In accordance with Regulation 4[e] of the General Regulations [G.57] for dissertations and theses, I declare that this thesis, which I hereby submit for the degree Master of Architecture [Professional] at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my thesis has already been, or is currently being, submitted for any degree, diploma or other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and the list of references.

Tuliza Sindi

FIGURES IN THE ROOM

Robot City

Author:
Tuliza Sindi

Study Leader:
Rudolf van Rensburg

Course Coordinator:
Arthur Barker

Submitted in partial fulfilment of the requirements for the degree of Magister in Architecture, MArch(Prof), the Faculty of Engineering, Built Environment and Information Technology, University of Pretoria.

Pretoria
2013

PROJECT SUMMARY

Program:
Urban Primary School

Site Description:
Public Works Department Workshops in Minnaar street, to the south of African Window, the Cultural History Museum, to the East of the Post Office and the West of the New Fire station. It is located on Minnaar street's cul-de-sac.

Address:
116 Minnaar street, Pretoria CBD, Gauteng, South Africa

GPS Coordinates:
25°45'16.52"S 28°11'06.28"E

Research Field:
HSU (Human Settlements and Urbanism)

Client:
Founders Community School, only the Primary School section

Keywords:
Adult space (urban realm), child space, confinement, surveillance, incremental city, urban school

Architectural Theoretical Premise:
Young children are confined in child spaces rather than surveyed in adult spaces. This limits their natural freedom and undermines their capable ability to make informed decisions about their environments and how to engage with it.

Architectural Approach:
The enablement of a co-habitation of adult space by both children and adults.

I dedicate this to the part of me that might never understand, but isn't afraid of that scenario anymore.

6 April 2013

MANIFESTO

The practice of architecture is synonymous with the practice of thinking.

Architecture is the acknowledgement that all understanding is at the mercy of interrogation. It interrupts our fundaments as it entertains us with the possibility that there is always more to every story. It then offers itself up as the vehicle that grants us the capacity to pursue it.

It does not and cannot stop at perception; it must become real. It cannot remain a static surreal painting or an incredible theoretical premise. If so, it exits the realm of architecture in order to occupy another discipline.

Architecture functions in the realm that brings things to life. It is for that reason that it has - only if open to it - the potential to establish in all of us the ability to come to life beyond just living.

It makes me, as I make it: it is my greatest critic and companion.

‘If cities are not meant for children, they are not meant for citizens either.’

Aldo van Eyck

ABSTRACT

An oppressor-oppressed nature exists between adults and children. Children are not considered as individuals in the planning of cities but are rather treated as universal, homogenous beings. Their rights as competent social actors are confiscated until they are deemed competent according to adult standards. Unable to represent themselves, they are given sterile child spaces by adults, who are too conditioned to be able to appropriately represent them. Paranoia for child safety results in confined, rather than alert and surveyed spaces with carefully treated edges.

Current child spaces are made to condition children with the rules that will result in their ability to be adequate and well functioning adults. They are treated as pre-adults, rather than as children - beings already adequate as themselves and not tending towards adequacy.

The dissertation will deal with the dissolving of boundaries and control brought on by confined child spaces in the form of an inner-city primary school. The Museum Precinct part of the city presents itself as rich adult-biased and educational environment in which to house children.

WORD OF THANKS

To God: A love like Yours cannot be given the undeserving fate of being quantified in words. I will simply continue to live in awe of it.

To my parents: I am humbled by you. Your overwhelming strength and love have given me the courage to live an unashamedly honest existence.

To Rudolf: Your patience and effortless ability to always inspire eludes me. Thank you for reminding me that this is about me. To ask of one to trust themselves wholly and providing the right circumstances in order for that to be the only possibility is the best learning I have ever received. Again, thank you.

To my brothers: When words fail me, remember how much I look up to all of you; remember how much I love you.

To Arthur: Thank you for taking your passion out on us.

To Rynette: You were selfless, I was undeserving. Thank you.

To the worlds designed for me and to those designed against me, thank you for establishing in me the unknowns that keep my thoughts alive.

I fight to keep the weight of these words.

PREFACE

I guess that I am now an adult!

I don't know when or how this happened but I know that the rumours are true. It crept up on me, before I was offered the opportunity to choose. 'They' say that it's not about age but it seems like its dictation by it is inevitable. All that it has brought me is a garment that doesn't fit; one that requires a lifetime of alterations. I don't know if I'll ever get it to fit but I don't mind trying.

I just want to retrace my steps in the hopes that I can ease this inevitable process that I did not see coming.

6 April 2013

CONTENTS

PART 1

The Fence

‘We worry about what a child will become tomorrow, yet we forget that he is someone today.”

Stacia Tauscher

*A little girl, once a full-time **vulnerable being**,*

as a woman fears that she, in her time of

weakness, will not be offered sympathy.

Why do I keep denying myself the right to be broken?

CHAPTER 01
Introduction

In Brief

Chapter 01 introduces the main issue, program and client. It also highlights the dissertation's aim and approach.

Terms to remember:

***Child space:** (Freeman & Tranter, 2011: 216)

1. Public parks, usually multipurpose
2. Dedicated play areas, such as playgrounds
3. Institutional space, such as childcare centres, schools, sports facilities, bicycle tracks and children's hospitals
4. Spaces colonized by children informally, such as areas used by skaters, skateboard parks, street-gathering points and places where families go to feed ducks.

***Adult space:**

1. The inhabitable urban realm, including child spaces.

***Sterilized space:** spaces made for childhoods resembling a prison sentence. They are spaces behind fences, locked doors and alarms; with their users' every moment scheduled, supervised and controlled.

***Third space:** Spaces that children do not need to be in but rather desire to be in. Home, school, shops, etc. are spaces of necessity. Home as and example of first space is one of nurture, protection and comfort. School as an example of second space is one of learning, work and discipline. The third space has no limit on what it offers, it is left to the child's imagination. they can play, feel free and be independent. There are no chores or homework there and their minds are truly free to wonder.

***Internet meme:** Jokes that circulate on the internet by taking an image and writing different scenarios for what the image could mean.

Figure 1.1: Who is more oppressed? (Artist: Malcolm Evans)

1.1 CHILD as a Pre-adult

American philosopher Richard Rorty gave, for the Tanner lectures at the University of Michigan in 1989, a lecture on the plight of women to overcome sex discrimination, as they "have to meet either the male standard for males or the male standard for females" (Rorty, R. 1989: 4). He states how the women essentially have to become honorary men. Its fundamental flaw, he claims, lies in the equality being formulated on the oppressors' (males) terms. This creates animosity towards those that enter the oppressors's realm as themselves - referenced by themselves - as they enter as something unfamiliar and unacceptable, i.e. females entering as females according to female standards (de la Porte, J. 2013).

The same dialectic is found between adults and children. According to the book *Children and their Urban Environments* (Freeman & Tranter, 2011: 5), two Australian authors - a town planner and a geographer - claim that "space acts as the nexus where society and place converge in a child's life." They have found a recurring problem in how infrequent children are considered in the planning process of a city. They outline two fundamental problems:

1. the first is that planners hold simplistic notions of children, characterized by the concept of a universal child, homogeneous and undifferentiated and
2. the second is that rather than treating children as competent social actors, they are relegated to *sterilized** '*child spaces*'* in the city.

The result of these perceptions is that children are denied the opportunity to represent themselves with reference to themselves as children, but instead, are assumed the role of pre-adults by adults. They are confined to *child spaces** as pre-adults in the city, rather than surveyed in *adult-oriented spaces** as children.

The first scenario envelops them in a rules-based utopia designed to pacify parental concerns, intensified by the media. The second scenario offers environments that can mould them into confident, experienced and uninhibited adults.

Figure 1.2: Despite being individuals, children's needs and personalities are dealt with as an entity. (Diagram by: Author)

Scenario 1 - Status Quo	**Scenario 2 - Alternative Possibility**
Pre-adult in *child space**	Child in *adult space**
Child represented by adult(s)	Child represented by him/herself
Rules enforced for children by adults	Rules circumstantial
(<------) Pre-emptive child growth development	(------>) Incremental child growth development

Table 1.1: Status quo vs. alternative possibility. (Compiled by: Author)

Figure 1.3: Dream House by Maurits - teacher's comments. (Artist: Maurits Escher)

> "Security is mostly a superstition. It does not exist in nature, nor do the children of men as a whole experience it. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure, or nothing."
>
> Helen Keller

1.2 CHILD as a Child

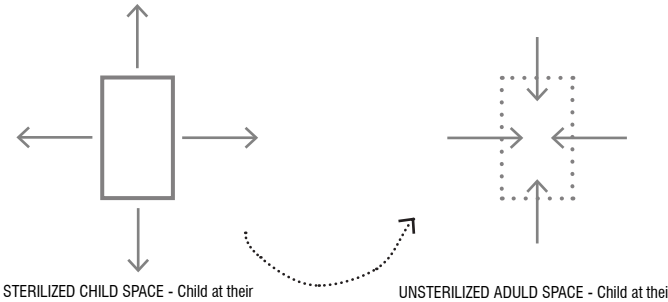
Freeman and Tranter (2011: 11) continue on to say that "...children's independent mobility has been replaced by adult-dependent mobility."

This decline in mobility is urged on by two elementary causes:

1. the removal of the street as *third space** due to traffic concerns and
2. children's safety with regards to other members of society.

Several space-based paradoxes arise as a result of this hold on independent mobility:

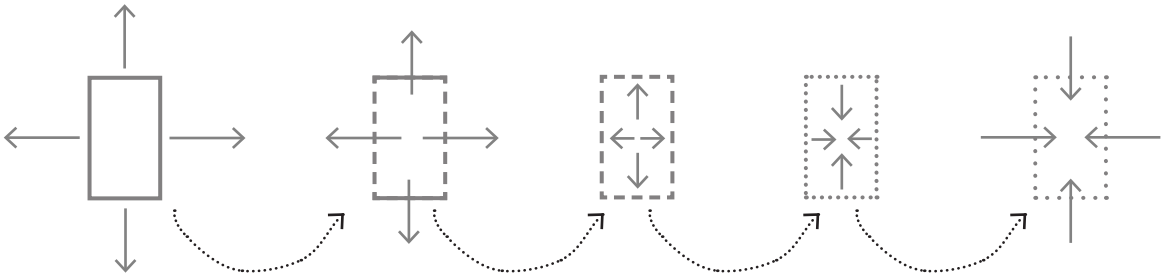
- Play, learning and exploration are seen as important, but spaces for these are reduced and/or sterilized (The high levels of sheltered childhood realities due to this sterility leads to a imbalance and unpreparedness for adulthood, increasing levels of stress and responsibility. A child is better stimulated mentally when confronted with certain levels of responsibility from a tender age).



STERILIZED CHILD SPACE - Child at their most dependent state. External societal pressures are kept away and handled by those that envelop them in completely safe environments.

UNSTERILIZED ADULD SPACE - Child at their most independent state. External societal pressures are handled by themselves and what kept them safe is no longer there.

Figure 1.4: Pre-emptive approach to raising a child
_**Pre-adult to Adult.** (Diagram by: Author)



STERILIZED CHILD SPACE - Child at their most dependent state. External societal pressures are kept away and handled by those that envelop them in completely safe environments.

Child that has the capacity to handle a certain level of freedom and pressure, but retains the need for their foundation, adult guidance and care.

Child that has the capacity to handle a more freedom and pressure, but retains their need for adult guidance and care.

Child that has the capacity to handle a higher levels of freedom and pressure, but retains their need for adult guidance.

UNSTERILIZED ADULT SPACE - Child at their most independent state. External societal pressures are handled by themselves and what kept them safe is no longer there.

Figure 1.5: Incremental approach to raising a child
_**Child to Adult.** (Diagram by: Author)

- cars are seen as dangerous and bad, but children are spending more of their time in them.

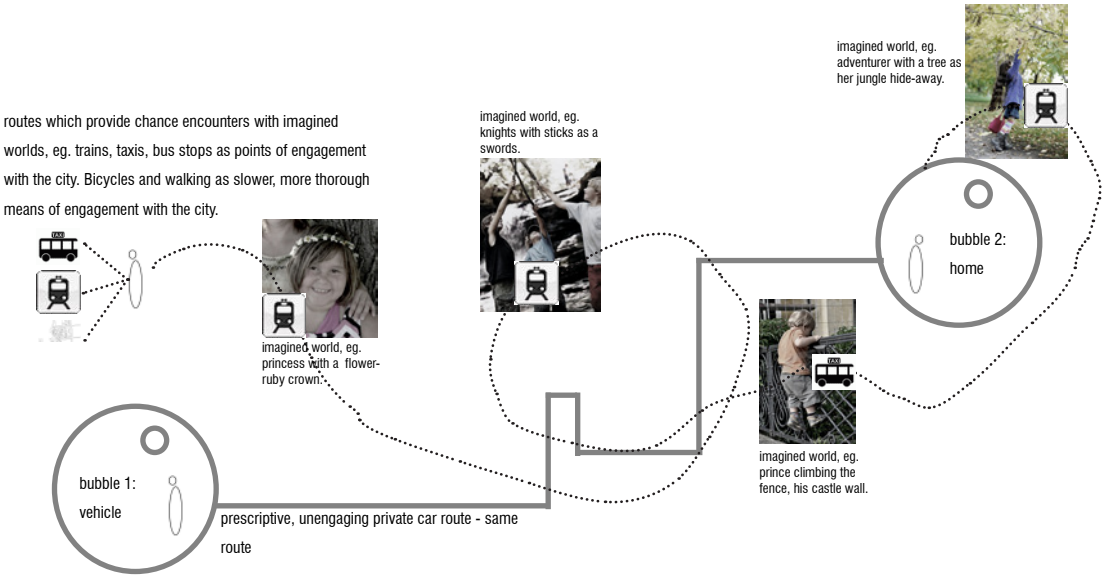


Figure 1.6: Children's inhibiting bubble environments. It is important to note that the imagined environments do not occur in the bubble environments, but rather in the adult-based environments (train and taxi stops). (Diagram by: Author)

- children's intellectual environmental knowledge is increasing, yet their own direct environmental experiences are decreasing.

Figure 1.7: *Internet meme** depicting modern day children's version of playing outside.

- children's lives are simultaneously becoming richer and more deprived.

"Children shape and influence cities; they colonize streets and create their own imagined spaces. They are in a constant negotiation over space: where they go, how they get there, who they go with and what they do in those spaces." (Freeman & Tranter 2011: 15)

When children's mobility, their inherent needs and their rights to develop are constrained, their well-being will be diminished. Their strong need to explore, encounter and engage with the world will lead them to pursue these needs passionately and autonomously by using their knowledge and understanding of social relationships to seek and promote their right to access the spaces that they need. "They need to exist as *a part of* and not *apart from* society." (Freeman & Tranter 2011: 15)

1.3 CHILD as a Spatial Informant

The dissertation will investigate the aforementioned dilemma in the form of an inner-city primary school.

A school presents itself as an appropriate investigative ground as it "...has long served as an institution of social reproduction. It replicates society and therefore societal problems." (Rault-Smith, 2008)

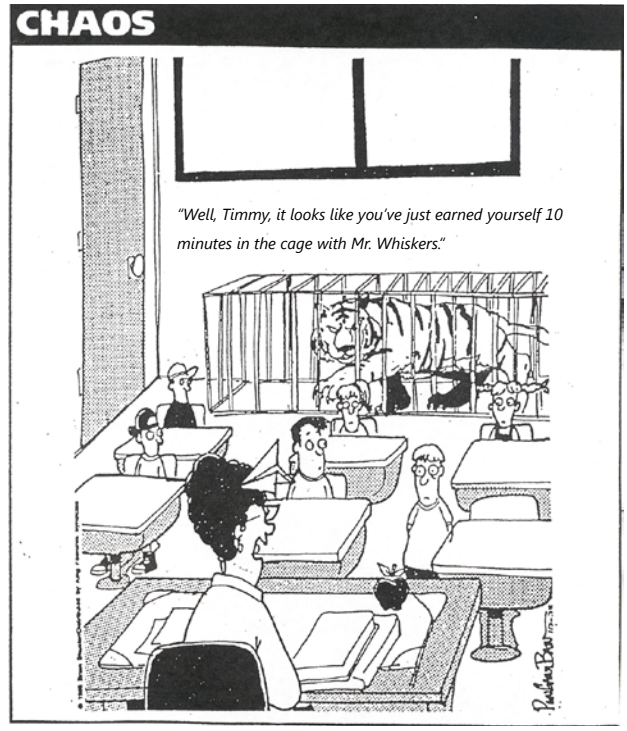


Figure 1.8: Exaggerated but telling illustration of how much of a hold adults' and children's systems inhibit natural freedom. (Artist: Unknown)

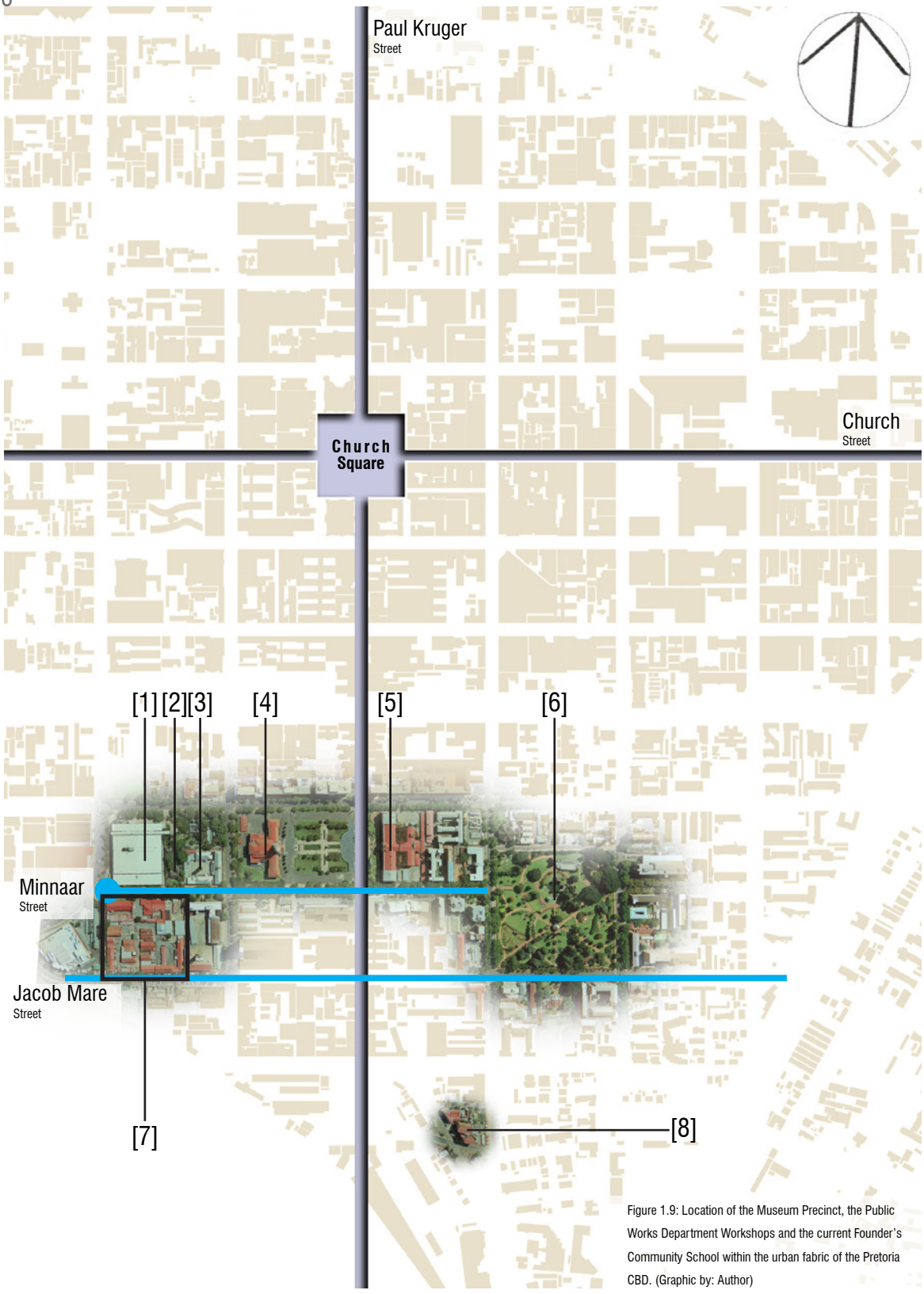


Figure 1.9: Location of the Museum Precinct, the Public Works Department Workshops and the current Founder's Community School within the urban fabric of the Pretoria CBD. (Graphic by: Author)

1.4 Site Location

The study area is located in the Central Business District (CBD) of Pretoria within the Metropolitan City of Tshwane.

The Museum Park Precinct, comprising of African Window Museum[1], Minnaar House [2], Old Pretoria Fire Station[3], City Hall[4], the Natural History Museum[5] and Burgers Park[6] - situated within the Southern precinct of the CBD - forms the proposed context. The Public Works Department Workshops[7] is the direct site in which the school will be designed. This will be explored in more detail in Chapter 03.

1.5 Client

The dissertation will take on the Founder's Community School[8], an inner-city Pretoria school, as client. This too will be explored further in Chapter 03.

Figure 1.10: Founder's Community School main entrance. (Photo by: Author)

The dissertation promotes the presence of children in adult-based urban landscapes, not limiting their societal and spatial competency to premeditated child-based urban landscapes.

1.6 Research Methodology

The investigation of this dissertation is structured in the following manner:

Chapter 01 Introduction - The chapter introduces the author's main point of departure as the dialectic between adults and children. It also reveals the site and client.

Chapter 02 Program - A brief history on education's journey internationally and locally is presented. An urban school typology tries to find its place in that journey.

Chapter 03 Client + Context - The Founders Community School is presented along with its children. It then introduces the larger and smaller context as well as potential approaches based on opportune findings. It addresses the site on both a theoretical and architectural basis.

Chapter 04 Theory - The theory introduces the limitations currently present in child-based spatial environments and what children as a result do in order to fill that gap.

Chapter 05 Precedent Studies - The chapter explores the different conceptual approaches deemed appropriate for all of the dynamics presented to the urban school. It also shows theoretical and spatial precedents of learning environments.

Chapter 06 Concepts + Visions - The larger context is the focus and a vision for both the larger and the smaller context is proposed.

Chapter 07 Design + Techné - A coming together of thoughts and ideas.

*A little girl, once **excited** to let others know **her**,*

as a woman fears being

fully understood.

Will 'they' think that I am vacuous?

CHAPTER 02
Program

In Brief

Chapter 02 delves into the history of education's effect on the relationship between child and adult, as well as their exclusive environments.

Terms to remember:

***Adult:** *Synonymous with Society* (for the purpose of the dissertation); everyone deemed old enough to be capable of making decisions that alter or affect the status quo of societal behaviour.

***Enculturation:** The passing down of culture by an older generation to a younger generation.

***Socialization:** The passing down of social values and behaviours an older generation to a younger generation or between peers.

