

2. Contemplation gardens allow for conversations to gain more privacy while remaining more casual in the open, garden environment.

Formal couselling
3. Group counselling rooms allow for multiple people to be involved in a consultation.

4. Personal counselling rooms are more intimate spaces ideal for couples counselling or one-on-one appointments.

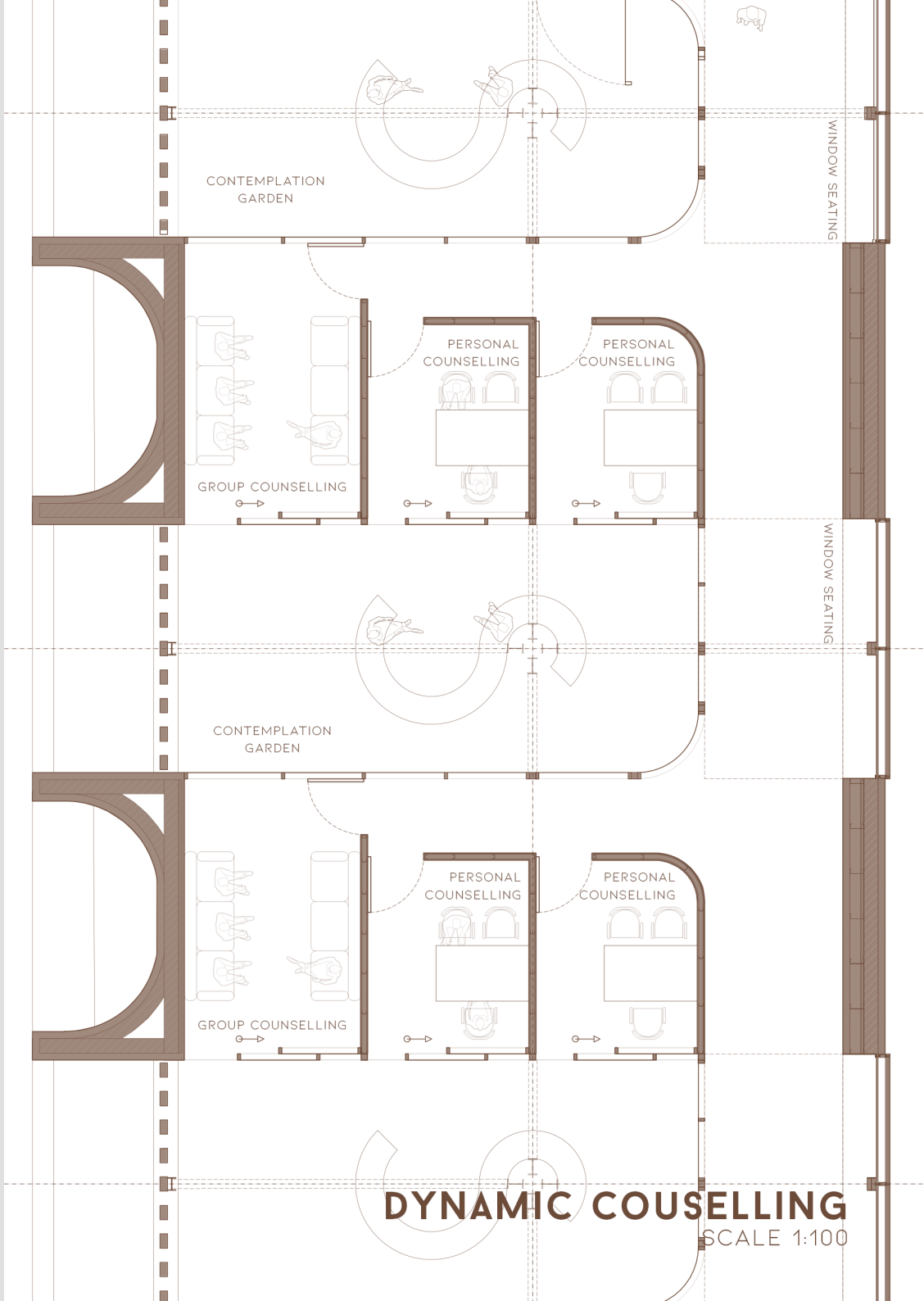


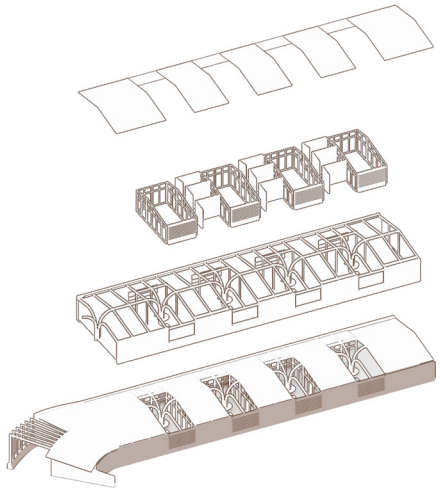
FIGURE 9.24
EXPLODED AXON
(AUTHOR, 2023)

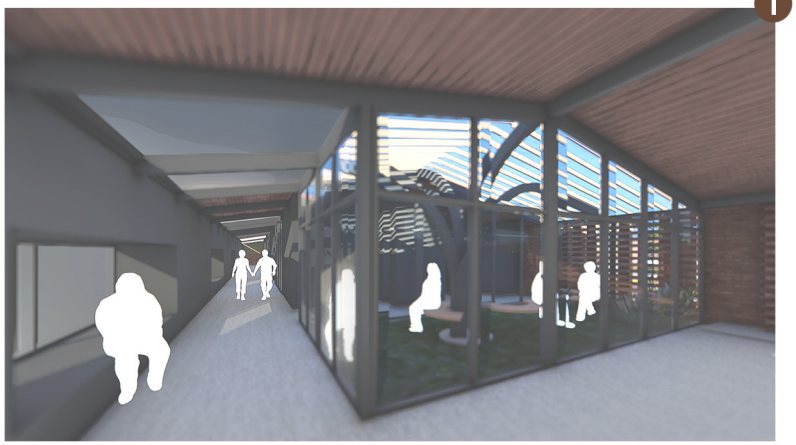
FIGURE 9.25
CONTEMPLATION
GARDEN RENDERS
(AUTHOR, 2023)

DESIGN

The significance of resolving conflicts or pursuing individual enlightment is respected through the expression of structural design.

Following the concept of sharing knowledge under the tree, the primary structural columns, fabricated out of bent steel I-beams, articulate within the contemplation gardens. The counselling spaces are positioned between these structural elements, opening and looking into the garden spaces adjacent.