***Montessori Education:** An educational curriculum started by Dr Montessori which promoted freedom for children, but in a prepared environment. The method of 'training', rather than teaching was promoted through the senses and sense training.

Learning	**Education**
The acquiring of new skills, knowledge and values	A process through which a society passes on the knowledge, values and skills from one generation to another
Basic instinct possessed by all individuals	Acquired by individuals
The process of adopting knowledge, values, skills	The process of imparting knowledge, values, skills
Ongoing process	Time and age-limited process
Informal	Formal
Internal source of knowledge	Outside source of knowledge
No set standards, can occur anywhere	Set classroom standards, venues
Knowledge gained through experience	Knowledge gained through teaching

Table 2.1: Learning vs. Education (Table adapted from 'Difference Between Education and Learning')

Prehistory

The period before the use of writing, and before written history. Education was achieved through *demonstration* and *copying* as the young learned from their elders. At later stages they received instruction of a more structured and formal nature, imparted by people not necessarily related, in the context of *initiation*, *religion* or *ritual.* Some forms of traditional knowledge were expressed through *stories, legends, folklore, rituals, and songs, without the need for a writing system.* Tools used include poetic devices such as rhyme and alliteration. These methods are illustrative of orality. The stories thus preserved are also referred to as part of an *oral tradition.*

3400 BC

The development of writing started in about 3500 BC, with various writing systems developed in ancient civilizations around the world. In Egypt though, fully developed hieroglyphs were in use at Abydos as early as 3400 BC. Later, the world's oldest known alphabet was developed in central Egypt around 2000 BC from a hieroglyphic prototype.

Ancient civilizations

In many early civilizations, education was associated with wealth and the maintenance of authority, or with prevailing philosophies, beliefs, or religion.

In the city-states of ancient Greece, most education was private, except in Sparta. In Athens, for example, during the 5th and 4th century BC, aside from two years military training, the state played little part in schooling. Anyone could open a school and decide the curriculum. Parents could choose a school offering the subjects they wanted their children to learn, at a monthly fee they could afford.

Middle Ages (500-1600 AD)

Formal Education. During the Early Middle Ages in Europe, the monasteries of the Roman Catholic Church were the centres of education and literacy, preserving the Church's selection from Latin learning and maintaining the art of writing.

After the 15th Century

Most schools in Europe during this era were founded upon religious principles with the primary purpose of training the clergy.

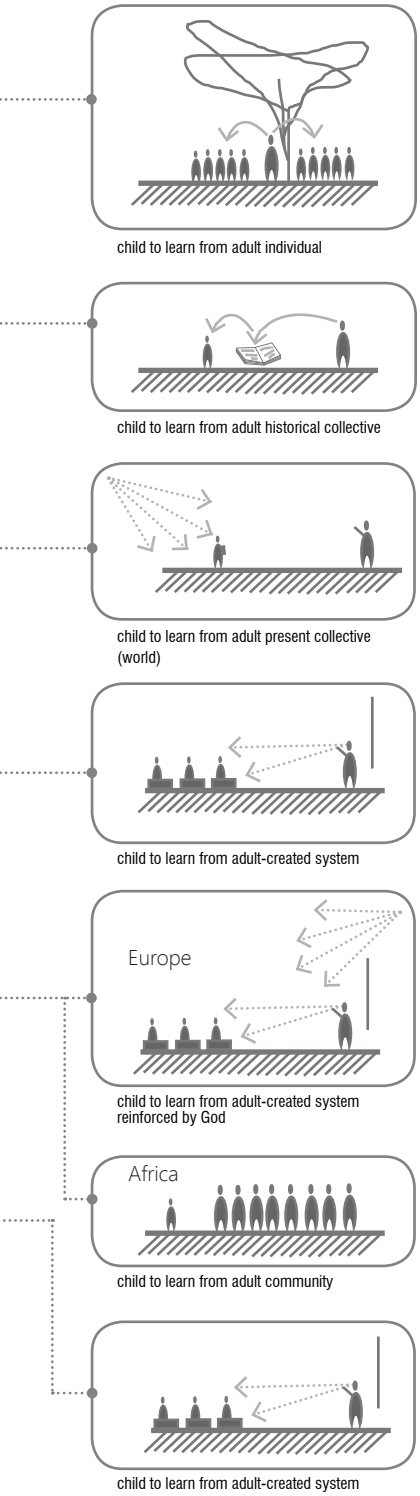
Until at least 1900 AD, in most African countries south of the Sahara, children received traditional informal education on matters such as artistic performances, ceremonies, rituals, games, festivals, dancing, singing, and drawing. Boys and girls were taught separately to help prepare each gender for their adult roles. Every member of the community had a hand in contributing to the educational upbringing of the child. The high point of the African educational experience was the ritual passage ceremony from childhood to adulthood.

Recent Worldwide Trends

Some kind of education is now compulsory to all people in most countries. Due to population growth and the proliferation of compulsory education, UNESCO has calculated that in the next 30 years more people will receive formal education than in all of human history thus far.

Summarized from 'History of Education'. Available from: http://en.wikipedia.org/wiki/History_of_education [Accessed: 04 July 2013]

Figure 2.1: Perception relationship between adult and child. (Diagrams by: Author)



2.1 Education's History

Every generation, since the beginning of human existence, found ways to pass on its stock of values, traditions, methods and skills to the next generation through processes such as enculturation* and socialization*. The history of the curricula of such education reflects history itself, knowledge, beliefs, skills, cultures and social practises of humanity today.

Oral traditions were central in societies without written texts. Literacy in preindustrial societies was associated with civil administration, law, long distance trade or commerce, and religion. A formal schooling in literacy was provided to an elite group, either at religious institutions or at the palaces of the rich and powerful.

Providing literacy to most children has been a development of the last 150 or 200 years, only 50 years in some Third World countries. Schools can therefore be said to be **a right of passage into adulthood.** It is here where a child will spend most of their lives between the ages of 5 to 18 years old. It remains one of the most important learning - not just education - platforms for children.

The designs of schools as a whole have however not reflected the historical changes in curriculum or the change in the level of importance in a child's life for learning. This is usually attributed to financial constraints. As the curriculum of today mimics that of the Middle Ages, classrooms that insinuate an "I instruct, you quietly obey" approach to teaching can still be seen being put up in masses across the world.

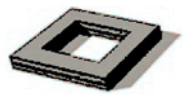
Figure 2.2: Different school typologies in of the 21st century.
(Diagrams adapted by: Author)

Courtyard

Closed Courtyard

Multiple Courtyard

Open courtyard



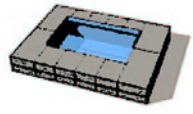
considers external space as very important

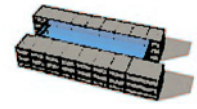
- Has a protected outdoor area that can be easily surveyed and is psychologically reassuring
- Creates a sense of ownership
- Provides visual focus for the interior spaces
- In urban areas, enclosed protected courtyards are preferred
- In suburban areas, L or U shaped courtyards are often used

Block

Atrium Block

Learning Street Block





characterized by compact volumes and simple internal layouts

- Large (unique) space for socializing (social heart) leading directly to the main learning spaces
- Optimized circulation usually as a 'street'
- Covered courtyard edifices

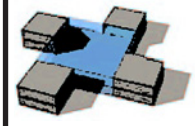
Cluster

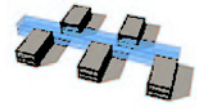
Main Atria Cluster

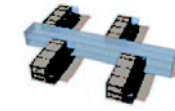
Main Linear Cluster

Unit Atria Cluster

Unit Linear Cluster







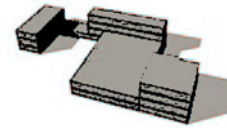
fragmented into different volumes, which can represent independent pedagogical units

- mall learning communities (SLC)
- Particular spatial characters, to enhance sense of belonging
- Main circulation and pedagogical unit circulation
- Buffer spaces between private and public, enhancing sense of belonging
- General gathering space, eg. hall

Town-like

Complex Block Town-like

Compound Structure Town-like



multiplicity of spaces and functions

- Most public space , the town hall square is surrounded by the most important buildings (library, auditorium)
- Roads give access to spaces that are more private and resemble an organic, not cluster pattern.

2.2 Recent Typological School Trends

The timeline presented reflects on the past 10-15 years of school typologies in Europe (Rigolon, A: 2010). Europe is chosen as an appropriate study as it has undergone years of discourse and experimentation in school design, with changes in educational paradigms having very direct influences on their learning environments. As a leading continent in education, the world has looked to them for answers. These are what they have provided thus far.

These school typologies illustrate the use of morphological and spatial patterns. Crucial to what detemines what a typological approach is:

- the characteristic of the school,
- the level of education,
- the number of pupils,
- the school's educational philosophy,
- its location (rural, suburban or urban) and
- its climatic conditions.

The list given is only of typologies that presented innovative factors in the field of spaces for learning and socializing, considering the child as a whole being and not one that merely stores and regurgitates information.

Chapter 06 will show some precedents of these kinds of environments that have been done successfully regarding the topic at hand.

1806

The earliest European schools in South Africa were established in the Cape Colony in the late seventeenth century by Dutch Reformed Church elders committed to biblical instruction, which was necessary for church confirmation. By the late nineteenth century, three types of schools were receiving government assistance - ward schools, or small rural schools generally employing one teacher; district schools, providing primary-level education to several towns in an area; and a few secondary schools in larger cities. During the last decades of that century, they abolished African enrolment in government schools. African children attended mission schools and were taught by clergy or by lay teachers, sometimes with government assistance.

1900

Following the British victory in the South African War, the British High Commissioner for Southern Africa, Sir Alfred Milner, brought thousands of teachers from Britain, Canada, Australia, and New Zealand to instill the English language and British cultural values, especially in the two former Afrikaner republics. To counter the British influence, a group of Afrikaner churches proposed an education program, Christian National Education, to serve as the core of the school curriculum.

1948

Prior to 1953, many black people attended schools set up by religions organisations that provided schooling of the same quality that white children received in state schools. Following the Bantu Education Act (No. 47) of 1953, the government tightened its control over religious high schools by eliminating almost all financial aid, forcing many churches to sell their schools to the government or close them entirely. The government implemented an educational system called Christian National Education (CNE). The basis of this system is that a person's social responsibilities and political opportunities are defined by their ethnic identity. The number of schools for blacks increased during the 1960s, but their curriculum was designed to prepare children for menial jobs. Per-capita government spending on black education slipped to one-tenth of spending on whites in the 1970s. Black schools had inferior facilities, teachers, and textbooks.

1974

In 1974, the Minister of Bantu Education and Development issued a degree commonly known as the "Afrikaans medium decree" in which the use of both English and Afrikaans was made compulsory in black secondary schools. In terms of this decree, physical science and practical subjects would be taught in English, mathematics and social science subjects would be taught in Afrikaans, and music and cultural subjects would be taught in the learner's native language. The Minister said that the reason for this decree was to ensure that black people can communicate effectively with both English and Afrikaans speaking white people.

1984

The National Policy for General Affairs Act (No. 76) of 1984 provided some improvements in black education but maintained the overall separation called for by the Bantu education system. The Department of Education and Training was responsible for black education outside the homelands. Each of the three houses of parliament—for whites, coloureds, and Indians—had an education department for one racial group, and each of the ten homelands had its own education department. In addition, several other government departments managed specific aspects of education.

1994

Under Apartheid South Africa, there were 8 different education departments that followed different curricula and offered different standards of learning quality. This included nation-wide departments for coloured people, for Indians and for black people, a department for independent schools, and provincial departments for white people in each of the former four provinces. The Mandela government fused all these departments as well as tertiary education departments into a single national education department that encompassed not only primary and secondary schools but also tertiary training facilities. It also set about to reform the educational system by first removing all racially offensive and outdated content and then introducing continuous assessment into schools.

1997

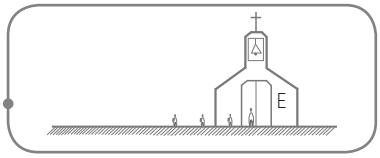
In 1997 the government launched its new educational system called Curriculum 2005, which would be based on "outcomes based education" (OBE). By 2006 it was clear that OBE as a social experiment had failed, and it was quietly shelved.

2006

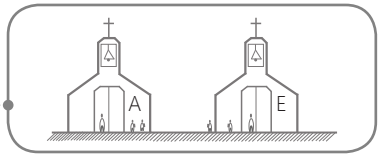
Prior to 2009, schools taught English only from grade 3 (and all subjects are taught in English from grade 4), and since 2009, schools teach English from grade 1 (and all subjects are taught in English from grade 4).

Figure 2.3: School as a representation of society
_Society vs. child. (Diagrams by: Author)

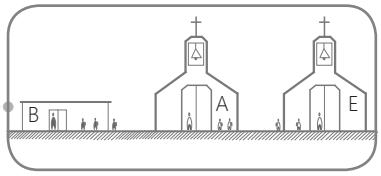
IDENTITY - PERCEPTION



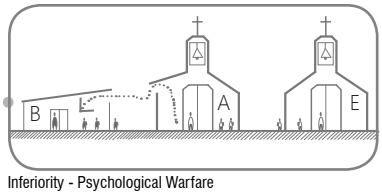
British Colony - Conservative Wealth



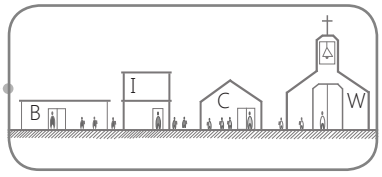
Cultural Stance - Separatism



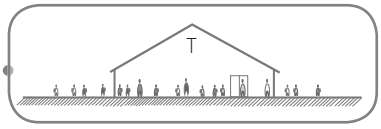
Rankings - Subordinance



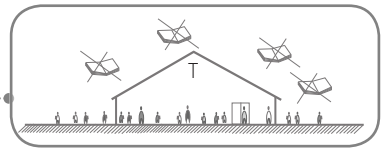
Inferiority - Psychological Warfare



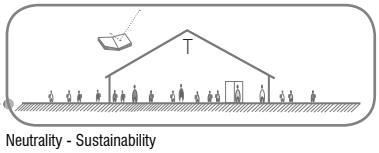
Cultural Stance - Isolation



Neutrality - Integration



Neutrality - Experimentation



Neutrality - Sustainability

E - British school system
A - Afrikaans school system
B - Black school system
W - White school system
I - Indian school system
C - Coloured school system
T - Integrated school system

2.3 Education in South Africa

As of 2009, the Education in South Africa is governed by two national departments: The Department of Basic Education (DBE), which is responsible for primary and secondary schools, and The Department of Higher Education and Training (DHET), responsible for tertiary education and vocational training. Prior to 2009.

The DBE deals with public schools, private schools (also referred to as independent schools), early childhood development (ECD) centres and special needs schools. The public and private schools are collectively known as ordinary schools, and make up 97% of the basic education schools in South Africa.

The nine provinces in South Africa have their own education departments responsible for implementing the policies of the national department, as well as dealing with local issues.

In 2010, the basic education system comprised of 12 644 208 learners, 30 586 schools, and 439 394 teachers.

In 2013, the government has planned to spend 19% of the national budget on basic education (and 2% on higher education).This is a big leap from 2011's total spending on education of 6%.

According to the national census of 2011, 41.7% of the total population has completed an education of high school or higher, whereas 8.6% of the population aged 20 years and older have not completed any schooling.

I cannot go to school today

Shel Silverstein

"I cannot go to school today"
Said little Peggy Ann McKay.
"I have the measles and the mumps,
A gash, a rash and purple bumps.

My mouth is wet, my throat is dry.
I'm going blind in my right eye.
My tonsils are as big as rocks,
I've counted sixteen chicken pox.

And there's one more - that's seventeen,
And don't you think my face looks green?
My leg is cut, my eyes are blue,
It might be the instamatic flu.

I cough and sneeze and gasp and choke,
I'm sure that my left leg is broke.
My hip hurts when I move my chin,
My belly button's caving in.

My back is wrenched, my ankle's sprained,
My 'pendix pains each time it rains.
My toes are cold, my toes are numb,
I have a sliver in my thumb.

My neck is stiff, my voice is weak,
I hardly whisper when I speak.
My tongue is filling up my mouth,
I think my hair is falling out.

My elbow's bent, my spine ain't straight,
My temperature is one-o-eight.
My brain is shrunk, I cannot hear,
There's a hole inside my ear.

I have a hangnail, and my heart is ...
What? What's that? What's that you say?
You say today is ..... Saturday?
G'bye, I'm going out to play!"

2.4 *Beyond Titles* - Design's Psychological Impact

Susan Jenko, a Professor in Education from the University of Washington challenged her students to document what different types of schools could subconsciously represent to its users. A notable observation made by one of her students was how the outdoor area of a private school prepares its students for navigating an ivy-league campus, while a public school's outdoor area prepares its students for navigating a prison yard (Freeman 2011: 59). Although not the most general of impressions, it allows us to acknowledge how much the design of a school can impact students' future outcomes.

Figure 2.4(a): St. John's College, Private School, Johannesburg.

Figure 2.4(b): Trinity Chapel, Ivy League University, Cambridge.

Figure 2.5(a): Richmond Hills High School, Public School, Queens.

Figure 2.5(b): Arizona State Prison Complex, Arizona.

The exercise, did not include an urban school, but the same question can be posed: what do current urban schools represent? Its current definition is one given by the New York State Education Department (NYSED) which determines it by the following factors: (Russo, 2004)

- it should be located in an urban (of, relating to, or located in a city) area rather than a rural, small town or suburban area,

- the school should have a relatively high rate of poverty,

- it should have a high proportion of students that are non-white,
- it should be designated as being 'high need' by NYSED and
- it should have a high proportion of students with limited English proficiency

When applying this to current urban schools in South Africa, we see that these schools fulfill at least three, sometimes 4/5 criteria, with the exception that they are not designated high need, as our education Department requires a school to have very little to nothing to be deemed high need (no classrooms, no roof, no desks and/ or chairs, etc.)

Several questions can arise from this: is this definition acceptable? What psychological role can a school described in such a way have on students' outcomes? **Why were the condition of spaces not addressed in the definition?** What can an urban school better represent?

- Resilience
- Resourceful - pop-up programs of convenience_mobile
- Accommodating - cohabited environments; mixed-use
- Spontaneous, dynamic
- Learning environment (as opposed to just an educational environment)
- Economical - close-grained diversity (Jacobs, 1961)
- Active urban edges (streets as opposed to roads)

All of the terms above can be used to describe an urban environment, yet schools in these environments neither represent nor do what the list states of urban environments out of a fear that child environments cannot handle the pressure that comes with a city being these things. The dissertation goes by the premise that an urban school can represent this side of an urban condition, rather than the gritty and unappealing side it has become known for, without compromising on children's safety and privacy.

2.4.1 Pretoria CBD's Educational Habitats

In the Pretoria context, urban schools are done in two ways:

1. it cordons off half or a whole city block, depending on how much space is needed, and places a confined *suburban model school**. It does not respond to its surroundings and establishes a 'bubble' in the busy city and

TO NOTE: *A suburban school as opposed to an urban school is one that exists in the outer suburbs of a city. It is usually characterized by its population of middle-class students whose parents have moved from the inner city areas in past generations. A suburban school is still administered by the school district it is in but because of the middle-class suburb that surrounds the school, it will generally reflect the affluence of its community.*

2. it stacks needs vertically into high-rise buildings, again, relinquishing the need to engage with the urban context.

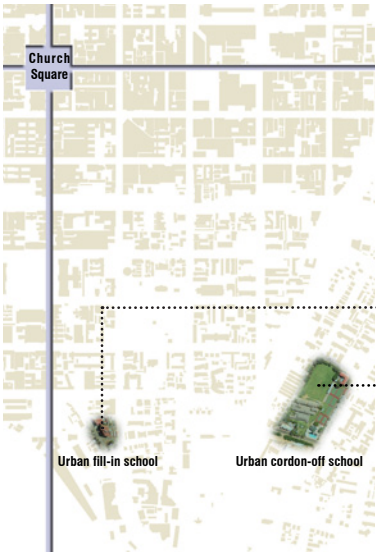


Fig 2.6: The Pretoria CBD with the locations of Founder's community School to the left and Oost Eind Primary school to the right.

Founder's Community school (client) and Oost Eind Primary school, 1km away from each other, are clear examples of both urban school typologies. They are models for the urban schools currently found in the Central Business District (CBD) of Pretoria.

Figure 2.7(a): The Suburban type Oost Eind Primary school.

Figure 2.7(b): The Urban type Founder's Community School. (Photo by: Author)

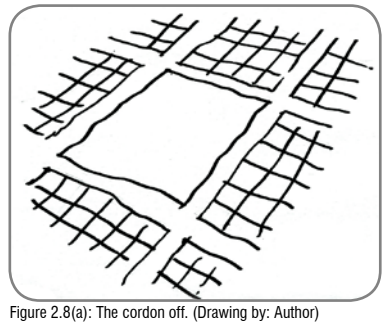


Figure 2.8(a): The cordon off. (Drawing by: Author)

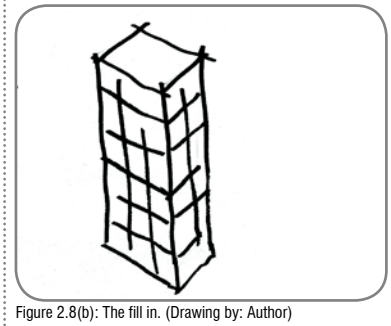


Figure 2.8(b): The fill in. (Drawing by: Author)

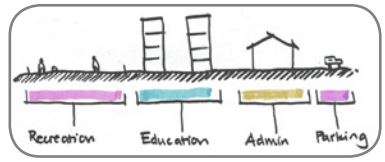


Figure 2.9(a): Surburban school type compartments. (Drawing by: Author)

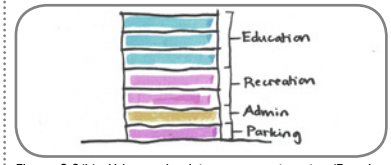


Figure 2.9(b): Urban school type compartments. (Drawing by: Author)

Compromise: resourceful use of limited urban space. It also compromises on the possibility of active urban edges.

Compromise: good quality internal learning spaces as well as adequate playgrounds.

Unexploited: Both unfortunately do not exploit the great potential that lies in experiential learning, teaching and playing through surveyed urban engagements.

2.5 The Balance

“School grounds transmit messages about the school and its place in the world.” (Freeman and Tranter 2011: 61)

Quick alterations to former office blocks (the fill-in) to accommodate schooling needs leads to a compromise in spatial qualities. The drywalls put to divide spaces inhibit deep light penetration, the classrooms become cramped due to awkward wall positions, natural ventilation is either not there or disturbed and there is often no ground space for play. This is the condition that currently exists at Founder’s Community School, the client, introduced in Chapter 03. Indoor playgrounds try to make up for the lack of outdoor play space, but the disconnect between child and nature is felt. This condition was found in three other schools that were visited in the Pretoria CBD. Although the fill-in is more economically viable for an urban context, one can ask why many of the Pretoria urban schools’ surrounding contexts are not currently in use, forcing school programs that accommodate a large number of facilities to fit themselves into spaces inadequate in both size and quality.

The fill-in typology acts clumsy, forcing more into the shell than can be handled. The only precaution it takes is to program the ground floor for public use (adult space), thus keeping the children away from the street noise, activity and access. The cordon-off typology isolates and creates an ideal and unrealistic landscape (child space), one that acts as a sterilized bubble from its unwanted urban surroundings. When school ends, for some, the car ‘bubble‘ takes them home, preventing them from ever engaging with the urban context (adult space).

The balance between these conditions is needed, one that integrates itself as it protects, considering urban edge activation but also not compromising on the quality of space.

Figure 2.10(a): Existing conceptual impression of urban primary schools in Pretoria's CBD. (Drawing by: Author)

Figure 2.10(b): Proposed approach to urban primary schools in Pretoria's CBD. (Drawing by: Author)

2.6 Current Primary School Curriculum

Subjects	Foundation Phase_Gr R-3	Intermediate Phase_Gr 4-6	Senior Phase_Gr7-9
Official Languages at Home language level	√	√	√
Official Languages at First Additional language level	√	√	√
Mathematics	√	√	√
Life Skills	√	√	
Natural Sciences and Techology		√	
Social Sciences		√	√
Life orientation			√
Arts and culture			√
Natural Sciences			√
Technology			√
Economic and Management Sciences			√

Table 2.2: CAPS Primary School Curriculum (CAPS, 2011: 9)

Based on the current basic education system as shown above, the ratio of indoor learning far outweighs outdoor engagement. As the classroom is the space inhabited for the longest in a school, the classroom becomes an important educational tool in its own right.

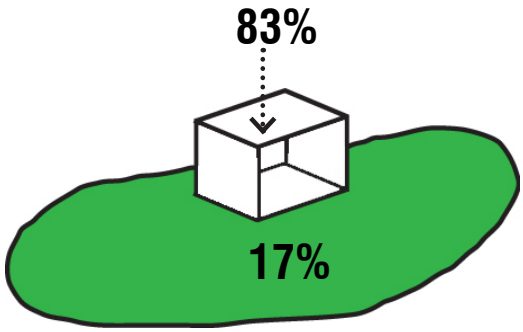


Figure 2.11(a): Grade 1-3 ratio of time spent indoors vs. outdoors as per the information given by the Department of Basic Education's CAPS outline. (Drawing by: Author)

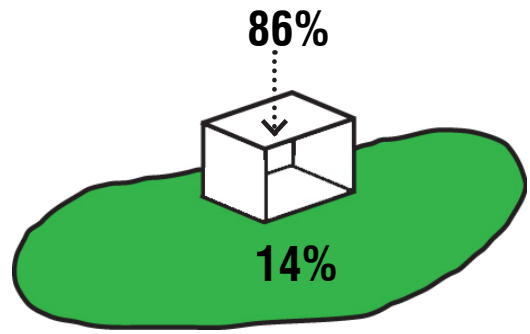


Figure 2.11(a): Grade 4-7 ratio of time spent indoors vs. outdoors as per the information given by the Department of Basic Education's CAPS outline. (Drawing by: Author)

*A little girl, once cage in **supposedly** stimulating spaces,*

as a woman fears breaking the rules put in place to

sterilize those environments.

Am I afraid to 'fail' as a well-suited member of society if I do?

CHAPTER 03
Client + Context

In Brief

Chapter 03 introduces the client as both the school as well as its children. It then gives a pictorial representation of both the larger and smaller context and addresses the different ways in which to approach it based on both the client's and site's needs.

Terms to remember:

***KIDS' CORNER:** This refers to the segments in the book where the children of Founder's Community School had a say, be it in drawing exercises, interviews and/or observations.

***Defensive space:** spaces that are cagey and unwilling to engage with its surrounding. It makes no effort to integrate as it exists suspicious of everything around it.

***Defensible space:** secure spaces made so not through aggression or paranoia, but rather through pre-emption based on psychological and social human understanding.

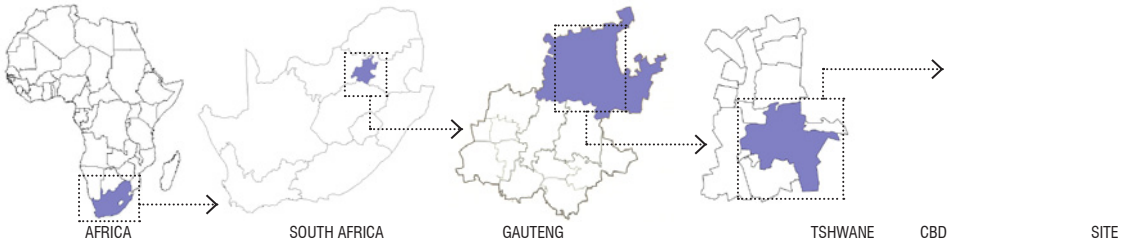


Figure 3.1: Location of study area. (Graphic by: Author)

3.1 The Collective Client_The Current Child Space

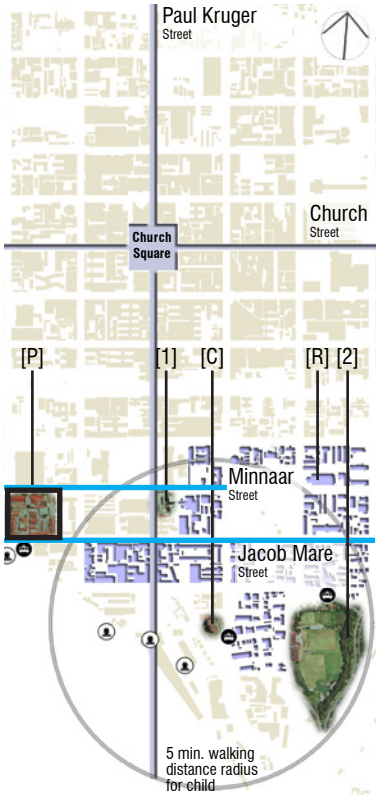


Figure 3.2: Past school locations and proximity to convenient urban amenities. (Graphic by: Author)

Between the years 2000 - 2005, Founder's Community school practiced in a building located opposite the Natural History Museum in the Central Business District (CBD) of Tshwane called Pretoria, in South Africa. They had to move due to rental issues.

In 2005 - 2009, they moved to the Old Cricket grounds. The Department of Land Affairs dislocated them in an attempt to build their Head office. This never materialized due to unresolved issues about the rights of the land.

The school then moved in 2009 into the building where they currently practice. They are considering moving again due to rental issues (Mpondo 2013). The new location sits on the north-east corner of Paul Kruger and Railway streets, 370m walking distance away from the west of its second location. The previous school precinct is still in use by the school for sports practises. According to one of the school's directors, Mr. Mpondo (2013), some of the practical reasons for the previous and current choice of sites were:

1. i ts close proximity to surrounding public transport systems – bus, taxi and train;
2. its building area was large enough to accommodate grades 1-12, including its nursery school and daycare centre;
3. its close proximity to surrounding residential blocks – their aim was to be no further than 3,5km away and
4. affordable rent.

The school currently caters for 600-800 children with school fees averaging between R400-R600/month. Although a private school, it subscribes to the government subsidized national CAPS curriculum, in order to get governmental financial aid. The majority of the students live within a 20-30km radius and use public transport (mainly the metro trains) to get to and from school. The school users' income brackets range from low-income to working class households. It accommodates nursery school children all the way to grade 12 students (Founders 2013).

[1] 1st location
[2] 2nd location
[C] 3rd + current location
[P] Proposed Primary School location
[R] Residential + mixed-use blocks
Taxi stops/ranks
Train stations

The problems currently affecting the school as observed are:

1. No playgrounds (parking lot and cafeteria used as play area)
2. No sports facilities
3. Unaffordable rent (Mpondo 2013)
4. Inadequate space for some much needed facilities, such as a science lab.

Other problems mentioned by Mr Mpondo (2013), was of rent being too high, classrooms being too small, an insufficient number of teachers and a lack of basic resources, such as science and biology laboratories.

Figure 3.3(a): Corridor with unkempt walls and no natural lighting or ventilation. (Photo by: Author)

Figure 3.3(b): Tiny classrooms with inadequate sunlight and ceiling height. (Photo by: Author)

Figure 3.3(c): grade 4 classroom with little room to move. (Photo by: Author)

Figure 3.3(d): Cafeteria used as a playground when the parking lot is too hot. (Photo by: Author)

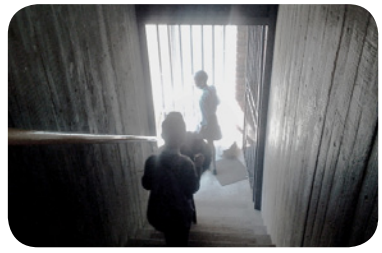


Figure 3.3(e): Unlit staircase leading to the parking lot from the cafeteria. (Photo by: Author)

Figure 3.3(f): Parking lot used as playground. (Photo by: Author)

Figure 3.3(g): Break time between 10h00 - 11h00 for the junior phase. (grades 1-7) (Photo by: Author)

Figure 3.4: Typical Pretoria CBD children's playground. (Photo by: Author)

3.2 *KIDS' CORNER**_The Classroom and the Playground

The children were asked two questions regarding their school premise. These were evaluated according to Susan Wright's (2010) research on children's drawings and their possible meanings. They were asked the following:

1. Draw yourself in the classroom
2. Draw yourself in the playground

The most notable drawings were the ones done by the grade 4s of their playground. Instead of drawing their current playground, they rather drew what they perceive a good playground would have. Their idea of a good playground resembled public parks. They currently have none of those play equipments. Figures 2.4 and 2.8 on the previous page illustrates the existing classroom and playground conditions respectively.

grade 1

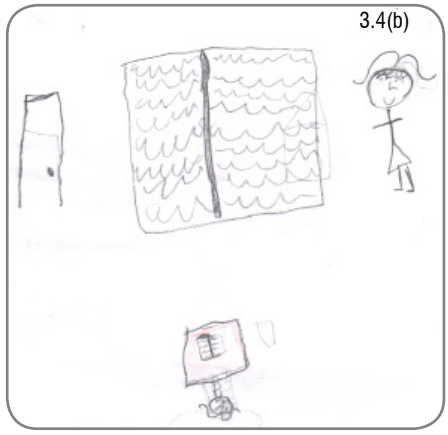


Figure 3.4(a)+(b): Grade 1 pupils' drawings. (Drawings by: ?????)

The grade 1s that drew their classrooms did not draw the room. The most they drew of the room was the door; the only building element most frequently engaged with. Books were drawn large and sometimes the table, with the teacher being the main focus in the drawings.

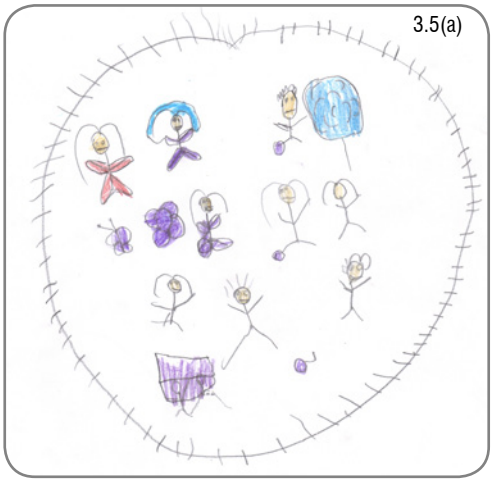
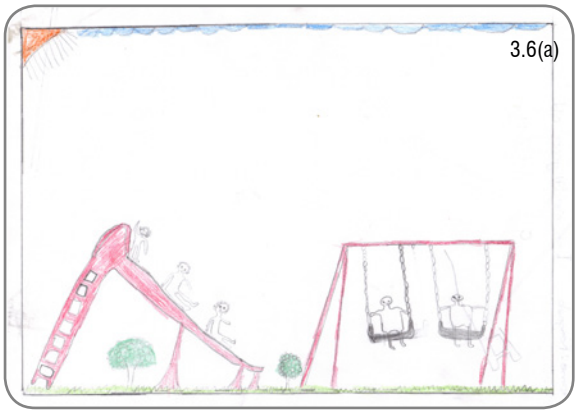


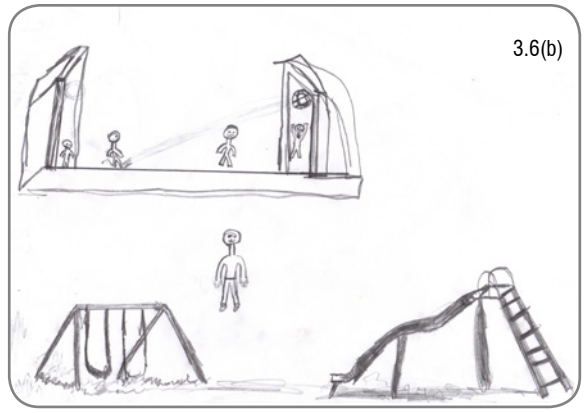
Figure 3.5(a)+(b): Grade 1 pupils' drawings. (Drawings by: ?????)

The grade 1s that drew their playground did not draw the ground. They rather focussed on drawing the activities that they execute on those grounds. Two of the children drew the fence around the playground, but again not the ground itself. All of the activities drawn can be played without the presence of the ground, i.e. they can play those games anywhere else, it is not exclusive to that ground.

grade 4

Figure 3.6(a)+(b): Grade 4 pupils' drawings. (Drawings by: ?????)

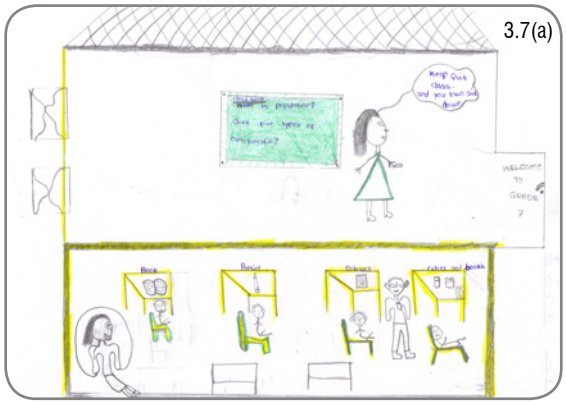


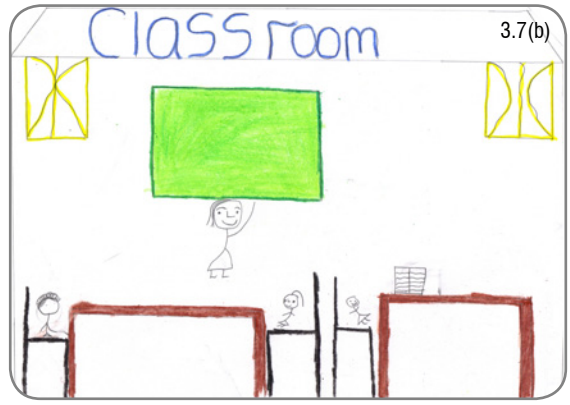


As previously stated, the grade 4s' drawings of the playground consisted not of what they currently have, but rather of what they wish they had: swings, slides, soccer fields, etc.

grade 7

Figure 3.7(a)+(b): Grade 7 pupils' drawings. (Drawings by: ?????)





The grade 7s' drawings of the classroom revealed an understanding of buildings as the provider of the space they inhabit. Like the grade 1s, they drew the teachers large and in the drawing on the right, the child shows how small he feels in class in relation to everything else, as if also subordinate to the furniture. In the drawing on the left, the student tried to explain all of the things that distract her and prevents her from paying attention in class.

3.3 KIDS' CORNER_Understanding the Little Clients

The drawing exercise further aimed to ascertain both *their perception of the city* and *their impression of themselves in the city*.

The exercise was conducted on three different grades, these chosen due to its wide age range: the grade 1s (ranging from 5-7 years old), the grade 4s (ranging from 8-10 years old) and the grade 7s (ranging from 11-14 years old).

Three city-based questions were posed:

1. Draw yourself in the city
2. Draw your route/how you get home
3. Draw your route/how you get to school

Several observations were made from this simple exercise that will be expanded on at later stages.

What can be noted for now are the characteristics that were found as commonalities in the different age groups as well as what could be extracted as their perception and understanding/ experience of space.

This understanding, as noted in bold under extractions, will be expanded on in Chapter 07 as a concept generator for the detailing of the building in collaboration with reused building materials from the proposed demolished buildings. This is presented further down.

Figure 3.8(a): Grade 1 pupil ... drawing.

Figure 3.8(b): Grade 1 pupil ... drawing.

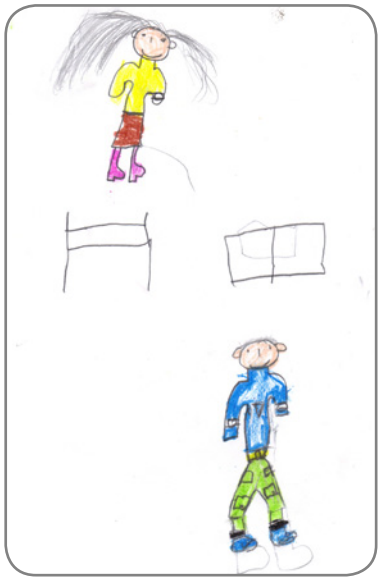


Figure 3.8(c): Grade 1 pupil ... drawing.

Grade 1s:

- Age Developmental Task or Conflict Stages of Development According to Erik Erikson (http://en.wikipedia.org/wiki/Erikson's_stages_of_psychosocial_development):

3 to 6 years old: Initiative vs. Guilt - Children want to undertake many adult-like activities, sometimes overstepping the limits set by parents and feeling guilty

- Commonalities:

- Class already divided into groups and everyone knows their place.
- They only write what they see on the board, not what is told to them to write.
- Each concept must be explained to them in several scenarios in order for them to understand it clearly.
- The teacher instructs the children on how to draw and reprimands those that don't do it that way: 'draw big', 'use colour', 'why are you drawing small?'
- They all reverted to drawing very small on the page.

- Extractions:

BUILDINGS LESS VISIBLE THAN THE INDIVIDUALS THAT USE IT

- No one drew a route/parts of the city, only family members.
- Several forgot what the question was and simply drew what they wanted to.
- Their dependence on their caretakers overrides their experience of the city.

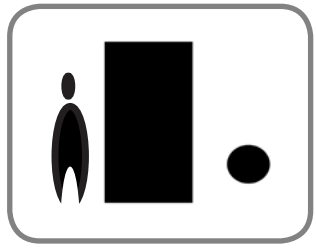


Figure 3.9(a): Grade 4 pupil ... drawing.

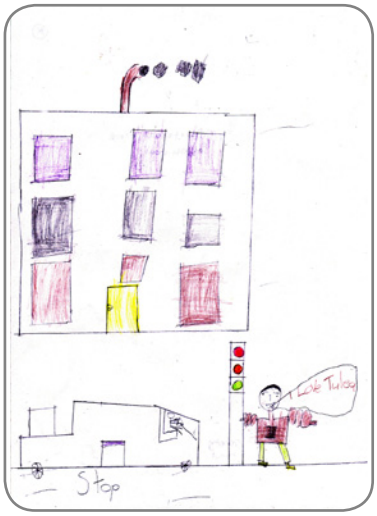


Figure 3.9(b): Grade 4 pupil ... drawing.

Grade 4s:

- Age Developmental Task or Conflict Stages of Development According to Erik Erikson (http://en.wikipedia.org/wiki/Erikson's_stages_of_psychosocial_development):

7 to 11 years old: Industry vs. Inferiority - Children busily learn to be competent and productive or feel inferior and unable to do anything well.

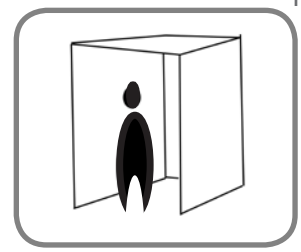
- Commonalities:

- Very easily distracted, unruly and difficult to manage.
- Uncertain about use of colour or the way to orientate the page.
- Students jump over each other's desks to get to their own; no space.
- They hide their drawings from each other for fear of being laughed at.
- They tell on each other and on their parents; no filter.
- They look at each other's drawings to validate their own.
- They cry to get the most attention.

- Extractions:

BUILDINGS AS OBJECTS, PROPS IN THEIR LANDSCAPE

- All included their homes in the city. Some were high-rise buildings with pitched roofs.
- Those that live in apartment blocks resorted to drawing pitch roofed houses in the city.
- One building represents a city.



Grade 7s:

- Age Developmental Task or Conflict Stages of Development According to Erik Erikson (http://en.wikipedia.org/wiki/Erikson's_stages_of_psychosocial_development):

Adolescence: Identity vs. Role confusion - Adolescents try to figure out, "Who am I?". They establish sexual, ethnic, and career identities, or are confused.

- Commonalities:

Figure 3.10(a): Grade 7 pupil ... drawing.

- Very quiet when drawing.
- Everyone used a ruler to draw.
- They felt more free with page orientation but were unsure about being able to use colour.
- Children sitting next to each other copy each others' drawings.
- Several students took out extra paper to practise first.
- The draft drawings were freer and more creatively inclined.

- Extractions:

BUILDINGS AS FUNCTIONAL AND ENGAGING ELEMENTS IN SPACE AND CREATOR OF SPACE

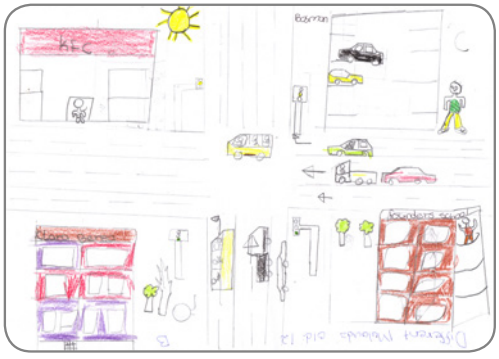


Figure 3.10(b): Grade 7 pupil ... drawing.

- Better understanding of the busyness of the city.
- More attention paid to the different kinds of building programs.
- Better understanding of building scale in relation to people.

3.4 Context_The Adult Space

3.4.1 Program Proposal

There is the possibility that the primary school and high school can be split, to ease the strain on their available resources. The primary school (with children ranging in ages between 6-14 years old) is to be accommodated at what currently houses the Public Works Department (PWD) Workshops, 975m walking distance to the north-west of the current school location between Minnaar and Jacob Mare streets. This primary school wing is the dissertation's design challenge. This new location remains in close proximity to the public transport nodes and the residential blocks. Chapter 05 will highlight its incremental growth plan by revenue generation.

The site will be shared with a framework member, who has proposed an Equestrian centre. The PWD workshop functions will be phased out. This is also explained in Chapter 05.