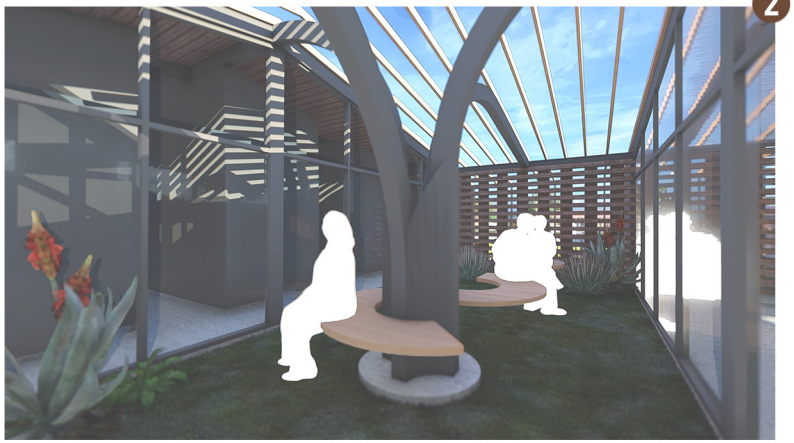
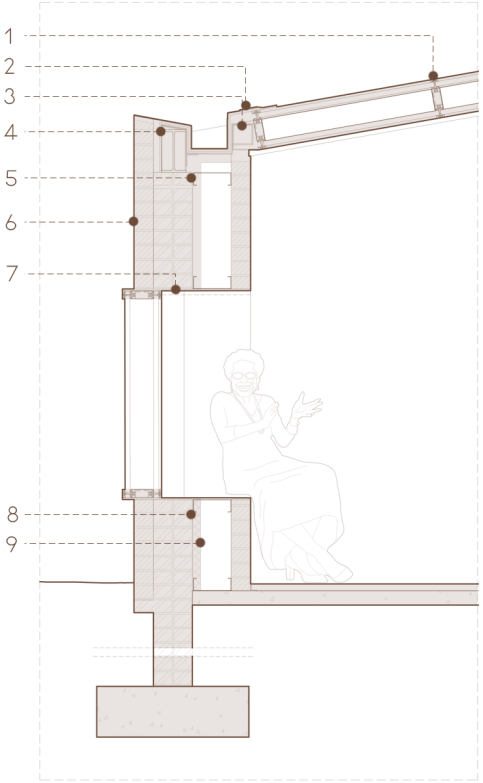


FIGURE 9.26
WELLBEING SECTION
(AUTHOR, 2023)

FIGURE 9.27
WELLBEING DETAIL
(AUTHOR, 2023)

These gardens are designed to reimagine the traditional approach to therapy space and allow for discussions to happen within a green and more intimate space, as the structure encloses the space with a permiable and breathable timber slatted pergola.

The window boxes, along the main circulation passage, allow for informal and open discussions and consultations to happen within more semi-private spaces.



1. ALUMINIUM MULLION
2.FLASHING
3. 120X120MM SQUARE HOLLOW SECTION
4.2544X133MM STEEL I-BEAM
5. 225X75MM STEEL LIP CHANNEL
6. FACE BRICK
7. 8MM STEEL PLATE
BOX
8. WATER PROOF MEMBRANE
9. INSULTION

WINDOW SEATING
SCALE 1:50



SECTION A-A
SCALE 1:100

EDUCATION CENTRE

FIGURE 9.28
EDUCATION CENTRE
(AUTHOR, 2023)

Accessed by pedestrains on Koma Street, the Growth Centre's Education Centre aims to provide a centralised facility where both the surrounding public and schools can benefit from access to educational resources and specialists.

It is within this component of the project that a community member can attend public talks from guest speakers, schools can bring their children to learn computer skills and receive lectures from specialists or where teaching staff from several schools can gather for training courses held by the READ Educational Trust.

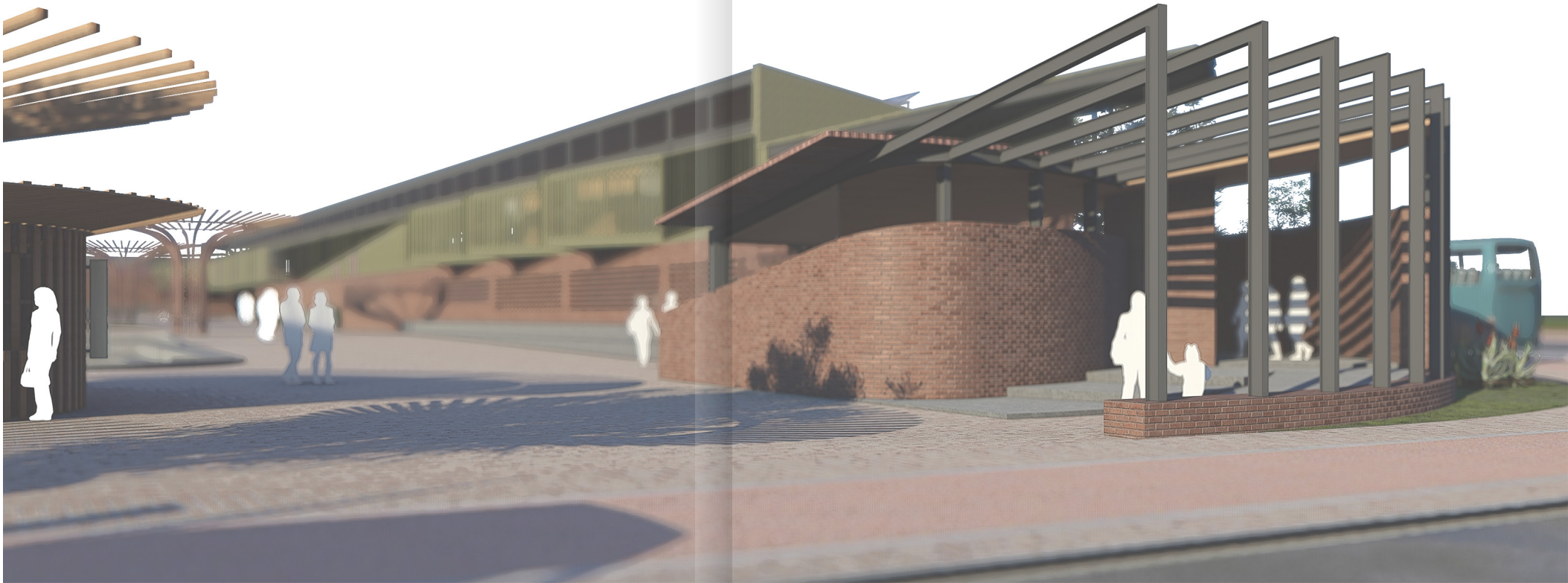


FIGURE 9.29
EDUCATION CENTRE
PLAN
(AUTHOR, 2023)

FUNCTION

The Education Centre's main entrance is accessed from Koma Street, at point 1, this caters to the pedestrain user or users who have to dropped off at the bus stop. These users can attend more public activities such talks held in the amphitheater or access the public library above.