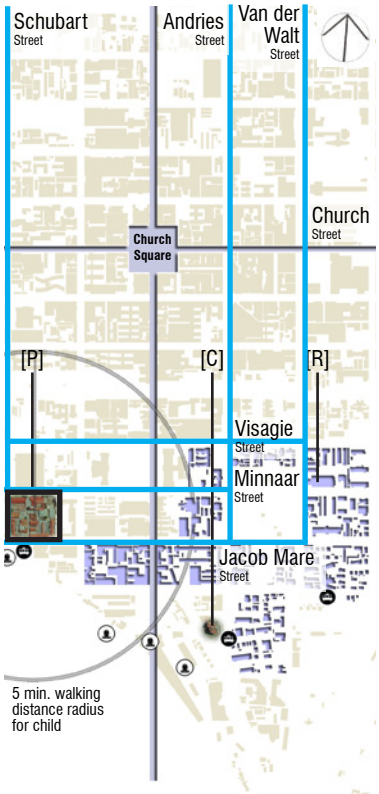


Figure 3.11: Proposed school location and proximity to convenient urban amenities. (Graphic by: Author)

[C] 3rd + current location
[P] Proposed Primary School location
[R] Residential + mixed-use blocks
Taxi stops/ranks
Train stations

Figure 3.12: Photo of the Museum Park Precinct taken in 1939 (Sammy Marks Photo Collection).

3.4.1.1 Larger Context_Museum Park Precinct

The Museum Park Precinct is located between Visagie street to its north, Minnaar and Jacob Mare streets to its south, Van der Walt and Andries streets to its east and Schubart street to its west.

It has had two separate frameworks proposed to government with the aim to reactivate its current state of dormancy, to no avail. One of the main issues now present on Minnaar street (deemed the Museum street) is the many homeless people and drug users that sleep on the public benches. There are two possible reasons for this:

- the putting up of fences has deactivated a constant flow along the street and its surroundings. This has hampered any possible street edge activation. Dead spaces with no chance of activation become attractive for the homeless.

- Benches are rare in the city. They are also a better alternative to sleeping on the cold paving. As the only street in the inner city with benches, it becomes a point of attraction.

Sectional street analyses as well as a Museum Precinct vision will follow as an analysis of the streets' current conditions.

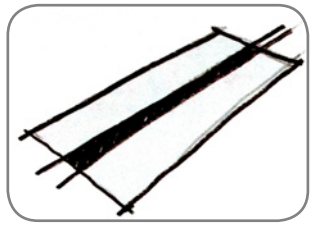


Figure 3.13(a): **Proposal 1_Museum Mall 1992 (Africana Collection, UP)**
The proposal aimed to address Minnaar street by pedestrianizing it in the hopes the more walking users will have reason to occupy it and hence the Museum buildings around it. None of the proposal got implemented.

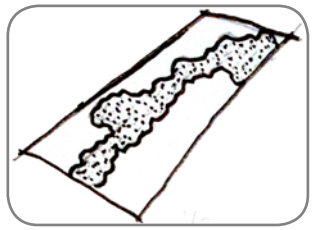


Figure 3.13(b): **Proposal 2_Museum Park (Africana Collection, UP)**
The proposal had a vision to connect all of the Museums through their courtyards, creating a large public street park. This was to be in phases, starting with pedestrianizing Minnaar street.

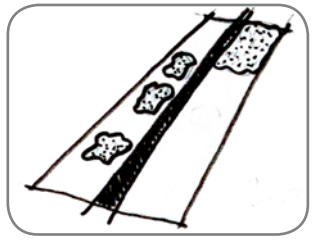


Figure 3.13(c): **Implementation_Museum Park (Holm Jordaan Architects)**
Of this proposal, only some of the plans for Minnaar street were implemented. Street lights with benches were put in place, as well as a wider pavement. Some of the Museum courtyards were tended to but a street park never materialized.

MUSEUM MALL

VOORGESTELDE OPGRADERING VAN KERKSTRAAT EN MINNAARSTRAAT

SAAMGESTEL: DEUR MUSEUMWERKGROEP
GETEKEN: MAURITZ NAUDé
DATUM: OKTOBER 1992

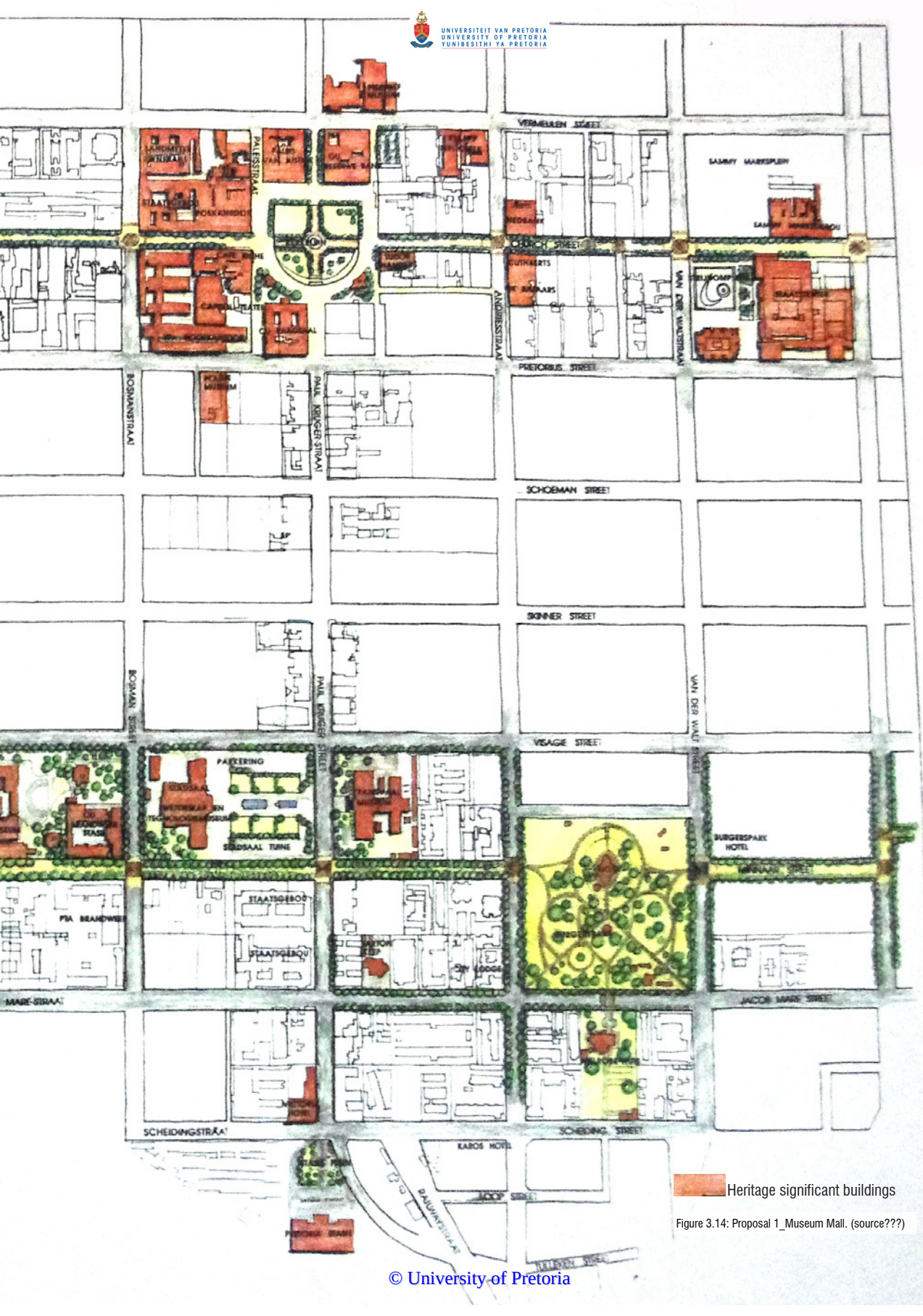
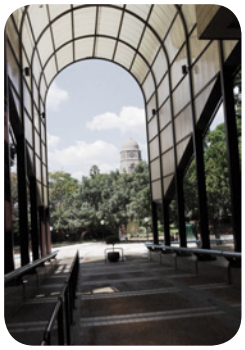


Figure 3.14: Proposal 1_Museum Mall. (source???)

[1]



Name: African Window (Museum of Natural Cultural History)
Architect:
Year: 1912
Significant feature(s): Housed in the Old Mint; rock paintings and engravings of the San people; thousand year old Iron Age figurines from Schroda in the Limpopo Province; Art Gallery with cultural objects, crafts, sculpture and paintings and an exhibition on Marabastad.

[2]

Name: Minnaar House
Year: 1900
Style: Victorian
Significant feature(s): former Headquarters of the British Forces

[3]

Name: Old Fire Station
Heritage Class: Subject to Section 34 of the NHRA (25 of 1999) as it is older than 60 years old.
Architect: Cowin & Powers Architects
Year: 1912
Significant feature(s): Six-storey high training tower; training tower

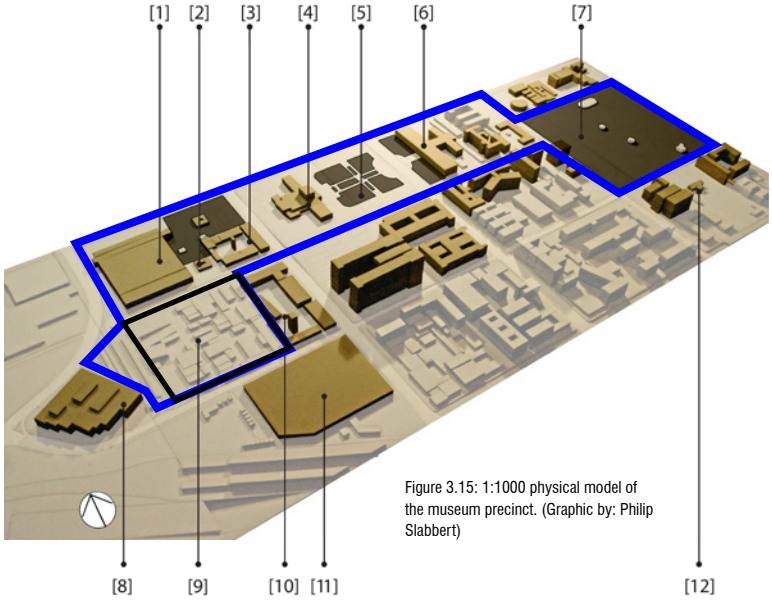


Figure 3.15: 1:1000 physical model of the museum precinct. (Graphic by: Philip Slabbert)

[1] - Natural Cultural History Museum (African Window)
[2] - Minnaar House
[3] - Old Fire Station
[4] - City Hall
[5] - Pretorius Park
[6] - Natural History Museum
[7] - Burgers Park
[8] - Post Office
[9] - Public Works Department (PWD) Workshops
[10] - New Fire Station
[11] - Station Square Mall
[12] - Melrose House
- Museum Precinct

[7]

Name: Burger's Park
Heritage Class: National Monument (National Heritage Resource grade 1) as of March 9, 1979
Botanist: James Hunter
Year: 1892
Style: Victorian
Significant feature(s):
- World War 1 monument
- President Burgers statue
- Florarium and fish pond

[8]

[9]

[4]

Name: City Hall
Architect:
Year: 1931
Style: Neo-Classical
Significant feature(s):
- Marthinus Wessel Pretorius statue
- Andries Pretorius statue
- Chief Tshwane statue

[5]

[6]

Name: Transvaal Museum (Museum of Natural History)
Architect:
Year: 1892
Style: Victorian
Significant feature(s): one of the largest and most impressive natural history museums in South Africa. It has cultural history, geology, military history, archaeology, paleontology, flora and fauna and anthropology collections.

3.4.1.2 Mu•se•um (my -z m)

n. A building, place, or institution devoted to the acquisition, conservation, study, exhibition, and educational interpretation of objects having scientific, historical, or artistic value.

The word ‘museum’, originating from the greek word Mouseion, refers to art set aside to be studied (Findlen, 1989). It displays and exhibits educational material on a sometimes large scale and is accessible to everyone, both young and old. It is a public form of education, allowing everyone to occupy the same space and be fascinated by the same things.

What adds to the joy of the museums in Museum Park are their landscapes, done with the intention of inspiring social interaction before entering its premises. Its landscapes are made of parks, courtyards and amphitheatres, this giving opportunity for outside learning and social engagement.

The presence of a school in this precinct can greatly gain from this context, engaging in both public and private forms of learning, and facilitated and experiential learning.

[10]

[11]

[12]

Figure 3.16: Cross-sectional analysis diagram of the PWD workshops and its surrounding context. (Graphic by: Author)

3.4.1.3 Searching for Clues_Street Analyses

A longitudinal and cross-sectional analysis were done to understand the nature and scale of the PWD's immediate surroundings. Besides its noteable Heritage components, other aspects such as informal vending, unsafe areas, noisy areas, seating spaces and play spaces were mapped.

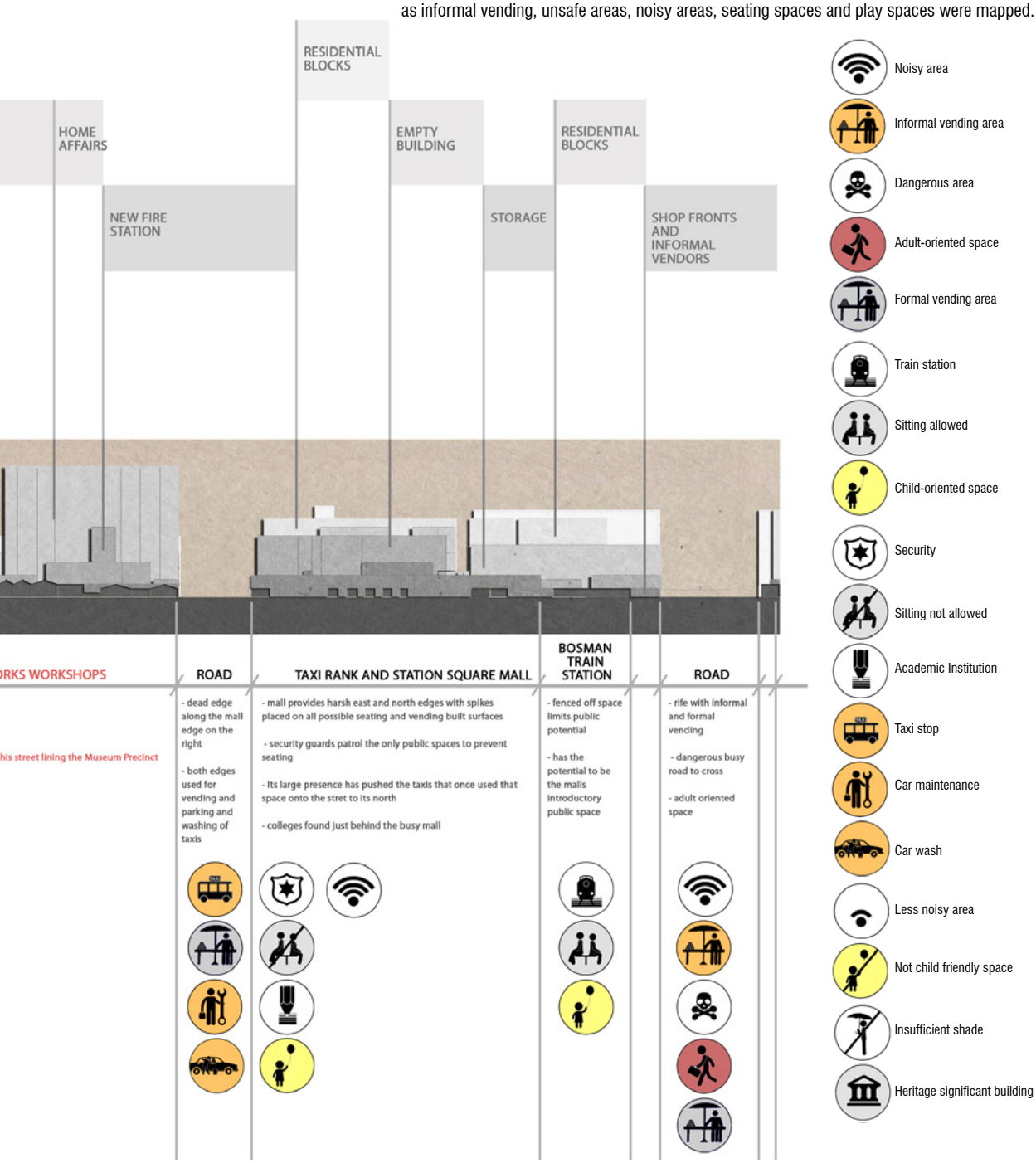
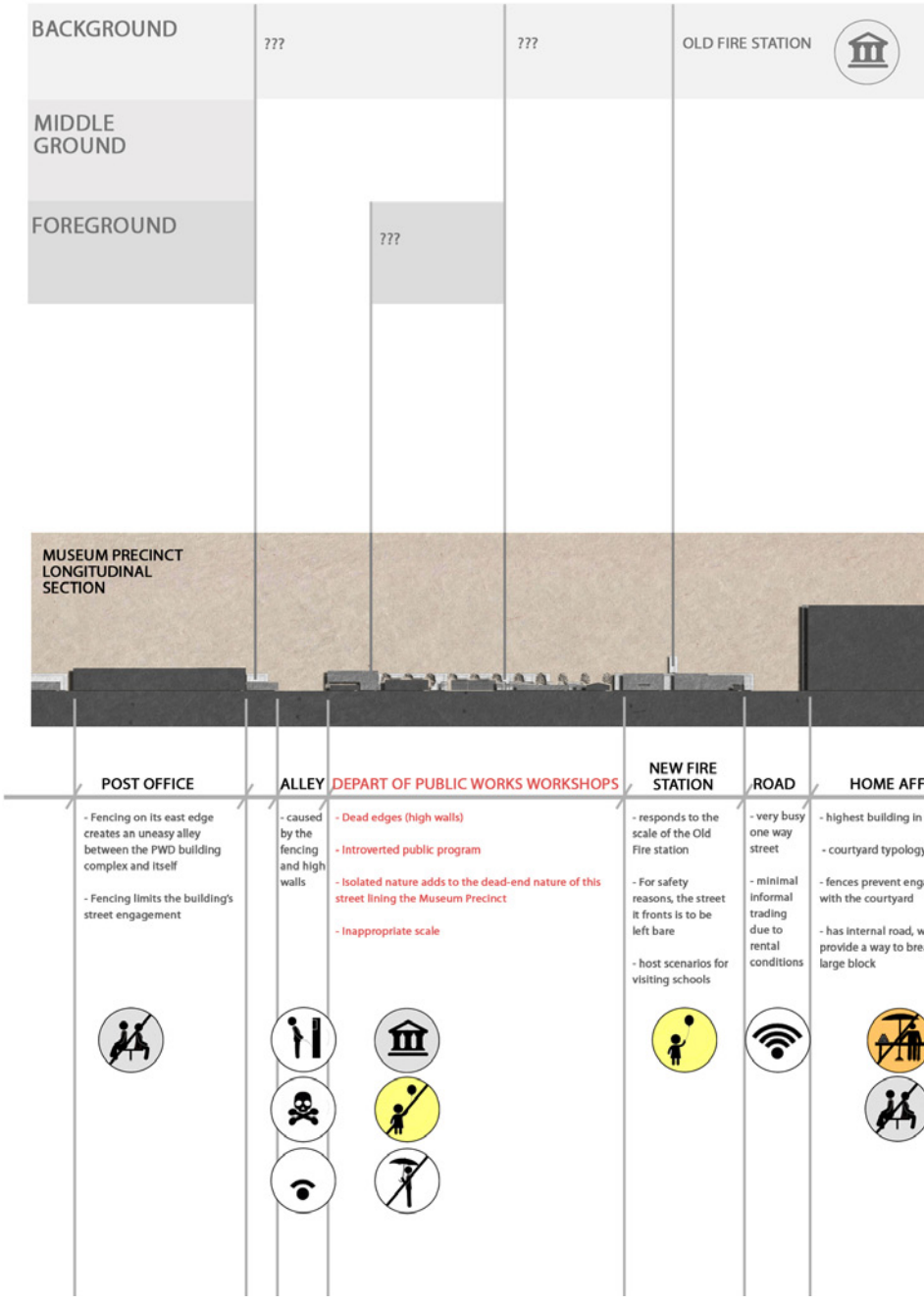
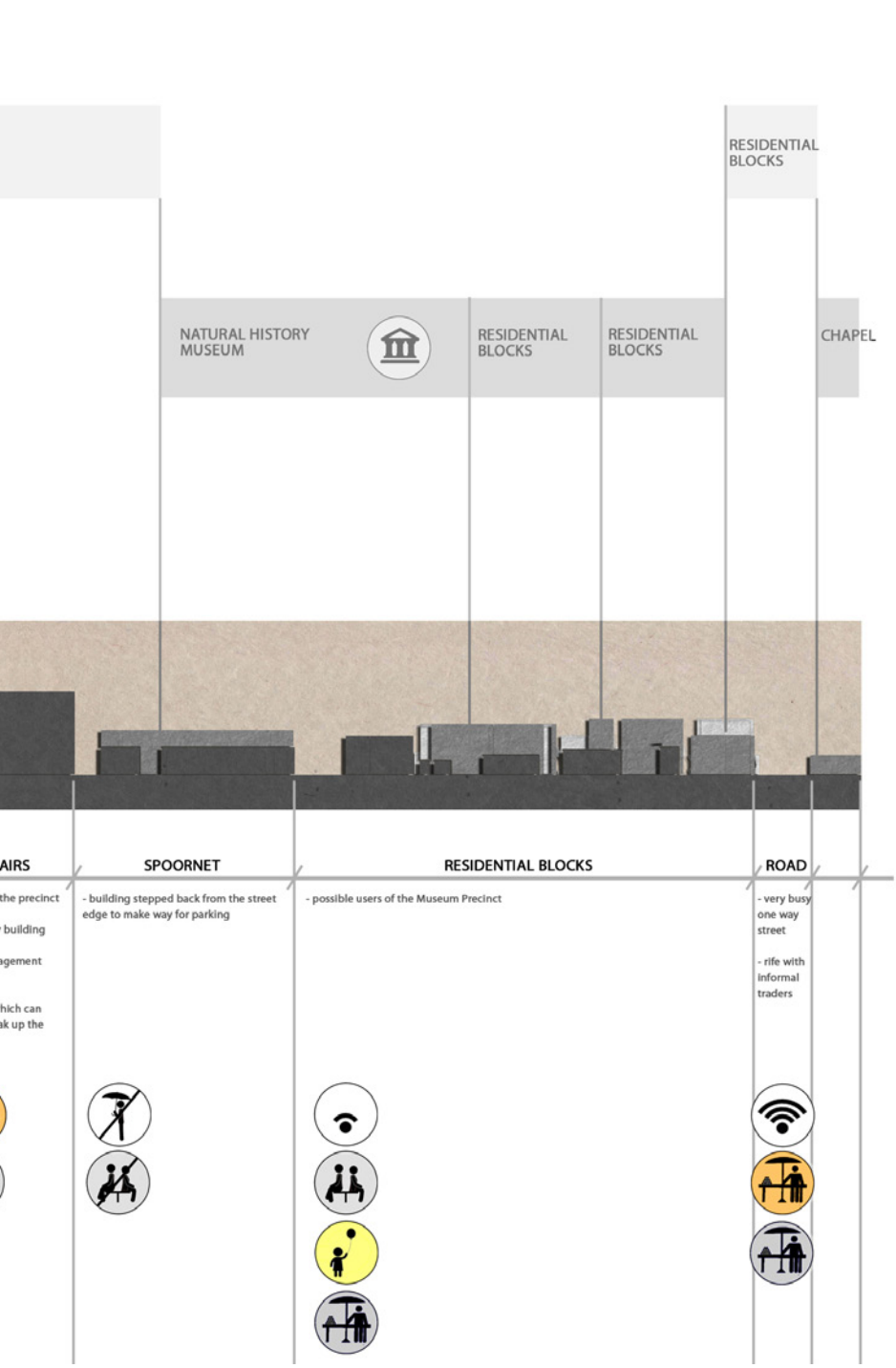
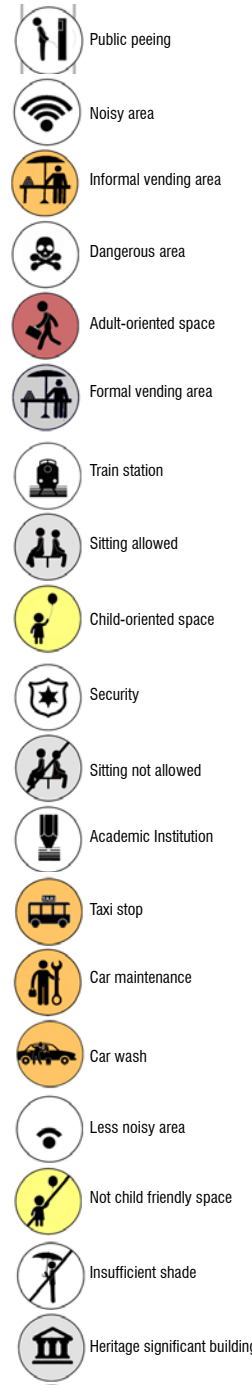
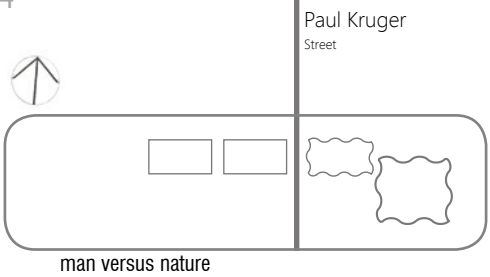


Figure 3.17: Longitudinal sectional analysis diagram of the PWD workshops and its surrounding context. (Graphic by: Author)

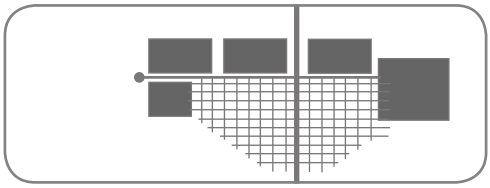




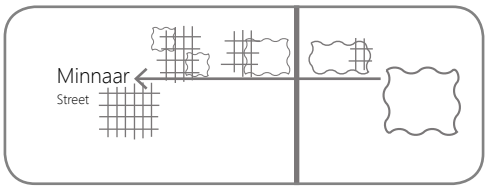




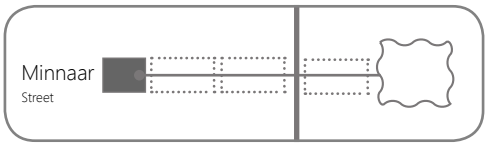
man versus nature



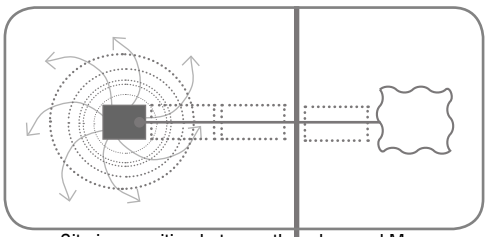
grain + time_preservation versus quotidia



grid versus organic



Minnaar street as thread with PWD and Burgers park as edges



Sits in a position between the urban and Musuem Precinct, carrying the potential to mediate between them through an acupunctural intervention

3.4.2 Urban Acupuncture

The PWD site is located on the Museum Precinct's Western edge. It sits in a place that has the potential to accommodate an acupunctural intervention, which can seamlessly introduce the Museum Precinct to the functionings of its bustling surrounding urban context though cross-programming. This would happen by programming some of the school's functions in its surrounding context so that engagement by the children can start to occur on a regular basis with the city. These programs would not be child-exclusive; they would include activities such as musical performances and plays, thus creating scenarios where adults can take an interest and at the same time engage with the same context.

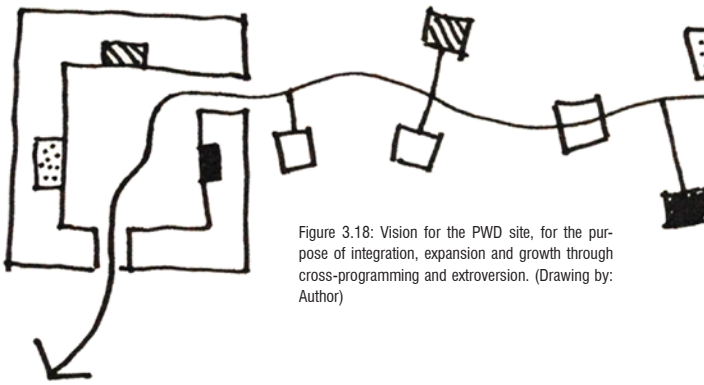
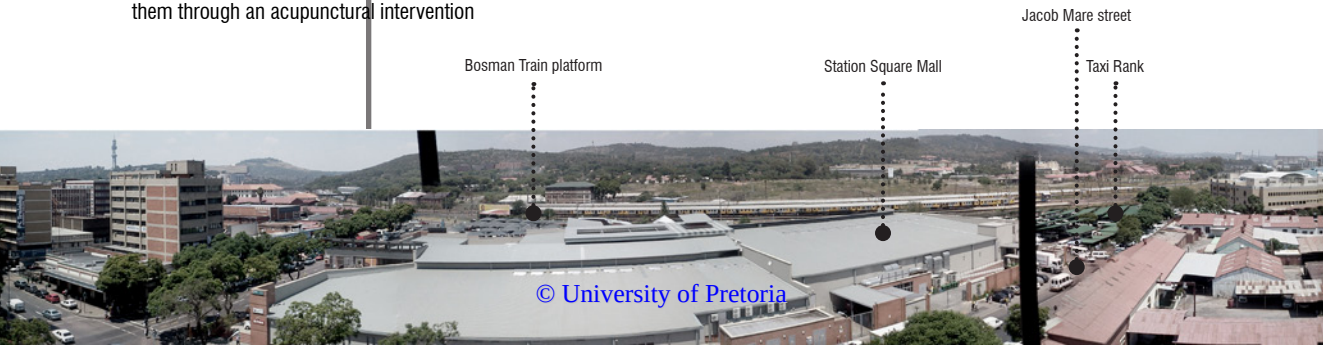
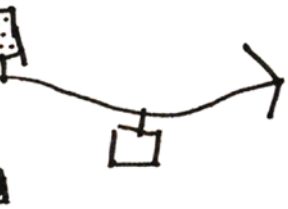


Figure 3.18: Vision for the PWD site, for the purpose of integration, expansion and growth through cross-programming and extroversion. (Drawing by: Author)

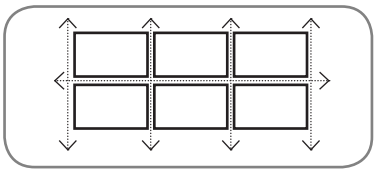
The diagrams on the left illustrate the polarites and hence opportunites currently present in the site's immediate surrounding context. These became the main informants for the urban vision as outlined in Chapter 05.



The following illustrations demonstrate the urban conditions necessary for the PWD site to function as an acupunctural point in the Museum Precinct. A lack of these conditions could possibly inhibit growth, integration and sustainability of the Precinct.

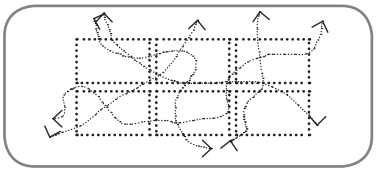


CURRENT CONDITION

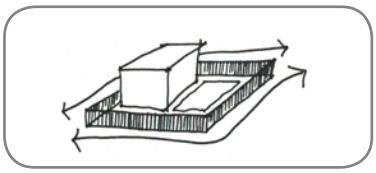


Monolithic street blocks

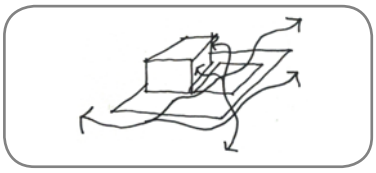
PROPOSED CONDITION



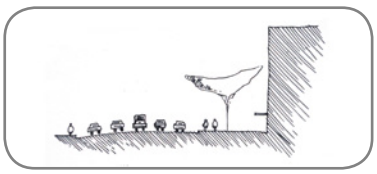
Break-up of the blocks through access and cross-programming



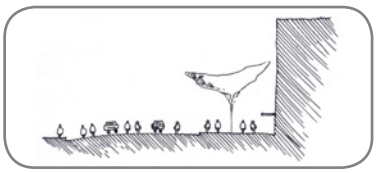
Museums are currently all caged in high walls and fences



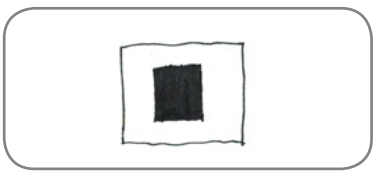
Removal of the fences - alternative forms of security; public spaces given back to the public



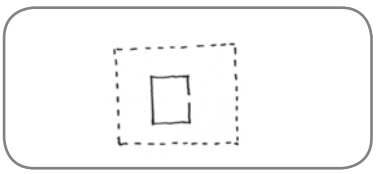
streets are car orientated



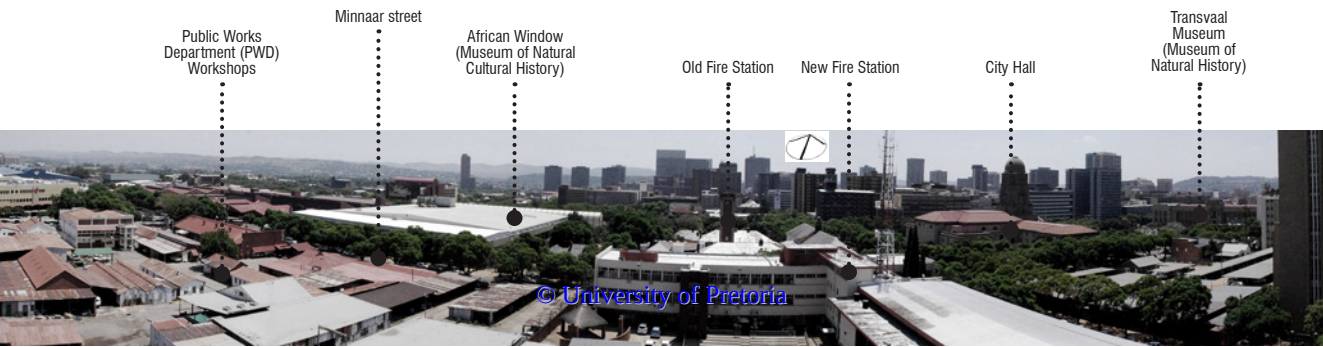
make car and pedestrian shared avenue, to inspire edge activations to increased pedestrian use



introverted or exclusive programming (monofuncitonal)



Cross-programming and integrated programming



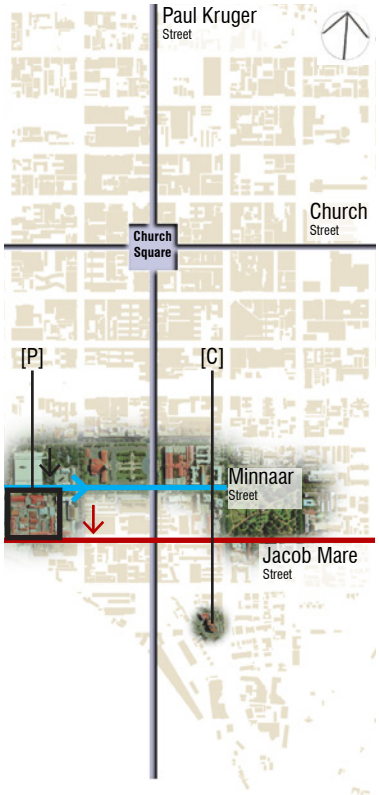


Figure 3.19: Proposed school location and proximity to convenient urban amenities. (Graphic by: Author)

[C] 3rd + current location
[P] Proposed Primary School location

Jacob Mare street observations

PWD's Minnaar street presence

Minnaar street observations

service yard - easy access

taxi rank

bustling informal vending sector

train

hard courtyard spaces

secure and guarded

very high windows inhibits outside connection

pitched roof architecture, unique to the larger context

ample lighting

abundance of vegetation

Informal vending stalls at traffic lights

wide, shaded pavements

Dormant vehicular roads and street edges

ample parking

barbed wire on fences

high walls

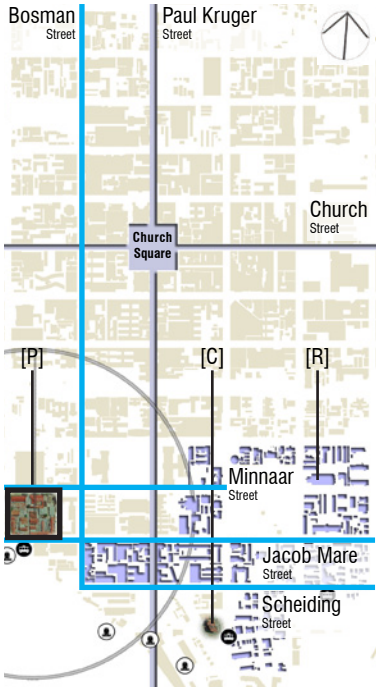


Figure 3.20: Proposed school location and proximity to convenient urban amenities. (Graphic by: Author)

3.4.3 Urban Engagement Proposal

Adaptive re-use of existing buildings and use/ownership of available city infrastructure can be a strategy to ease rental costs while providing the school with some much needed facilities. The school currently hires a bus to take the children to Pilditch stadium for large sporting activities. For smaller sport events, they use their previous location's sporting grounds for training and extra-mural activities. More of the city has underutilized and available facilities which can fit into the school academic curriculum's needs and are at walkable distances.

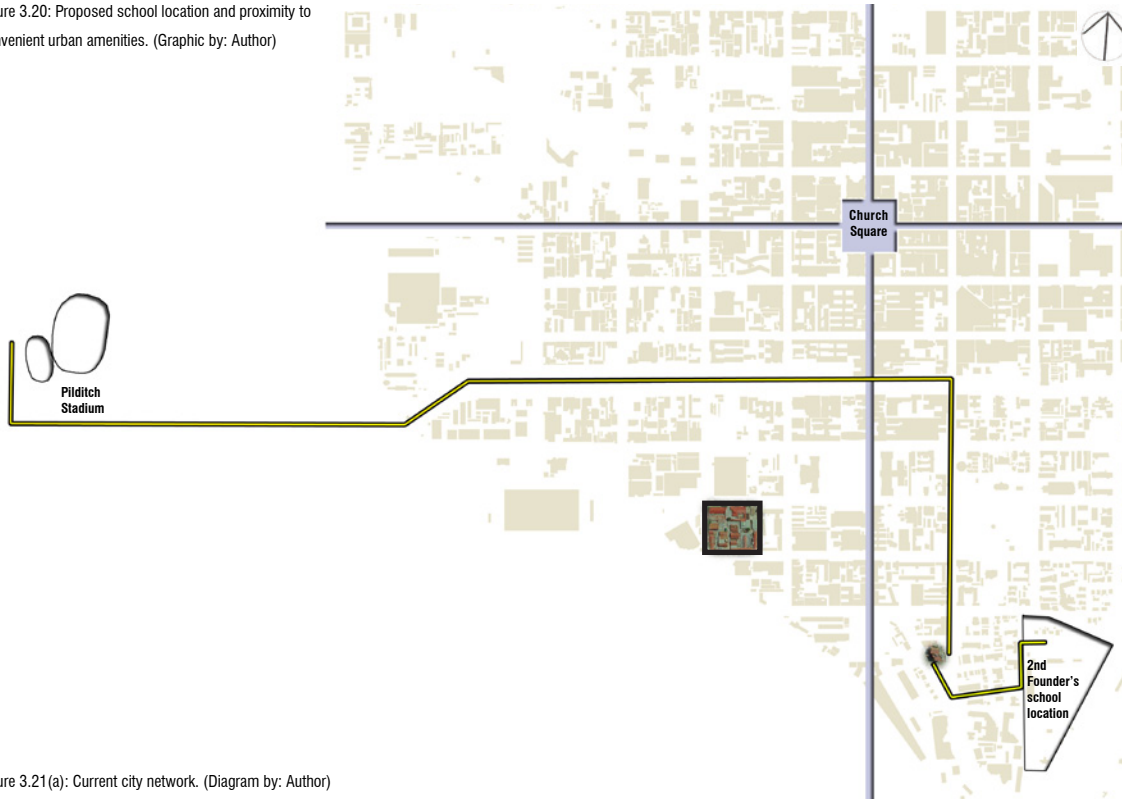


Figure 3.21(a): Current city network. (Diagram by: Author)

Name: New Fire Station's unused swimming pool [13]
Current Child Use(s): None
Possible Child Use(s): Swimming and water safety practises.

Name: Transvaal Museum (Museum of Natural History) and Discovery Centre [5]
Current Child Use(s): OBE-based class tours; hand-on activity centre (sensory)
Possible Child Use(s): History and Natural Science lessons and demonstrations can be presented though plays, which can be made along with the objects on display as props, as if the children lived through those eras.

Possible resting option(s): The fountains at City Hall on the way to the Museum; snacks can be bought along Paul Kruger street.

Name: Burgers Park landscapes [6]
Current Child Use(s): After school recreation
Possible Child Use(s): School recreation, physical education.

Possible resting option(s): The fountains at City Hall on the way to the Museum; the kiosk and the public amphitheatres at on the Transvaal Museum lawns; snacks can be bought along Paul Kruger street.

Name: Minnaar House [2]
Current Child Use(s): None
Possible Child Use(s): It was once used as a daycare centre. Its large northern views to the courtyards gives children ample room to run and explore in the confines of a protected space.

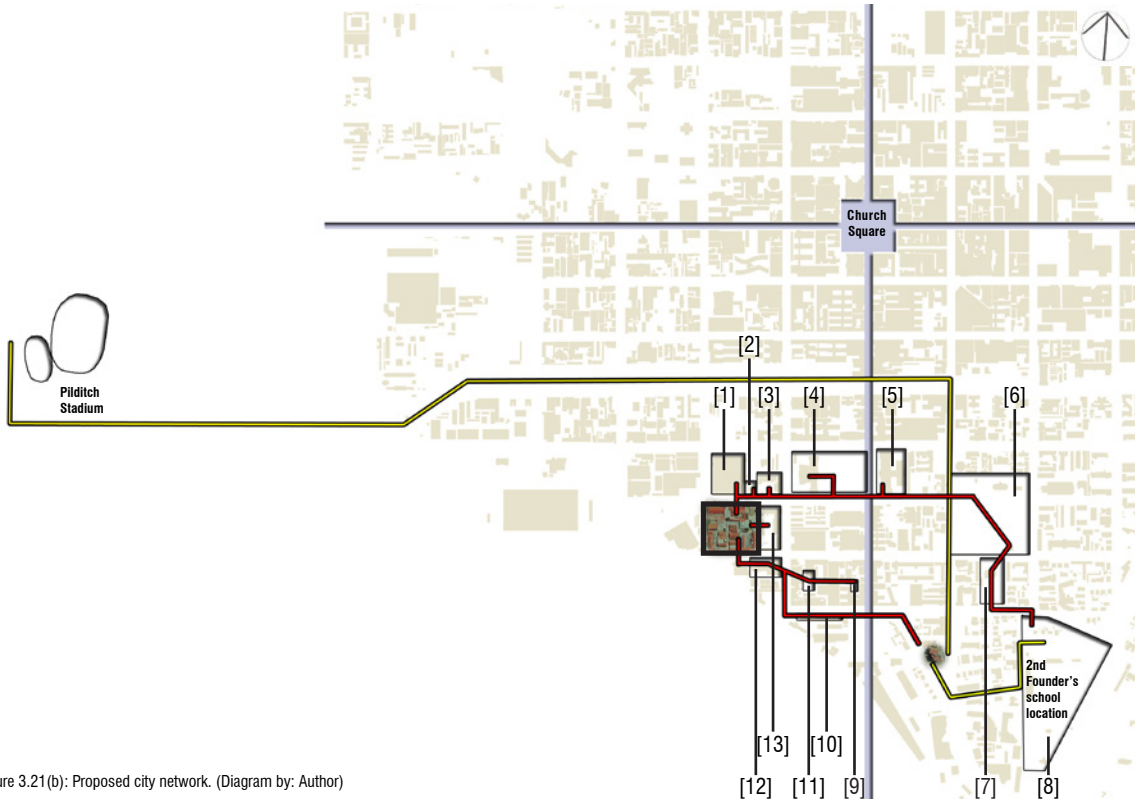


Figure 3.21(b): Proposed city network. (Diagram by: Author)

Name: Burgess Park Florarium [6]
Current Child Use(s): none
Possible Child Use(s): Botany related topics in Natural Sciences; vegetable planting and maintenance.

Possible resting option(s): The fountains at City Hall on the way to the Museum; the kiosk and the public amphitheatres at on the Transvaal Museum lawns; snacks can be bought along Paul Kruger street.

Name: New Fire Station courtyard [13]
Current Child Use(s): Occasional school visits
Possible Child Use(s): Children can be taught safety lessons and execute demonstrations with off duty firemen.

Name: Market on the corner of Scheiding and Bosman streets [10]
Current Child Use(s): none
Possible Child Use(s): The Economic and Management science subject can be aided with a space like this, where they can learn first-hand how to become entrepreneurs. It can also help to quickly understand the pace of the city and what is needed by its users.