The student entrance and reception, at point 12, allows for classes of students to safetly be dropped off at the drop off zone away from the main roads, at point 5.

PUBLIC

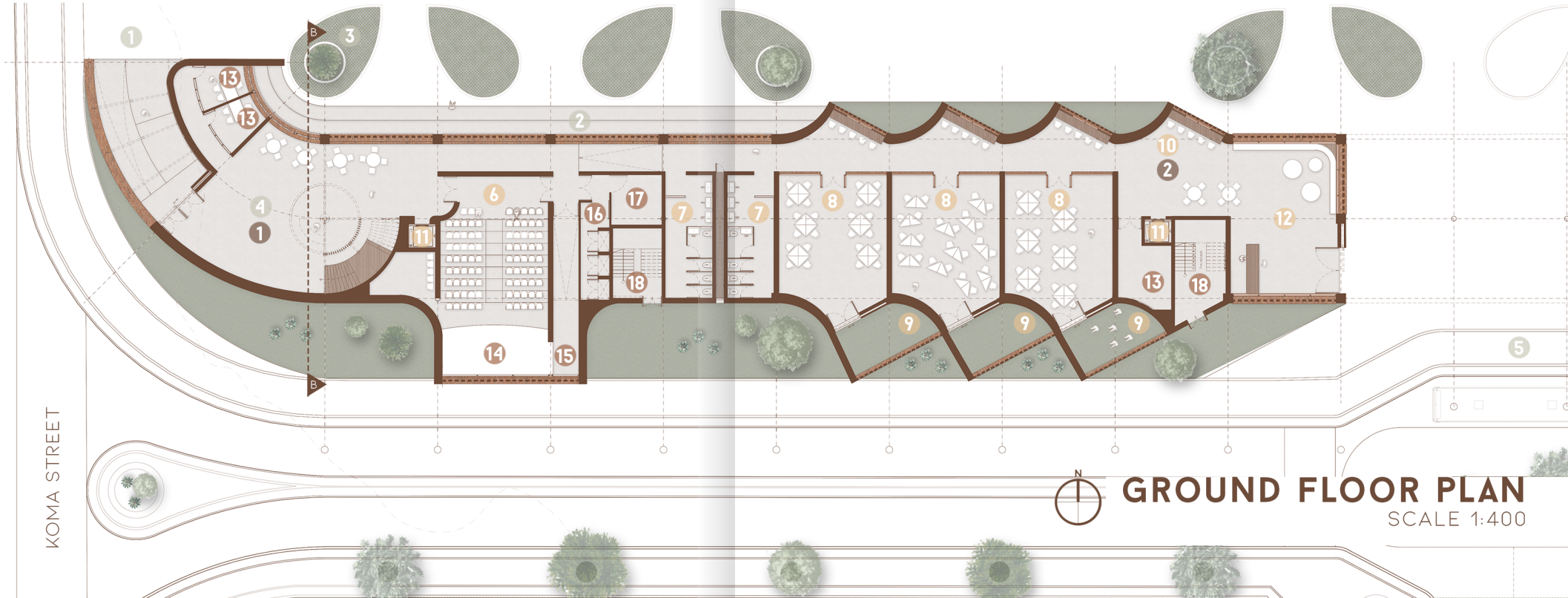
1. EDUCATION CENTRE ENTRANCE
2. SEATING AREA
3. SOCIAL TREE
4. RECEPTION
5. DROP OFF ZONE

SEMI-PRIVATE

6. AMPHITHEATER
7. BATHROOMS
8. TEACHING ROOM
9. TEACHING COURTYARD
10. TUTOR TABLES
11. LIFTS
12. RECEPTION

PRIVATE

13. ADMIN OFFICES
14. STAGE
15. BACK STAGE
16. DUCT ROOM
17. SERVICE STORAGE ROOM
18. FIRE ESCAPE STAIRCASE

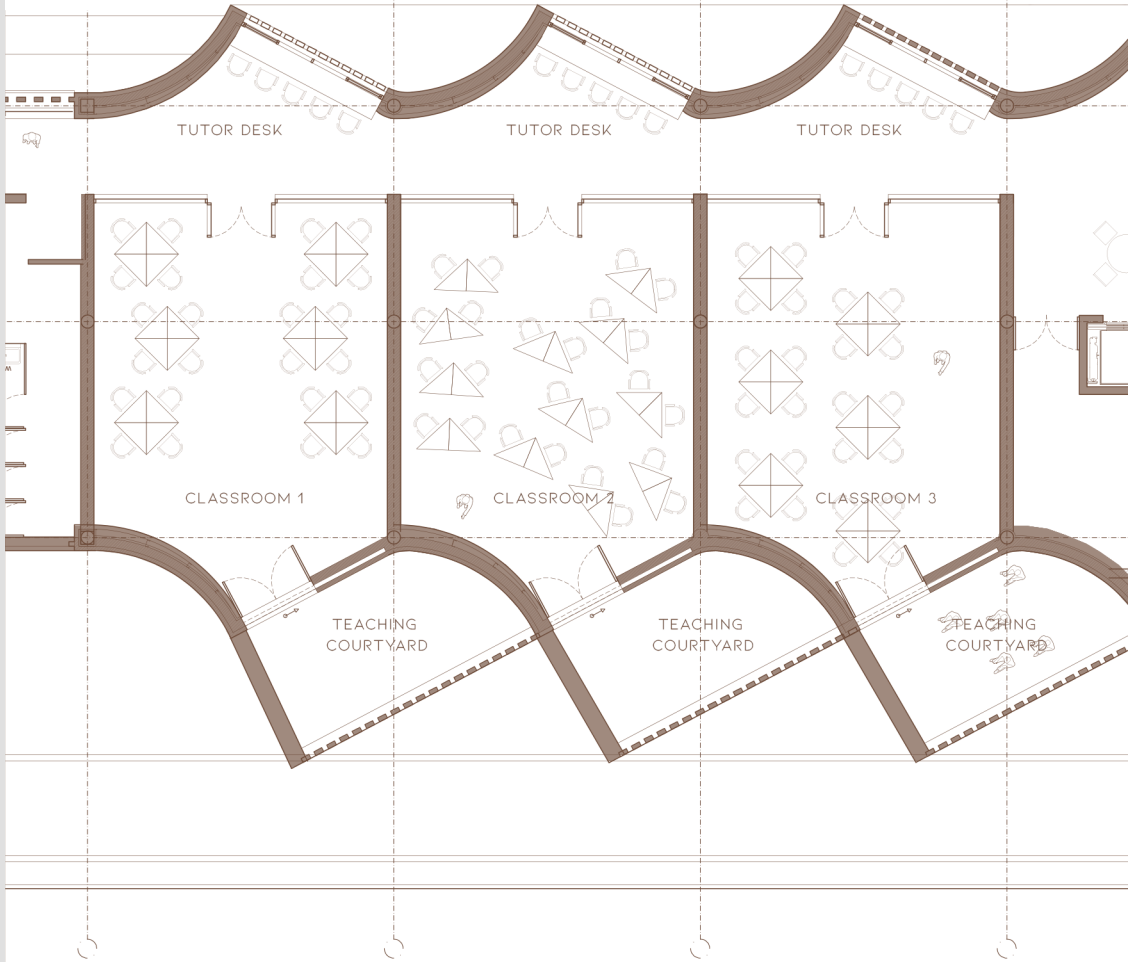


GROUND FLOOR PLAN
SCALE 1:400

FIGURE 9.30
TEACHING SPACES
(AUTHOR, 2023)

Tutor desks along the northern facade of the building, angled to avoid direct sunlight, facilitate spaces where tutor sessions can be held. These open spaces, connected to the main circulation axis of the centre allows for the lessons to be monitored by other users of the building and ensures greater surveillence and protection for the student users. Students can walk to these lessons from school or be dropped off by their guardians who can utilise another aspect of the centre while they wait.

The three main teaching spaces are designed to cater dynamic teaching styles. Triangular desks allow for arrangements to be adapted to the nature of discussion taking place, students can gather around their teacher, face each other to all engage in discourse or face towards a projection for a presentation. Alternatively the desks can be abandoned and teachings can take place within the connected courtyards where the free environment aims to encourage more a more liberated learning atmosphere.



DYNAMIC TEACHING

SCALE 1:100

FIGURE 9.31
EDUCATION CENTRE
RENDERS
(AUTHOR, 2023)

DESIGN

1. In the public reception of the education centre bent I-beams form a structural tree and focal point for the information desk below. A skylight above allows for light to enter the foyer.

2. The curved walls of the tutor desks catches the morning light through perforated bricK. These curves are used to mimmick thick trunks, rows of trees and create an exciting space to learn within.





FIGURE 9.33
EDUCATION CENTRE
SECTION
(AUTHOR, 2023)



PUBLIC LIBRARY

FIGURE 9.34
PUBLIC LIBRARY PLAN
(AUTHOR, 2023)

The library is intended to address the loss of libraries within local schools and lack of spaces to access literature and computer labs within the area.

FUNCTION

A staircase and lift at the ground floor reception provides a point of access to the public. While the children's library on the eastern end of the building is accessed through the student entrance on the ground floor, providing an spacial buffer for its private functioning.

PUBLIC

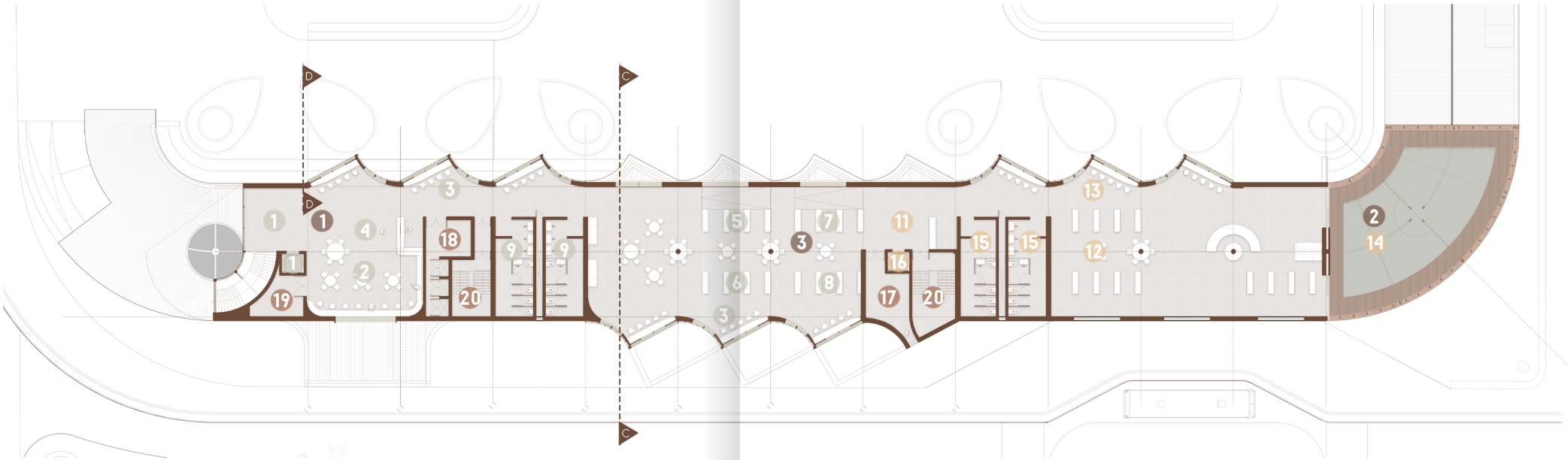
1. LIBRARY ENTRANCE
2. COMPUTER WORK STATIONS
3. STUDY SPACES
4. RECEPTION
5. LOCAL LITERATURE
6. HISTORY & PHILOSOPHY
7. NATURAL SCIENCE
8. MODERN CLASSICS
9. BATHROOMS
10. LIFT

SEMI-PRIVATE

11. CHILDREN'S LIBRARY RECEPTION
12. CHILDREN'S LITERATURE
13. TEACHING STATIONS
14. ROOFTOP PLAY-AREA
15. CHILDREN'S BATHROOMS
16. LIFT

PRIVATE

17. ADMIN OFFICES
18. DUCT ROOM
19. SERVICE STORAGE ROOM
20. FIRE ESCAPE STAIRCASE



FIRST FLOOR PLAN
SCALE 1:500

FIGURE 9.38
LIBRARY RENDERS
(AUTHOR, 2023)

The library aims to serve all ages which seek information and enlightenment within the area. Therefore, the two heads of the form are used to appeal to the varying natures through which different ages learn.

At point 1, the reception accessed by the public is connected with computer workstations. Allowing for community members to explore other mediums of information and where usage can easily be monitored by administration.

At point 2, connected to the reception of the children's library; a rooftop playground allows for children to take part in after school care which extends beyond books and incorporates learning through play in a less traditional and more open environment.