Possible resting option(s): The Station Square mall

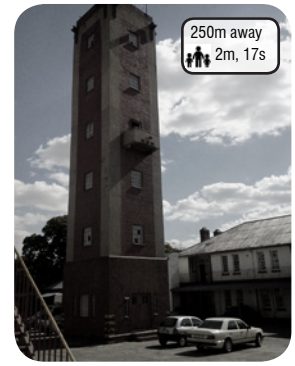
Name: Transvaal Museum (Museum of Natural History) courtyards [5]
Current Child Use(s): none
Possible Child Use(s): plays and musical performance shows; playground; history classes and art exhibitions.

Possible resting option(s): The fountains at City Hall on the way to the Museum; snacks can be bought along Paul Kruger street.

Name: City Hall's interior and gardens (Pretorius Park) [4]
Current Child Use(s): Arts market; feeding homeless children
Possible Child Use(s): School plays, musical events and eisteddfods and concerts can be held by the school in connection with the Arts market. Its very public nature can eventually generate revenue for the school through the events they host. The students doing Home Economics can give the meals they prepare to the homeless children, aiding their ability to emphasize and give back to the city.
The gardens can be used for physical education and school recreation.

Name: The Station Square Mall [12]
Current Child Use(s): after school shopping
Possible Child Use(s): the internet cafés can be used as temporary school computer laboratories while the school generates revenue to get their own. The constant flurry of people coming from the train stations and taxi rank places this mall at a great place for business and business learning, opportune for the children learning Economic and Management Sciences.

Name: African Window (Museum of Natural Cultural History)'s interior and gardens [1]
Current Child Use(s): occassional school visits
Possible Child Use(s): School recreation; story time, plays and musical events at the outside seating area; Arts & Culture, Life Orientation and Social Sciences classes can be taught here.



Name: Old Fire Station [3]
Current Child Use(s): Museum; School of Performing Arts; movie nights
Possible Child Use(s): Music lessons, dance and acting can be taught to students as part of their curriculum. Movie nights can start to generate revenue for the school.

Name: Burgers Park building structures [6]
Current Child Use(s): After school recreation
Possible Child Use(s): Unused structures such as the one in the image above can be used as an outdoor classroom. The surrounding natural landscape becomes a relaxing and rejuvenating backdrop in which to undergo learning.

Possible resting option(s): The fountains at City Hall on the way to the Museum; the kiosk and the public amphitheatres at on the Transvaal Museum lawns; snacks can be bought along Paul Kruger street.

Name: Old Founder's Community school sports grounds [8]
Current Child Use(s): sports practise
Possible Child Use(s): although it is currently in use by the Founder's Community school, it is highly unkempt and harbours criminals. Communal use by more schools can lead to a maintenance plan for the grounds and eventually revenue generation.

Possible resting option(s): Melrose House and Burgers Park, both of great historical value to the city with effective green spaces. Several informal vending stores provide drinks and juicy fruits to quench thirst after sports practise.

Name: Transvaal Museum (Museum of Natural History)'s Kiosk and lawn [5]
Current Child Use(s): none
Possible Child Use(s): Occasional lunch breaks can occur here for the school, with the remainder of the lawn acting as playcapes for the children.

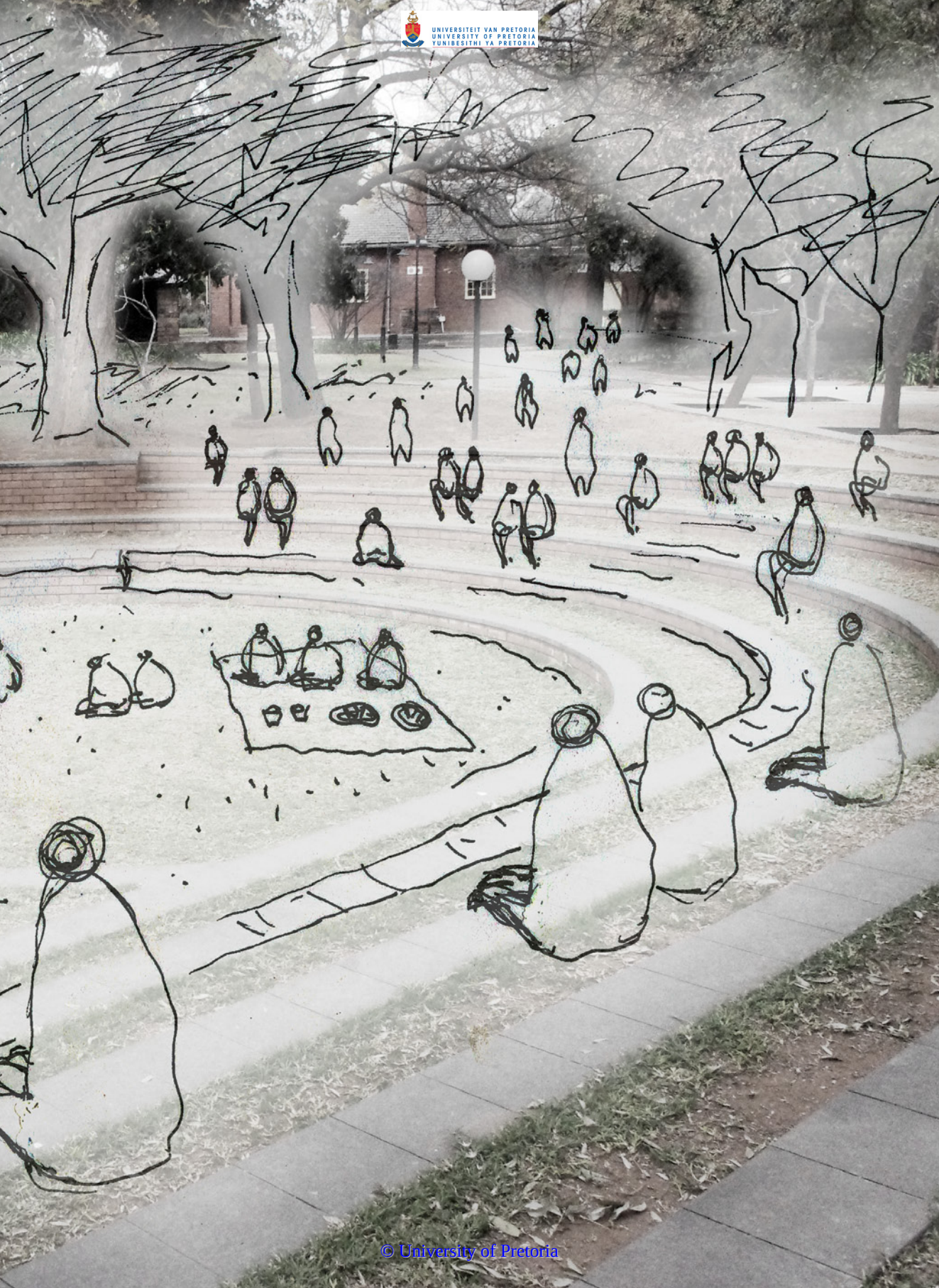
Possible resting option(s): The fountains at City Hall on the way to the Museum; snacks can be bought along Paul Kruger street.

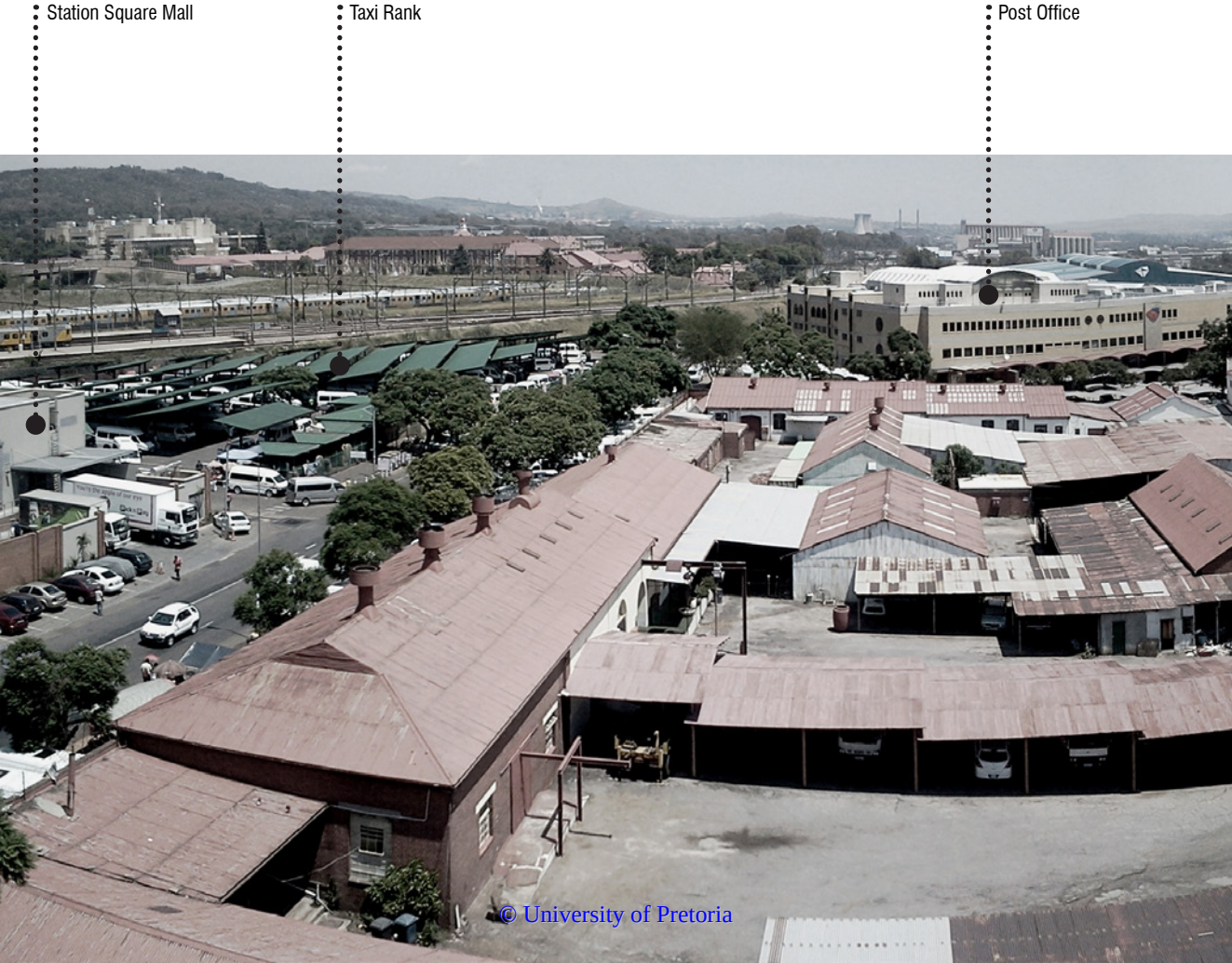
Name: Parking lot between Christina (east) and Hoop (west) streets [11]
Current Child Use(s): none
Possible Child Use(s): These mostly underused streets are used by students who are on their way to the Bosman train station. As its inactivity poses a safety issue, the parking lot can become a playground with vending surrounding it. This will establish a safe and surveyed resting point in the city for the children.

Possible resting option(s): The Station Square Mall

Name: African Window (Museum of Natural Cultural History)'s outside seating area
Current Child Use(s): None
Possible Child Use(s): School recreation; story time, plays and musical events; Arts & Culture.

[1]





3.4.3.1 Smaller Context_Public Works Department Workshops

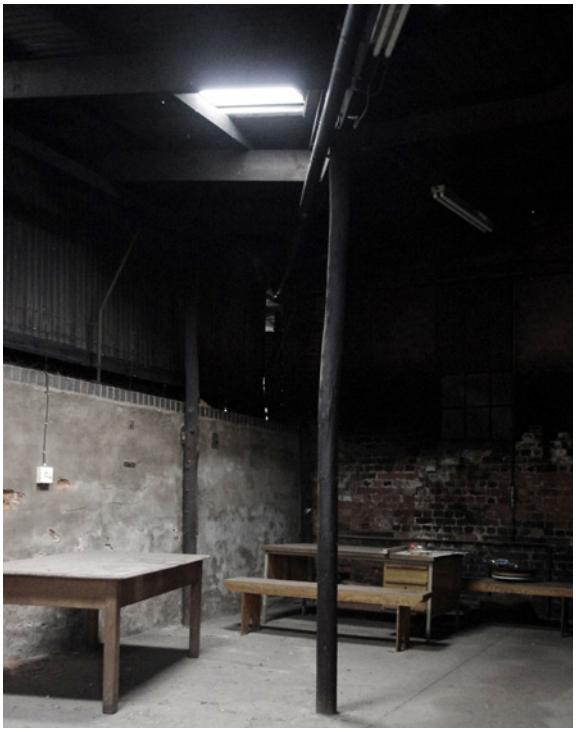
Figure 3.22: Controlled point of entry and exit. (Drawing by: Author)

Figure 3.23: The PWD site currently functions as an introverted courtyard both physically and programatically. (Drawing by: Author)

The Public Works Department (PWD) workshops is located 1.2km walking distance to the south-west of Church Square. It is walled up on all four of its sides with one point of entry and exit, near the security cameras and guard house to the north. It is made up of scattered shed-type brick building structures - with the highest being the three storey administration building - ranging in ages between 40 and 118 years old (1895 to 1970s). The PWD block is very private in nature and the cul-de-sac by which it sits prevents easy mobility and access.

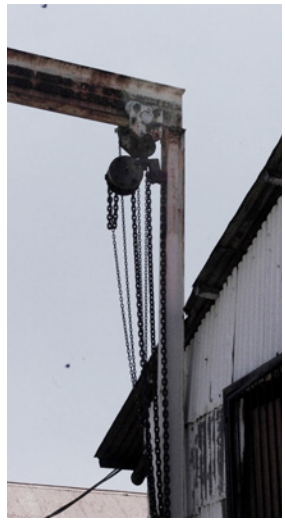
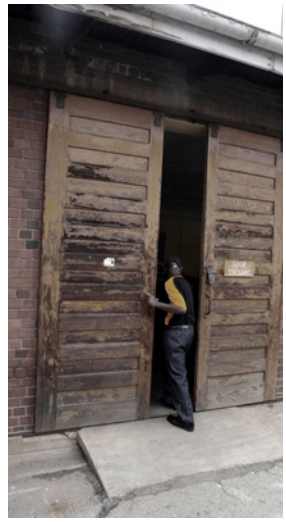
It has no engagement with its immediate surroundings; that being the mall and taxi rank to its south and the museum buildings to its north. It is positioned as a potential mediator between its very different north and south urban conditions.

*Landing Exercise*_First Impressions







3.4.3.2 Existing Programs

The workshops are currently in use, although spatially over-accommodated. It has over the past 20 years decreased significantly in number of occupants, from around 120 in the 1960s to around 40 in 2013.

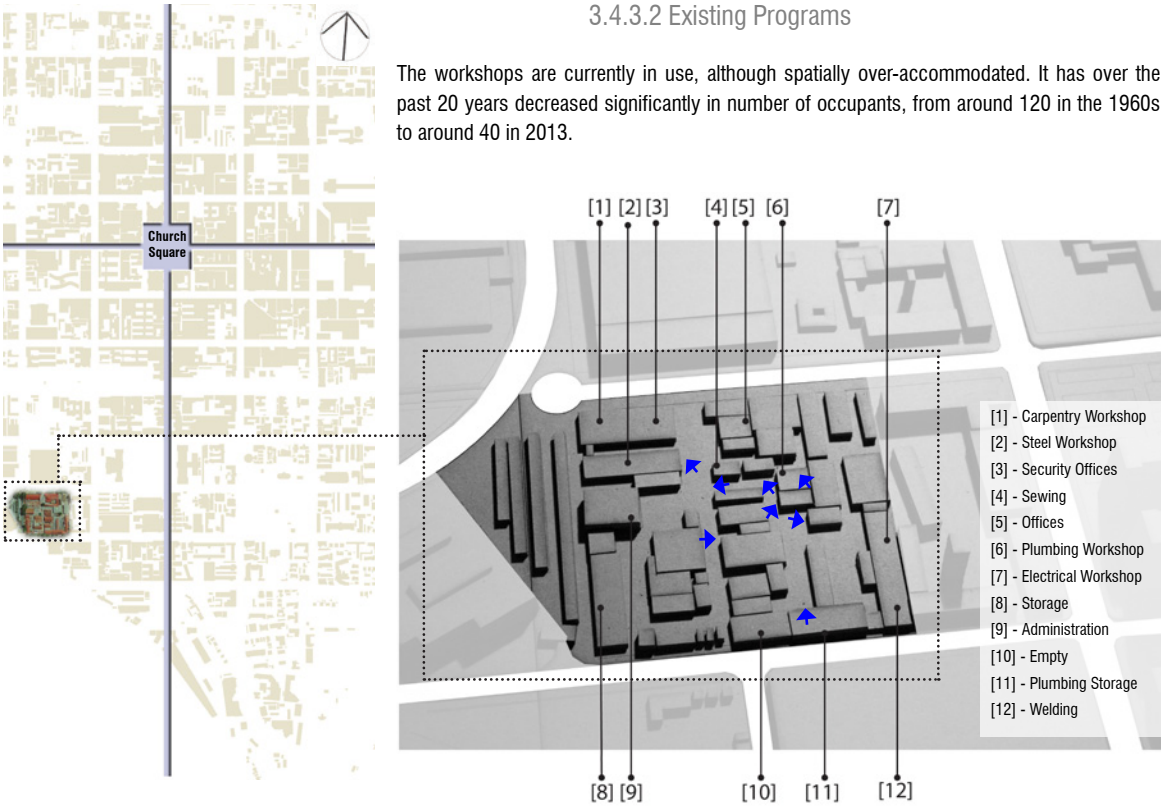


Figure 3.24(a): Current building programs. (Photo by: Philip Slabbert)

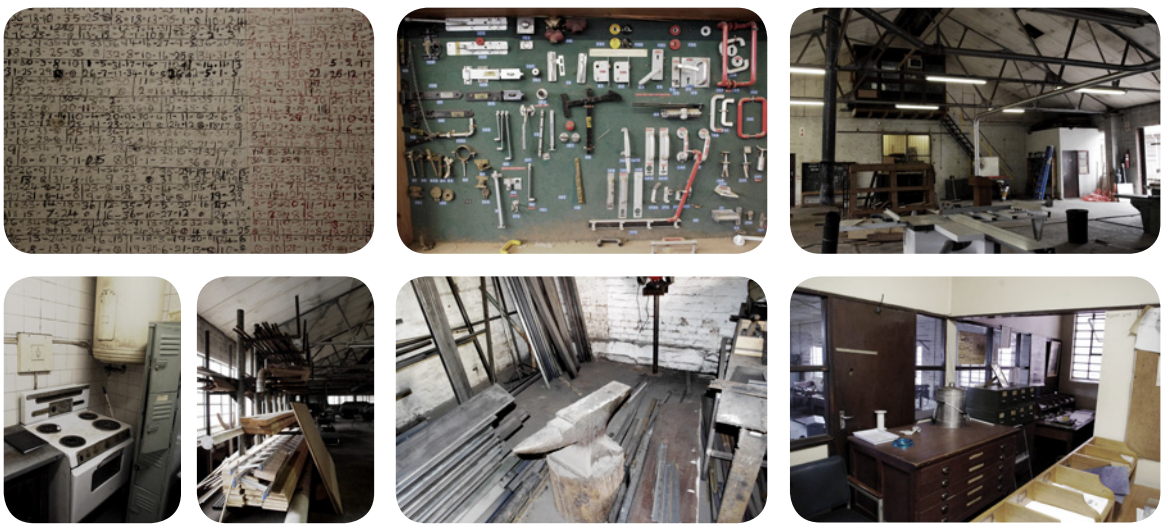


Figure 3.24(b): Photos of spaces still in use by the workers at the PWD. (Photos by: Philip Slabbert)

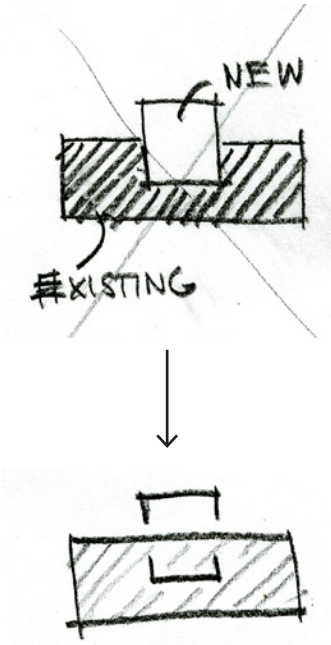


Figure 3.25(a): Heritage building approach illustrated with the image above. (Drawing by: Author)

3.4.4 Heritage Proposal

The significant Heritage buildings shown below are protected by **section 34 of the National Heritage Resources Act of 1999**, as they are over 60 years old.

These buildings come together compositionally to create an intimate, human scale to the courtyard spaces, this being a unique feature in the Museum Precinct. The heritage stance to these buildings is to ensure that this human quality remains.

The buildings are granted physical **[as per articles 21.2 (Adaptation) and 22 (New Work) of the BURRA Charter]** or programmatic **[as per article 7.2 (Use) of the BURRA Charter]** change on condition that it is for the purpose of enhancing its surrounding courtyard spaces. Its brickwork and single storey typology should be retained for this purpose **[article 16 (Maintenance) of the BURRA Charter]**. The primary school program will then aim to adhere to ***article 13 (co-existence of cultural values) of the BURRA Charter*** by respecting and promoting a co-existence of both the old and new building styles, programs and rituals.

The Plumbing Store (iii) is the only one that has a definite prescription, that being that its west façade is not to be changed, but rather maintained as is, according to **article 16 (Maintenance) of the BURRA Charter**. Its arched entrance with recessed wooden doors - unique to the site - and peeling plastered brickwork presents a tangible archaic character to the space it sits in, immediately bringing users back to the nature of the time. That character, as well as an axial vista towards it is to be preserved, as a reminder of what the precinct started as and has managed to successfully retain.