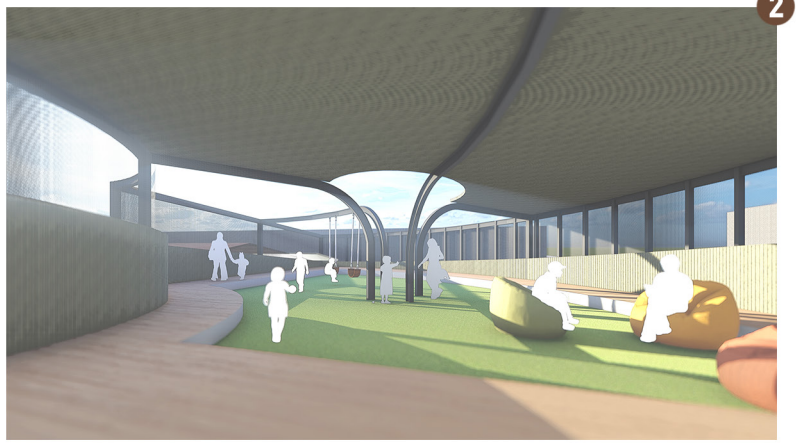


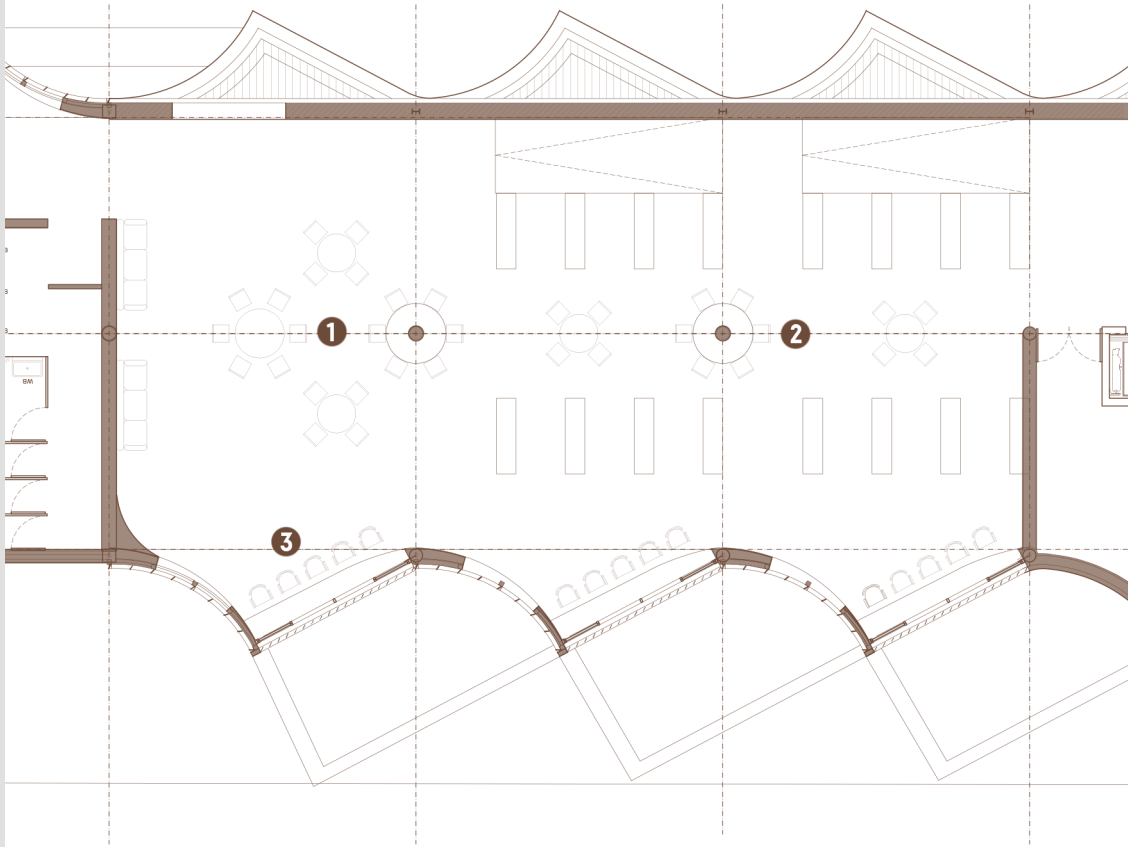
FIGURE 9.35
LEARNING SPACES
(AUTHOR, 2023)

Between these two receptions, study spaces within the library accomodate different approaches to exploring information for its users.

1. Open areas allow for groups to learn together around tables, encouraging sharing information and collaboration. Here study groups, book clubs and other gatherings around information can take place.

2. More intimate studying spaces can be found closer to the tree columns with tables located under the low ceiling.

3. Computer stations allow for individuals to access information through the digital medium and expand their exploration on content.



DYNAMIC LEARNING
SCALE 1:200



FIGURE 9.39
LIBRARY RENDERS
(AUTHOR, 2023)

MATERIALITY

FIGURE 9.40
EXTERIOR RENDERS
(AUTHOR, 2023)

FIGURE 9.41
ELEVATION (AUTHOR, 2023)

Two main materials dominate the facades of the Growth Centre; brick and steel.

BRICK

The use of brick was determined during the assessment of schools within the area, and intends to celebrate the existing language of educational spaces. Brick is used on the ground floor to emphasise the robust connection to the ground, with perforated brick work allowing for windows to receive shading as well as protection from security breaches.

STEEL

The first floor uses steel to break away from the dense nature of the brick level below. Here open slats and window openings allow for the facade to be porous, letting light within the spaces, visual connections with the forecourt to take place and for the essence of the tree canopy of leaves to be evoked.



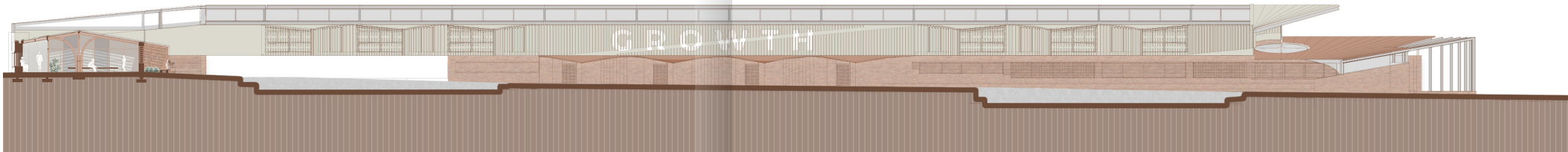


FIGURE 9.42
EXTERIOR RENDER
(AUTHOR, 2023)

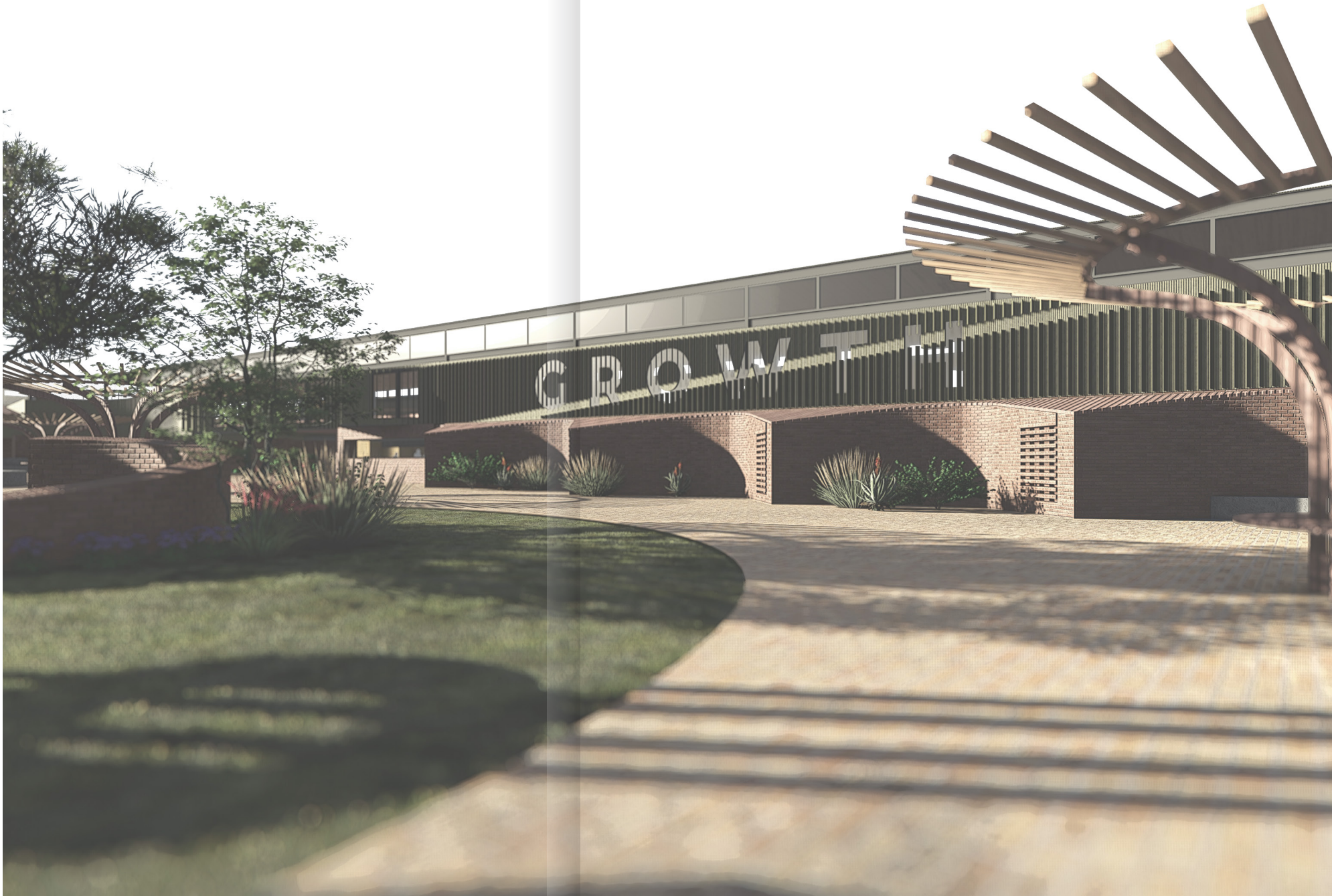


FIGURE 9.36
LIBRARY SECTION
(AUTHOR, 2023)

DESIGN

The library form of the building is designed to be less dense visually, with regards to materiality, than its connecting ground floor form. High ceilings and windows along with slatted openings on its facade allow for light to pour into the first floor and for air to passively flow out.