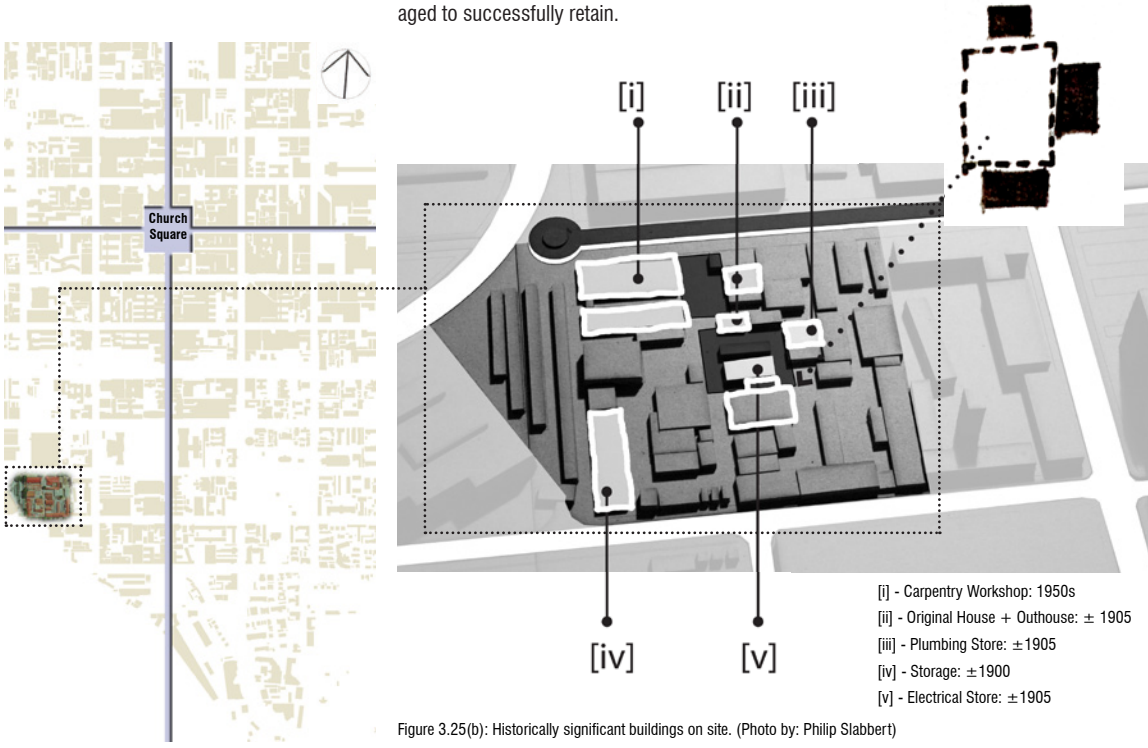


Figure 3.25(b): Historically significant buildings on site. (Photo by: Philip Slabbert)

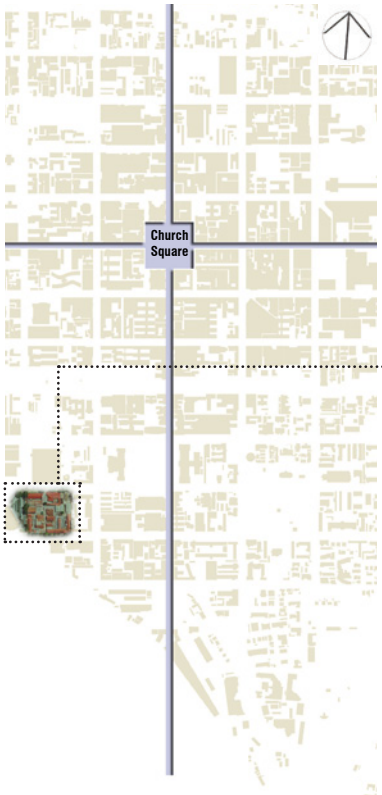
Figure 3.26(a): [ii] Original House (left; bare-faced brick building) and Outhouse (right; white painted plastered building). (Photo by: Philip Slabbert)

Figure 3.26(b): [i] Carpentry workshop. (Photo by: Philip Slabbert)

Figure 3.26(c): [iii] Plumbing Store. (Photo by: Philip Slabbert)

Figure 3.26(d): [iv] Storage. (Photo by: Philip Slabbert)

Figure 3.26(e): [iv] Electrical Store. (Photo by: Philip Slabbert)



3.4.4.1 Underutilized Spaces

A majority of the covered spaces on site are currently parking. The amount of temporary storage buildings add up to as much as the buildings in regular use. Regardless, the builidngs in use remain underutilized, at times with as little as 3 people working in a workshop area that can fit over 100 workers.

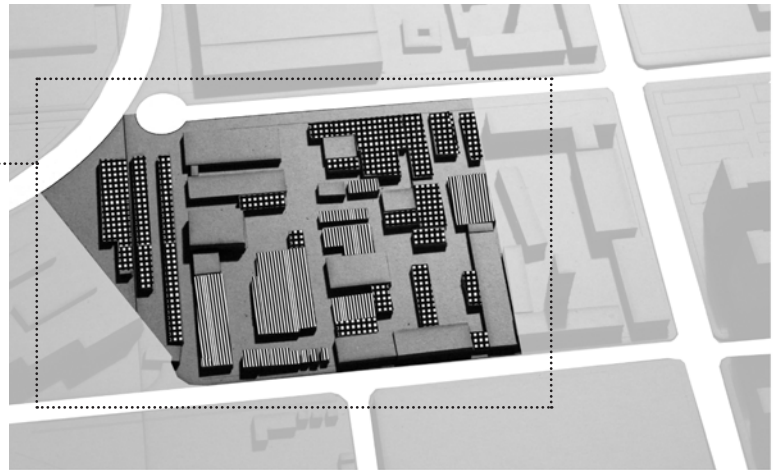


Figure 3.27(a): Underutilized buildings on site (potential for re-use). (Graphic by: Philip Slabbert)

Parking structures

Temporary storage buildings

Figure 3.27(b): Unused cloak room space [1], as well as parking lots found at the PWD [2] - [5]. (Photos by: Philip Slabbert)

3.4.5 Rental Proposal

As an urban environment births temporary pop-up ventures of convenience, the school can accommodate such energies and eventually establish permanent mixed-use and/or revenue-generating programs that can cater for both the school students and the city users' needs, eg. a computer centre that can be used as an internet cafe after school hours.

Figure 3.28(a): Phones, airtime, talk time, phone covers and cigarettes are some of the items that can be seen on sale on the intersection of Minnaar and Paul Kruger streets. (Photos by: Author)

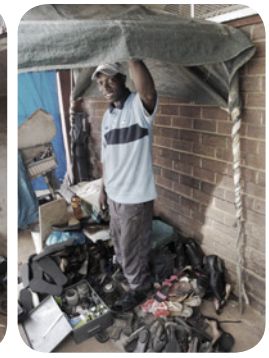


Figure 3.28(b): A hairdresser on Jacob Mare street gives a man a quick 'chiskop' while a shoemaker around the corner on Bosman street fixes shoes and makes and designs his own. (Photos by: Philip Slabbert)

Figure 3.28(c): A quick lunch can be bought on the intersection of Bosman and Jacob Mare streets. (Photo by: Philip Slabbert)

Figure 3.28(d): For heavier meals, Jacob Mare street offers a variety of things, from whole meals to large portions of meat. (Photo by: Philip Slabbert)

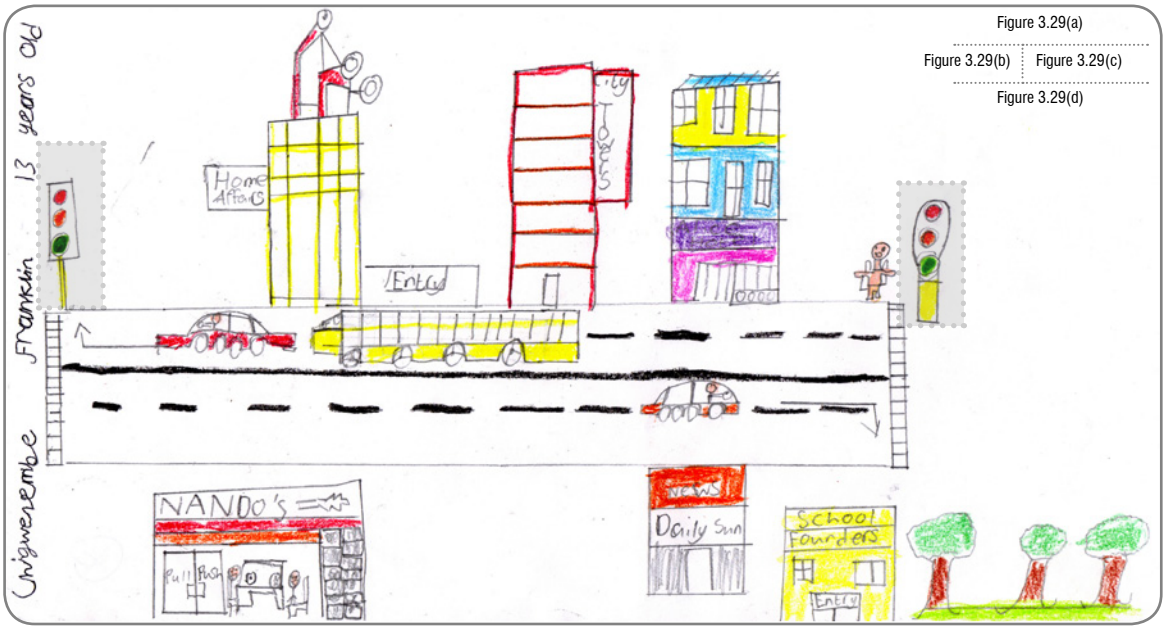
Figure 3.28(e): The shoemaker's self-designed shoes on display along the high brick wall of the new Fire Station. (Photo by: Philip Slabbert)

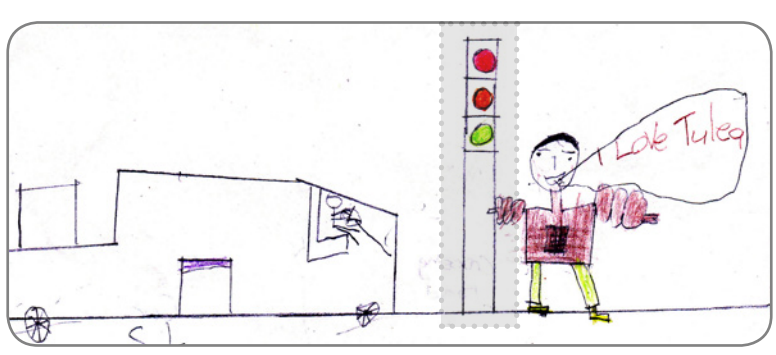
Figure 3.28(f): Informal vendors' canopies can be seen all along Bosman street, with items ranging from food to clothes to bicyles. (Photo by: Philip Slabbert)

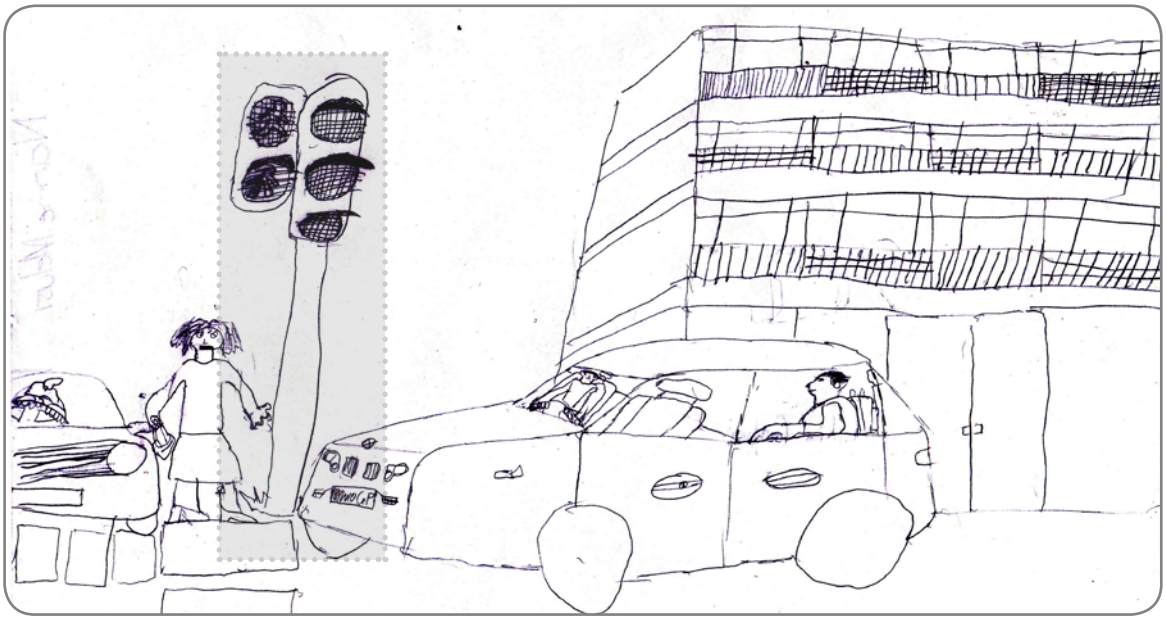
Figure 3.29(a)

Figure 3.29(b) Figure 3.29(c)

Figure 3.29(d)







from pg 74:

Fig 3.29(a): Drawing by grade 7 pupil Chigwenembe, 13, of Founder's Community School. He was asked to draw himself in the city.

Fig 3.29(b): Drawing by grade 4 pupil Kekeletso, 10, of Founder's Community School. He was asked to draw his route/how he gets home.

Fig 3.29(c): Drawing by grade 4 pupil Tshilidzi, 9, of Founder's Community School. He was asked to draw himself in the city.

Fig 3.29(d): Drawing by grade 4 pupil Melusi, 10, of Founder's Community School. He was asked to draw his route/how he gets home.

3.5 KIDS' CORNER_City Drawing Exercise

The drawing exercise asked three questions concerning these children in the city:

1. Draw yourself in the city
2. Draw your route/how you get home
3. Draw your route/how you get to school

What was most prominent in the drawings was the weight of the traffic lights. Most of them drew detailed or dominating traffic lights, sometimes larger than the surrounding buildings. Every child said that they were not afraid to navigate the city by themselves, crediting their feeling of safety to the traffic lights. In fact, all of the children claimed to find the city fun and safe. This revelation is what inspired a re-evaluation of approach to urban child spaces. It inspired a thought that the city has the capacity to be consumed partially. Each traffic light stop is a constant; it is an expected safe/control point which breaks the rhythm of the city as it establishes its own. It essentially strings the city together in lengths and provides points of rest from the city. If this is true for the children, this method would imply why the city does not feel too big or unmanageable to them. Beyond the sometimes justified adult paranoia lies the possibility to re-examine the way that children are kept safe, through differentiating between *confining** (which physically manifests into walls and fences) and *surveying** (observant and alert environments, void of the need for elements that cause confinement).

On a city scale, traffic lights act as a surveillance point of control. It strings the city together and in so doing, frees the edges of confinement (fences are not needed around roads because there are traffic lights to walk to that allows for safe crossing).

Surveillance can also be perceptive rather than physical. A camera, for example, need not have someone looking through the footage at all times. As long as those being filmed assume that they are being watched, they will conduct themselves in the required manner. The dissertation will explore how to edge an urban school in order to establish balances between security and freedom, as well as integration and privacy.

Chapter 07 will address what this means for the urban school.

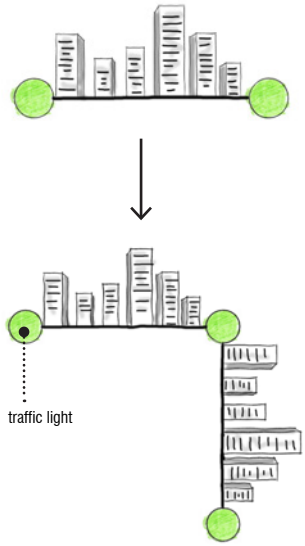


Fig 3.30: The Portioned City (Diagram by: Author)

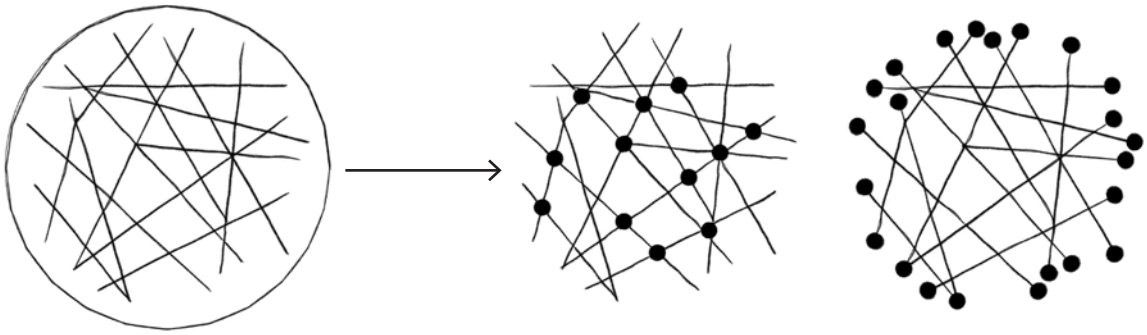


Fig 3.31(a): Confinement (Diagram by: Author)

Fig 3.31(b): Surveillance through points of control assembled differently (Diagram by: Author)

3.6 City Observations

3.6.1 Bound Spaces - *Defensive Space**

Figure 3.32(a): Inactive urban edges (Photo by: Philip Slabbert)

Figure 3.32(b): Spikes_prevents seating, therefore activity (Photo by: Philip Slabbert)

Figure 3.32(c): Security guards, guard houses and boom entrances (Photo by: Author)

Figure 3.32(e): Security codes and coded turnstyles (Photos by: Author)

Figure 3.32(d): Walls and fences (Photos by: Author)

Figure 3.32(f): Barbed wire and electric fences (Photos by: Author)



Figure 3.33(a): **Denoted boundaries**_low vertical elements can be used that are so unobtrusive, that they can provides play possibilites for children or a street atmosphere. (Photos by: Author)

Figure 3.33(b): **Presumed surveillance with cameras**_Users of the space can not ever know if they are on constant observation. (Photo by: Author)

Figure 3.33(c): **Pre-emptive surveillance with bright lights**_Users are aware that the area will be viewable even at night time, implying that the environment is constantly guarded. (Photo by: Author)

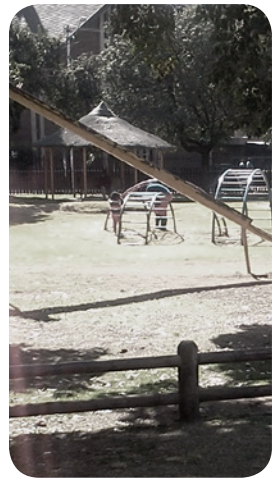


Figure 3.33(d): **Directional seating**_Parents' seating is turned towards the entrance side of the park so that all activity can be monitored at all times without concerted effort. (Photo by: Author)

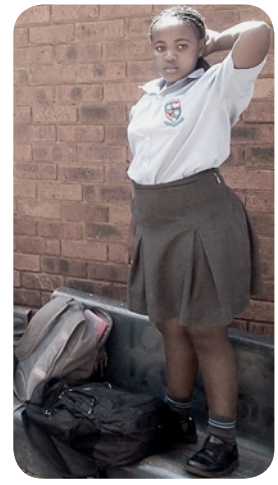


Figure 3.33(e): **Attire**_A child walking alone in the city in regular attire is far less acceptable than one walking in the same area alone in school uniform. The latter implies a justified means to an end, whilst the former doesn't. Security restrictions would be handled differently for the 2 scenarios in the same environment. (Photo by: Author)

Figure 3.33(f): **Active spaces providing passive surveillance**_Many children can be seen in very busy areas in the city as they keep their parents' company while they work. It is not frowned upon due to the high level of activity establishing adult supervision. (Photo by: Author)

Figure 3.33(g): **Restricted viewing and soft edge with vegetation**_Vegetation is not an impenetrable wall but has the ability to establish a high, yet unimposing boundary, as no-one minds a high tree along an urban man-made street. (Photo by: Author)

Figure 3.33(h): **Warnings and implications through signs**_Signs are an effective way to let users know what is not allowed and what has negative consequences. Users can then have the freedom of use as long as they do not disregard what has been made clear. (Photo by: Author)

*A little girl, once praised for being **different**,*

as a woman fears being

judged for it.

Why do I associate it to being 'crazy'?

CHAPTER 04
Theoretical Discourse

In Brief

Chapter 04 presents the shadow room, figure room and virtual room. Its explains their relationships to each other and what they mean to a child.

Terms to remember:

***Adult:** Society; everyone deemed old enough to be capable of making decisions that alter or affect the status quo of societal behaviour.

***Confinement:** assumes that any existing surveillance tools put in place are insufficient and as a result, the walls and fences are put up, strictly regulating movement with little further effort needed. It unfortunately inhibits any potential engagement between the public and private sides of the fences. It revokes its capacity to be an aware environment through appropriate edge design.

***Surveying:** does not jump to that conclusion; it provides more freedom as it contextually determines how to manipulate the environment in order to provide safety without alienation. It renders walls and fences redundant.

***Twitter:** Hugely successful social networking site in which the level of a subscriber's popularity is determined by how many 'followers' have. 'Trends', whether local or worldwide are set based on how many people are talking about that topic at the same time, recorded by the use of a hashtag (#) before the name of the trend. Its ability to yield popularity results at an alarming rate remains its strongest hook.

4.1 Premise_CHILD as a child

Rorty continued to say in the lecture, as outlined in Chapter 01, how there is a need for the oppressed to exist in isolation, only exposed to themselves, in order to derive ideas and 'a way of being' in reference to themselves and not perverted by the norms of the oppressor. This he finds a possible solution for the dialectic between the oppressor and the oppressed. This is not entirely possible for children due to their nature of dependence. The approach will rather be to eliminate *confinement** (being closed in and conditioned with rules given by the oppressors) and to promote alertness through *surveillance** (more freedom obtained as less is restricted or kept in or out).

If child space were considered a 'room' in adult space, an urban primary school presents itself as an appropriate 'room' in which to examine the dialectic between adult and child. It is one that tries to retain its child-space characteristics in very adult-orientated spaces. This room can be termed the 'shadow room': a watered-down, utopian and sterile version of a layered adult space. It exists in resistance to its environment, in the name of safety. The adult space in question, the Museum Park Precinct, is themed on education, but of a public nature. It fails to take advantage of its surrounding urban context in order to promote its educational agenda as it sits as a fenced island. The dissertation presents the urban school as a 'figure room'; one that understands its presence's urban implications and the potential that the Museum Precinct has for learning and exists in response to it. The 'figure room' aims to reintroduce some of the rich layers present in adult environments that inspire emergence, social engagement, experiential learning, city and spatial proficiency and quotidia.

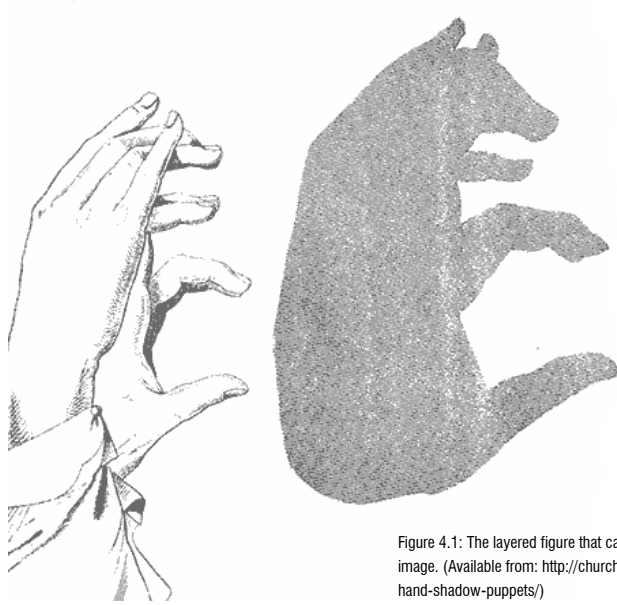


Figure 4.1: The layered figure that casts a flat shadow image. (Available from: http://churchfun.com/2008/11/10/hand-shadow-puppets/)

Shadow: This represents current child spaces, which are a watered-down, utopian and sterile version of the layered adult spaces.