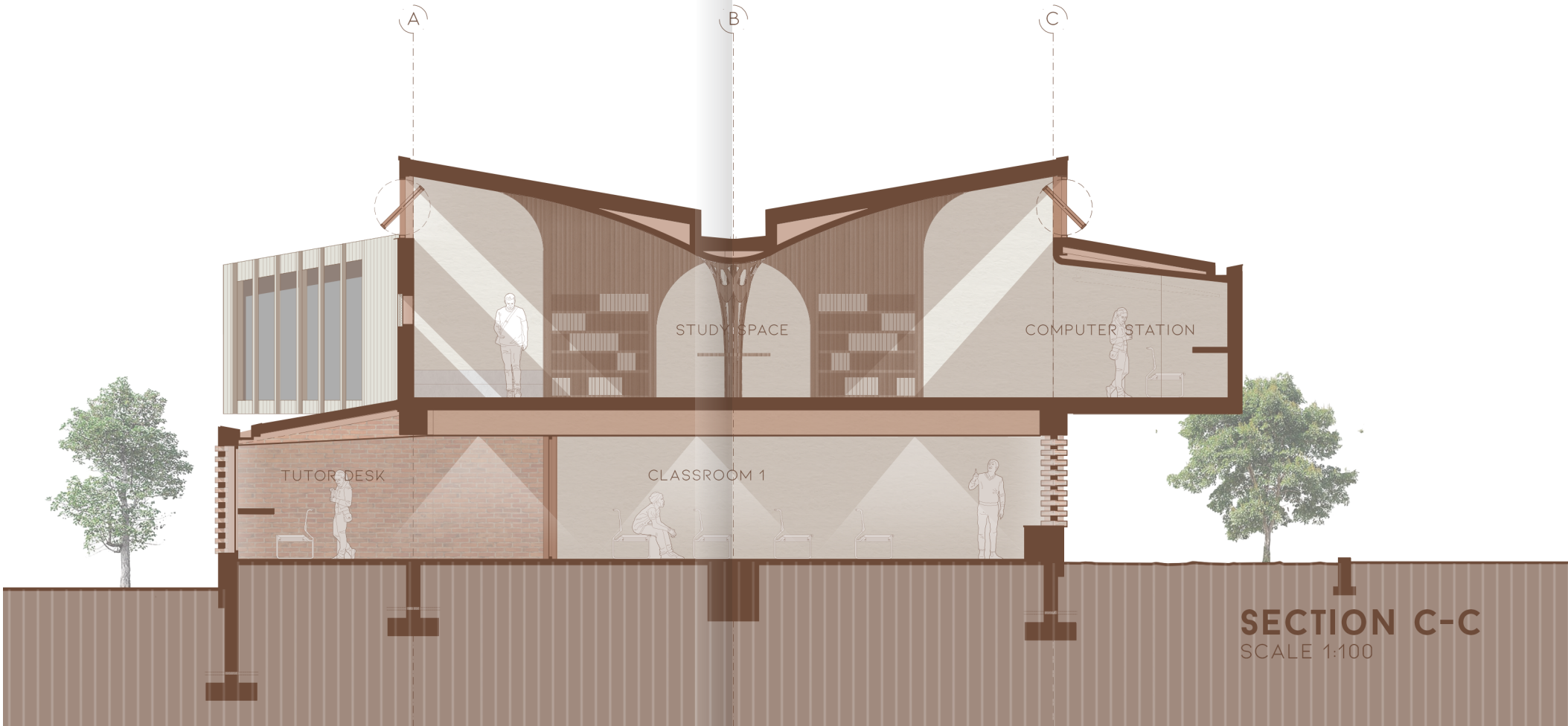


FIGURE 9.37
LIBRARY PERIM SECTION
(AUTHOR, 2023)

The exterior envelope of the first floor is comprised of steel structural components and corrugated sheet metal cladding.

This contrasts with the thick walls and perforated brick which conceal the openings which take place on the ground floor.

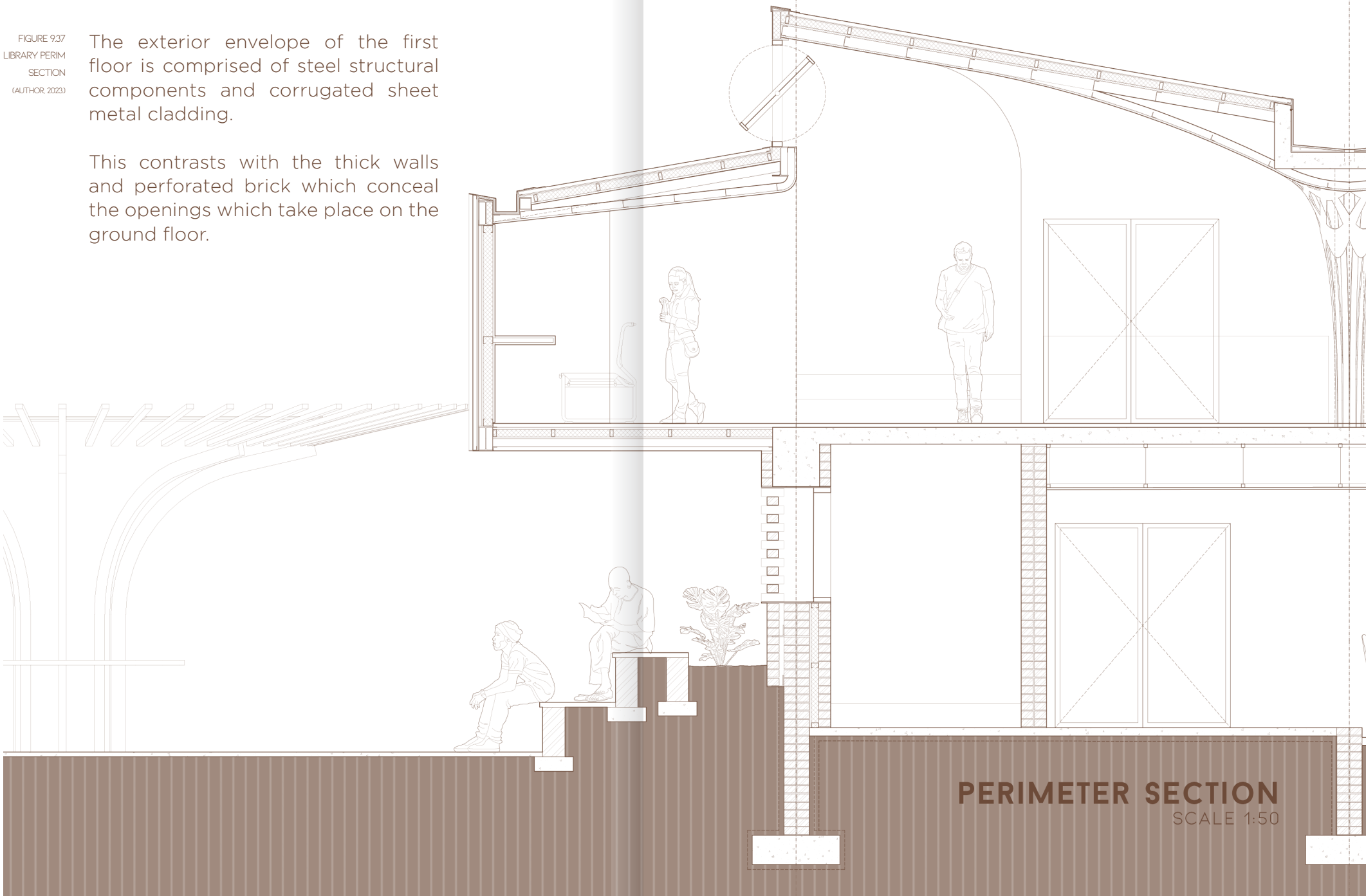


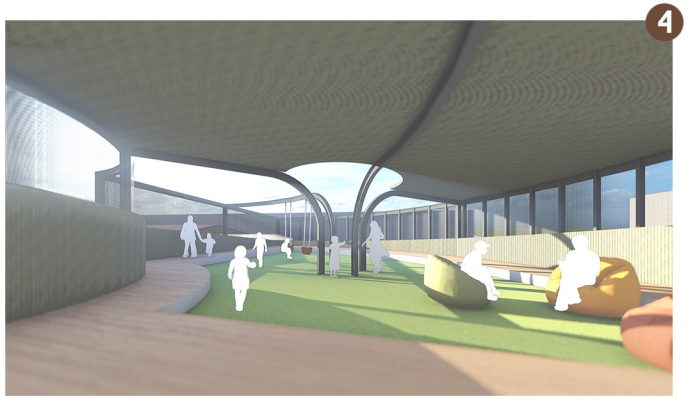
FIGURE 9.38
LONG SECTION
(AUTHOR, 2023)

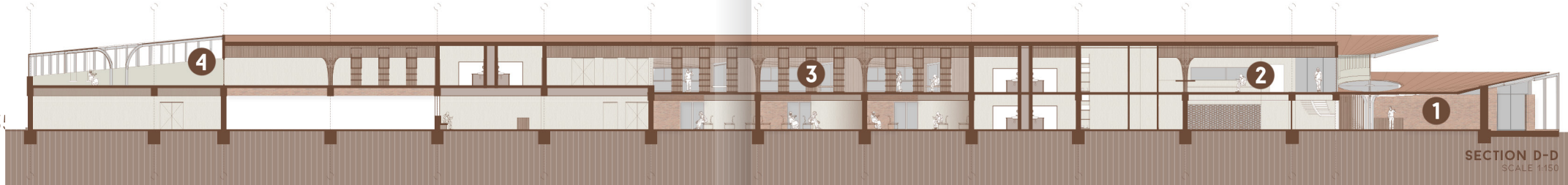
FIGURE 9.39
LONG SECTION
RENDERS
(AUTHOR, 2023)











SECTION D-D
SCALE 1:150

Chapter 10

REFLECTIONS

This brief chapter reflects on the research report and final design intervention, outlining the gaps and room for improvement.

FIGURE 10.0
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR 2023 AFTER GOOGLE IMAGES 2020)

FINAL THOUGHTS

RESEARCH

It is my belief that the goals of any community centred research demands for a deep and extensive dive into several threads of investigation which cannot be pre-conceived and must be explored until uncovered.

Given the limiting timeline for a report such as this, this research report merely scratches the surface. The greatest memories and lessons learned during this process were gaining through humble conversations with the residents of Jabulani. Had time been a greater resource during this process, one can assume that the distance that both the intervention and the personal understanding of approaching infrastructure within the context of Jabulani could've reached greater lengths.

INTERVENTION

The intervention serves are a foundational application of the understanding of equitible infrastructure explored during the research report, unconventional ly connecting differing programs and opening as much of the site for public gain.

However, given that the nature of equitible design is highly catered to a specific location the intervention itself can not be applied into any location without becoming irrelevant and instead it is the research component which is intended for this use.

The application of the research component within an area aims to highlight the most relevant point of execution for community development within an area, therefore setting up the groundwork for a unique intervention to materialise.

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FIGURE 60
JABULANI NODAL DEVELOPMENT INVERSE
(AUTHOR 2023 AFTER GOOGLE IMAGES 2020)

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Chapter 9

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

SCHOOL of ARCHITECTURE PLANNING

04 August 2023

Faculty of Engineering and the Built Environment:

Ethics clearance letter:

Dear David Pillay

Student number (1665494), this letter confirms that your ethics application has been cleared. Your clearance/protocol number: SOAP010/04/2023

Yours sincerely

Lerato Nkosi

School of Architecture and Planning, Faculty of Engineering and the Built Environment, John Moffat Building, Wits, 2050, South Africa
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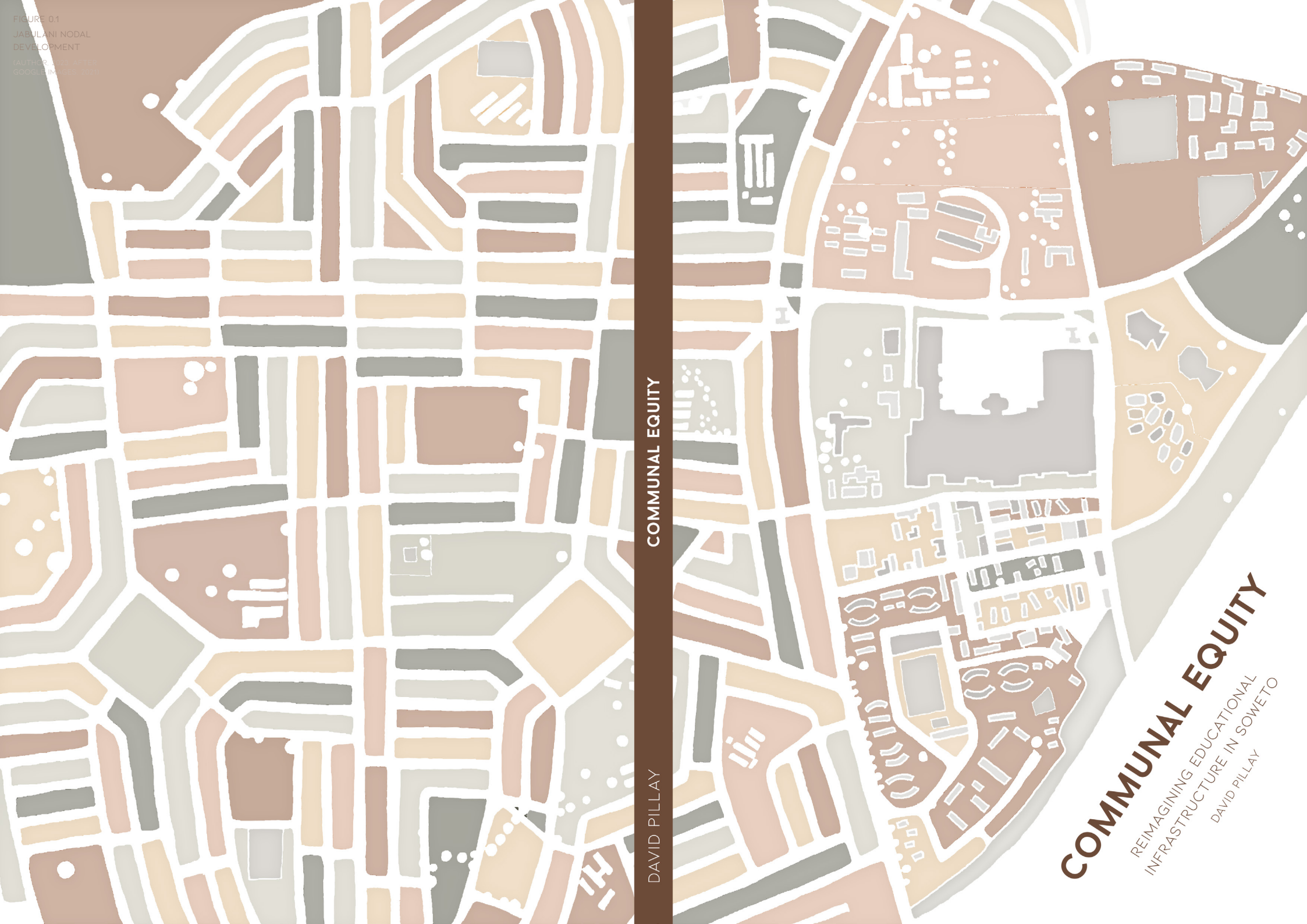
FIGURE 0.1
JABULANI NODAL DEVELOPMENT
(AUTHOR, 2021, AFTER GOOGLE IMAGES, 2021)



COMMUNAL EQUITY

DAVID PILLAY

COMMUNAL EQUITY

REIMAGINING EDUCATIONAL INFRASTRUCTURE IN SOWETO

DAVID PILLAY