Figure: This is proposed child space that will have distinctions beyond the flatness of an image or ideal.

Shadow Room	**Figure Room**
Adult OR child biased realms	Adult AND child inclusive realms
Set/ inflexible rules	No/ flexible rules
Established and limited forms of engagement	Extended forms of engagement
Child as pre-adult	Child as child
Confined	Surveyed

Table 02: Shadow room vs. Figure room (Table compiled by: Author)

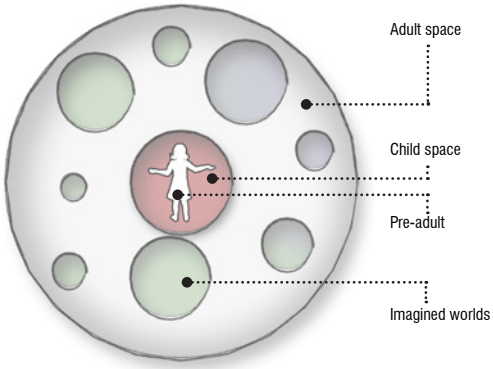


Figure 4.2(a): Current 'room' scenario according to planners Claire Freeman and Paul Tranter. (Diagram by: Author)

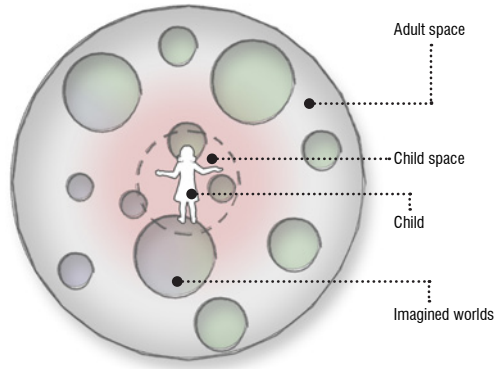
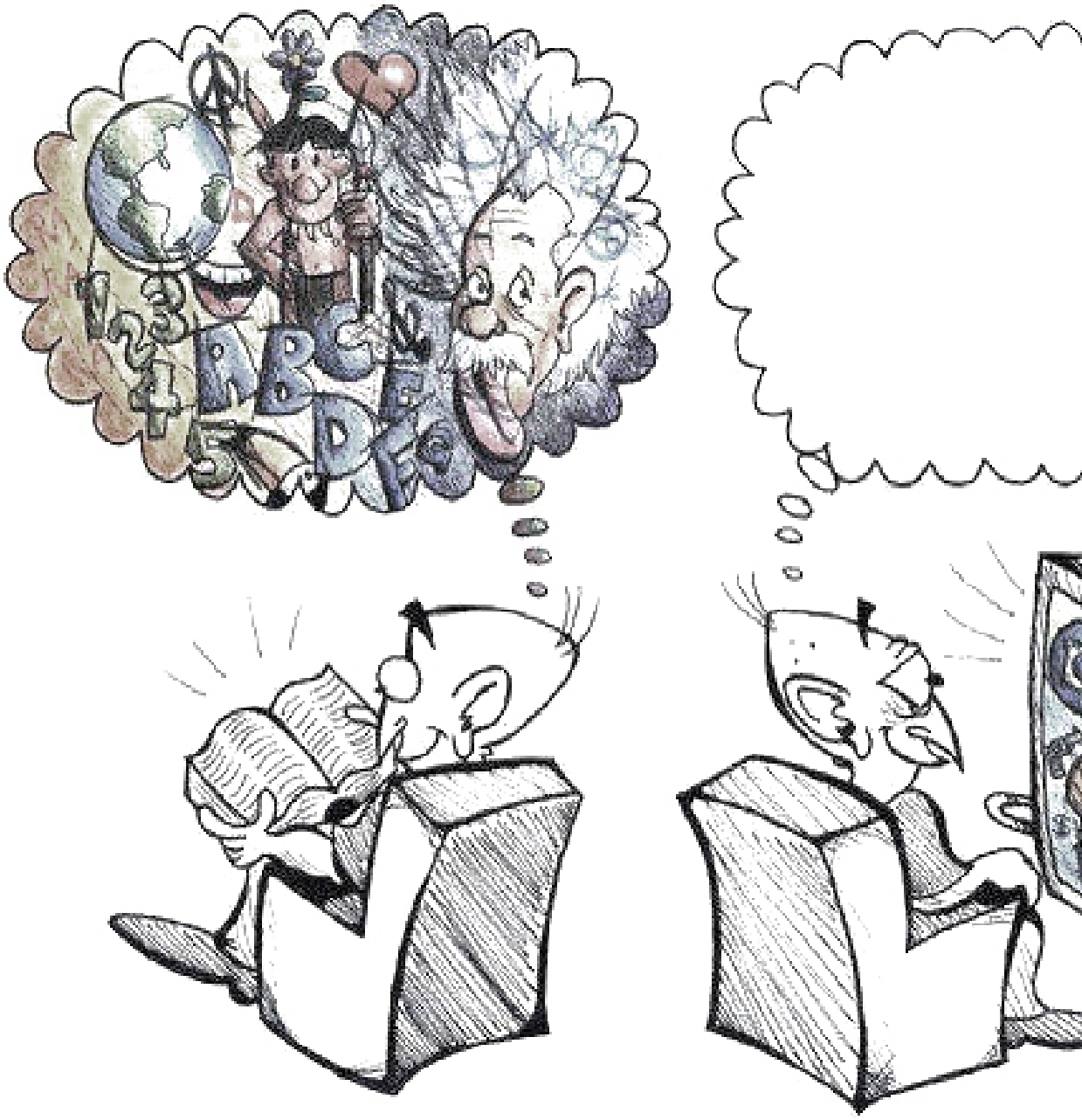


Figure 4.2(b): Proposed 'room' scenario by author. (Diagram by: Author)



4.2 How much is too much?

Figure 4.3 illustrates the difference between the figure and shadow in reference to media. What is in a book or on a television screen are ideas that have been derived by others and not by the one engrossed in it. The book gives a blueprint of where the mind can go to imagine the words as pictures, but it is incapable of inhibiting different ways of seeing the same words. The television on the other hand, gives both the thought and the image to match, leaving no room for alternative imagined possibilities. Both scenarios lead, i.e. the story in the book cannot run one's imagination without its guidelines, but it does not and cannot do all the work, it leaves room for creative initiative on the part of the reader. The television never does. The book acts as a figure, while the television acts as a shadow.

The same comparison can be made for child spaces, The elements in these 'shadow rooms' are often too prescriptive and outdated. Children immediately know how to use the play instruments because their parents and parents' parents had it and are able to prescribe its use to its new users. Its lack of place as anything other than play objects in a city then renders them useless at certain parts of the day when children can no longer play. It provides no room for exploration as it essentially comes with a user manual: parents.

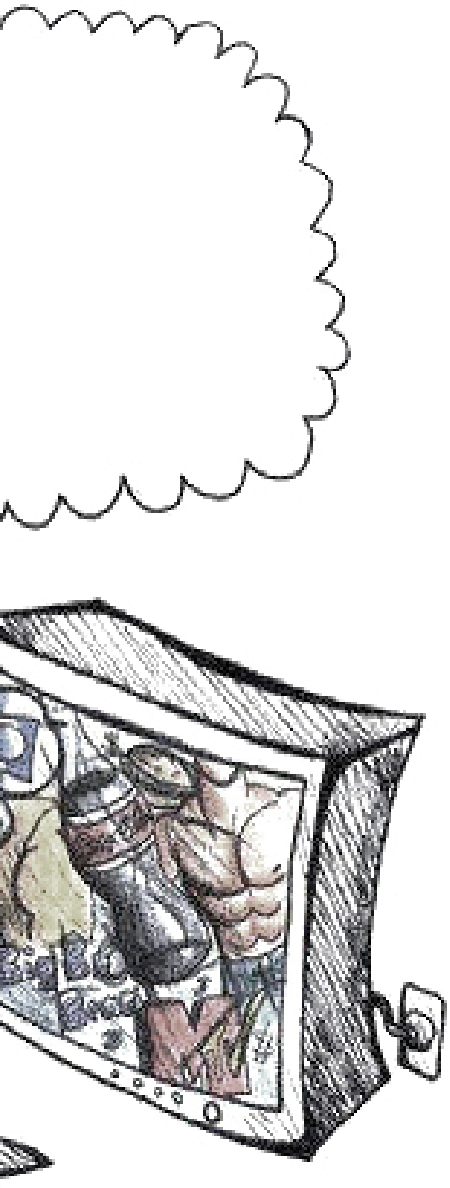
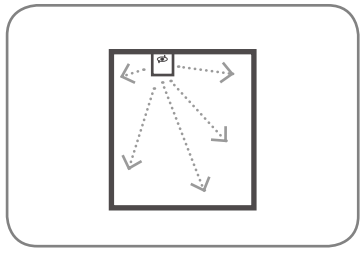
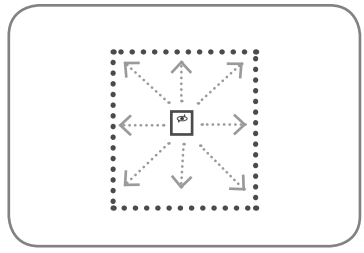
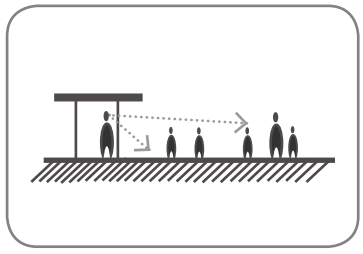
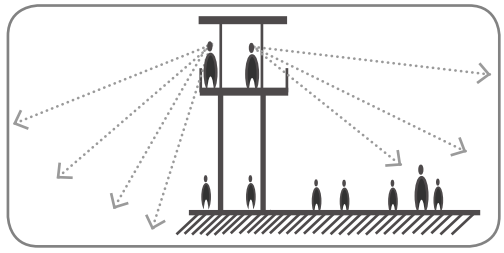
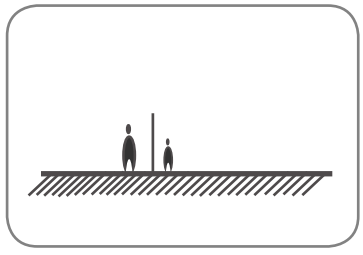
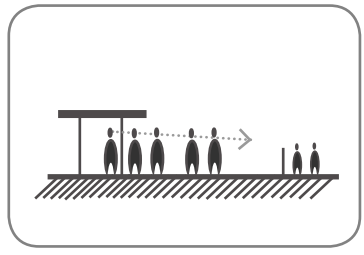
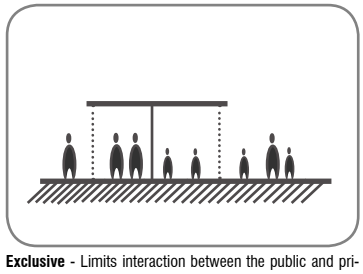
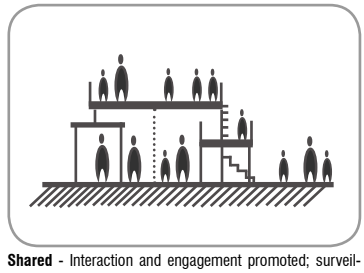


Figure 4.3: The television and the book. (Artist: Unknown)

4.3 Figure versus Shadow Rooms - Its Elements

The following diagrams shows an analysis of how current shadow room edges are handled and tries to explore different ways that it can be handled, retaining security but promoting freedom and engagement on the part of the user in order to establish figure rooms.

	SHADOW	FIGURE
Placement of security and/or cameras	 **Edge** - 180° view; other buildings in the block might obstruct view.	 **Centre** - 360° view; security integrated in surrounding buildings; makes it easier for the guard to reach all areas.
Height placement of guard house	 **Ground** - limited view; cannot survey far areas.	 **Raised** - further and wider view range. This also frees its presence below for use by occupants.
Inactive fence edge versus passive surveillance through active spaces	 **Walled Edge** - inactive edge can cause some blind spots in views.	 **Building as Edge** - Activity along an edge can have the edge constantly viewable.
Exclusive edge building programs versus communal programming, shared spaces	 **Exclusive** - Limits interaction between the public and private realms; opportunity of extended programs not taken.	 **Shared** - Interaction and engagement promoted; surveillance constant through use and occupying different levels.

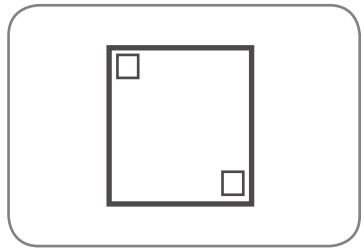
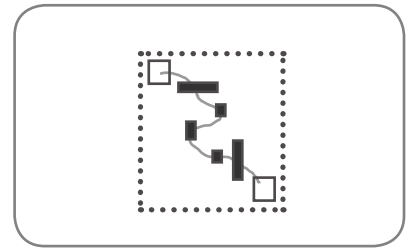
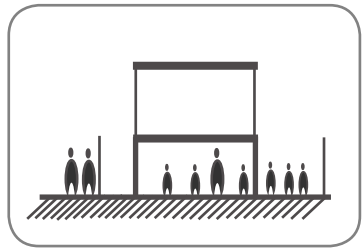
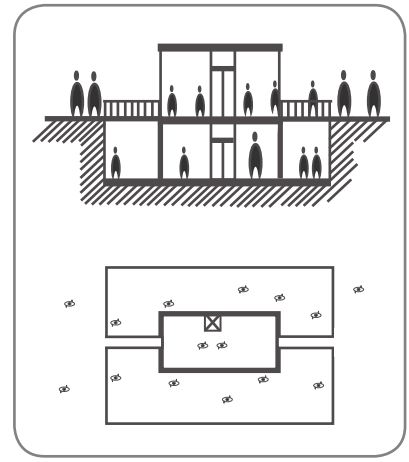
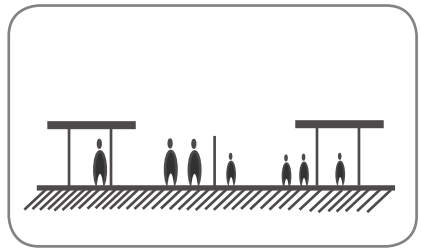
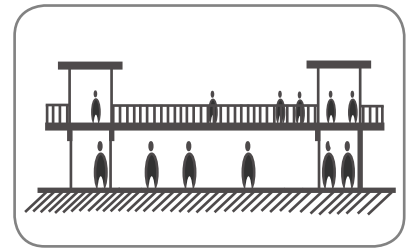
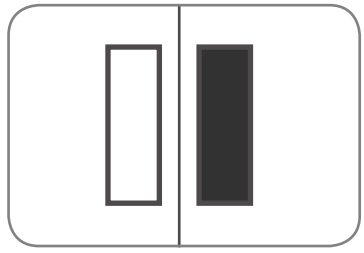
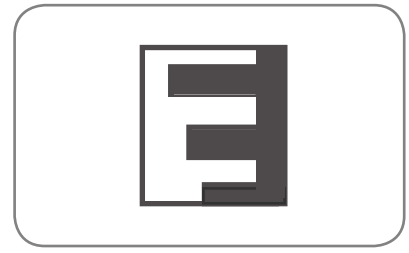
	SHADOW	FIGURE
Scattered programming, inspiring infrastructure inbetween them	 **Isolated** - 180° view; other buildings in the block might obstruct view.	 **Programmatic Joints** - 360° view; security integrated in surrounding buildings.
Control point(s) of entry	 **Edge** - 180° view; other buildings in the block might obstruct view.	 **Centre** - 360° view; security integrated in surrounding buildings; makes it easier for the guard to reach all areas.
Spatial bridging	 **Separate** - 180° view; other buildings in the block might obstruct view.	 **Bridged** - 360° view; security integrated in surrounding buildings; makes it easier for the guard to reach all areas.
Spatial tongue and groove jointing	 **Apart** - 180° view; other buildings in the block might obstruct view.	 **Jointed** - 360° view; security integrated in surrounding buildings; makes it easier for the guard to reach all areas.

Figure 4.4: Burgers Park entry signage. (Photo by: Author)

4.4 Case Study_Burgers Park as both Figure and Shadow Room

When designing playgrounds, Aldo van Eyck was determined to discover forms that would remain archetypal. He spoke of how “an elephant or a giraffe made of aluminium stands there odd and bored. Animals are not of the language of the city and they shut down the imagination rather than expand it.” He also spoke of catalogue equipment not being real enough or having the right aesthetic. “It is unnecessarily complex, unlike a simple tumbling frame with children somersaulting round it like flywheels and talking at the same time. That belongs to the city. The child is hence given an opportunity to discover its possibilities by themselves: this is a reward.” (van den Bergen, 1999)

Part of the success of Burgers Park in the city is due to the high level of use by children. This does not only occur in the cordoned off children’s park, but all around the park. Essentially, they have managed to find play potential in the entire space, be it a space filled with children or with adults. It is this that van Eyck was referring to. Those kinds of engagements with simple elements could not have been predicted, such as the low wooden fence [5] which the children use to lie on, balance, swing upside down from, jump off of and sit on.

This notion does not inhibit design but merely suggests that not a lot is required in order for children to have fun, because they are always the creators of their own fun. They are the ones that assign unthinkable roles to things as they try to make sense of everything that exists in the world. What is good about this though, is that they never inhibit anything’s original function, they only assign more functions to them, i.e. adding value. To overdesign is to simply hamper their creativity.

As Freeman and Tranter (2011: 100) point out: ‘good public space for children does not need child-oriented play equipment‘.

[1] Typical play parks that act as an instruction book through years of generational use
DAY: park
NIGHT: ???

[2] DAY: princess by her castle
NIGHT: event space; romantic spot

[3] DAY: seat, swing, skip rope, hurdle bars
NIGHT: edge demarcation, seat

[4] DAY: evil witch's house, princess trapped
NIGHT: educational space

[5] DAY: seat, balance beam, obstacle course
NIGHT: edge demarcation, seat

[6] DAY: talking tree, tree house, climbing tool
NIGHT: romantic spot, tree

[7] DAY: palace gardens, princess and the frog
NIGHT: garden and water fountain

4.5 Helicopter Parents versus Free Range Kids

Lenore Skenazy, author of Free Range Kids (2009) and labelled the 'worst mom in America', spoke of the outrage that ensued as she let her nine year old son ride on the subway alone.

For weeks, he begged her to leave him anywhere in the city so that he could figure out how to get home on his own. One Sunday, she dropped him off somewhere and gave him a subway map, a MetroCard, a $20 note and some quarters in case he had to make a call.

She trusted him to find out that he should take the Lexington Avenue subway down and the 34th Street crosstown bus home. If he could not, she trusted him to ask a stranger and even trusted that stranger not to think, "Gee, I was about to catch my train home, but now I think I'll abduct this adorable child instead."

Her nine year old son got home with no hassle, feeling confident and independent.

She speaks of the increasing paranoia that has washed over the 21st century parents as child product manufacturers have taken advantage of the dual income parents and less children trends as well as the televised missing child cases. Parents are also made to feel too busy and therefore too incapable of remaining as alert as they should be at all times. Letting a child play unattended in the front yard can now lead to arrest.

Skenazy refers to this as helicopter parenting; being alert and ready to spring into action as danger is always coming for your child. She speaks also of the dangers of being so over-protective and insists that it makes children believe in their inabilities and dire dependence, until they become that unable and dependent. These parents are made to subscribe to the "worst first thinking" method of approaching situations; deriving the worst possible scenario that could happen and proceeding as is if it is likely to happen.

"We've become so bent out of shape over something as simple as letting our children out of sight on the playground that it starts seeming on par with letting them play on the railroad tracks at night." - Lenore Skenazy, Free Range Kids.

Free Range Kids promotes "i did it myself" moments, as she terms them: experiential moments that can never leave a child's memory. She merely grants her children the same freedom that was granted to children in the last few generations, where the street became an extension of their front yard and became a playground and the park was a safe place for them to go to on their own. She speaks of how it was not only the park that was enjoyable, but the whole process of getting to the park and back. She believes that the adventures and experiences going on in a child's mind on that route is so impossible to predict that it becomes a crime to inhibit it.

Several problems arise from helicopter parenting, outlined in the following pages.

4.5.1 Spatial Outcome_To Avoid or to Colonize?

London city managers were confronted with problems arising from public spaces that attracted both sedentary, elderly citizens and active, young skateboarders. It was found that the elderly were specifically intolerant of the presence of young people in groups. In a *Play England* study, it was found that the police received complaints from adults about children who were irritating or alarming them by gathering in groups (note in Chapter 03, page 77, it is highlighted how what a child wears in the city determines how they will be treated. The same applies to a child alone and a child in a group).

With these intolerant attitudes creating exclusion and alienation of children from public space, children resort to two possible things as explained below.

4.5.1.1 The avoidance of public spaces

According to Freeman and Tranter (2011: 101), children are not afraid to explore alternatives if an environment is not able to accommodate them. The problem with this is that if a child's intrigue is not satisfied, they will not stop searching. This can inspire wandering off in the hopes to find something that will excite their senses or else simply feel unfilfilled as they are forced to remain in the vicinity that their guardians choose. They essentially become the guardian's company in the city rather than a participant.

4.5.1.2 The colonization of leftover spaces

Leftover spaces refer to places on the margins of a city, the less popular spaces away from adults. These fairly abandoned spaces present themselves with no rules as well as potential due to its neglect.

A child's intrigue is not alleviated by city and parental restrictions, only excited.

PRECEDENT_**Ownership**

Southbank Centre Undercroft; London
Artistic Director: Jude Kelly
Conception: 1970s

"What we have now wasn't designed by committee. It grew organically and is totally unique." - Henry Edwards-Wood on behalf of *Long Live Southbank*.

The *Long Live Southbank* Initiative is one borne of the many Southbank users and makers outraged by plans to turn it into restaurants and shops. With 25 000 people signed up against the plan, it is a true show of how emergent and now child-owned space will be taken care of. It was started by children and continues to attract new generations.

4.5.2 Perceptual Outcome_Generation Net: CHILD as a simulation

Sociologist Sherry Turkle explains how emerging technology, specifically computers, affect human thought and self perception. As children are more restricted from outside play and city negotiations, they require other means of distraction. Technology has stepped in to fill that gap, creating simulations of the real world though social media networks and virtual games.

She highlights several repurcussions from this shift in play. The first is the difficulty that now arises in distinguishig between humans and computers (a person's facebook profile is no different to the physical person). The second is how technology is no longer a tool, but a part of personal, psychological and social life and the third is how expectations now lie more on technology and less on humans, limiting the need for human encounters.

Her extensive research on MUDs (Multi-User Domains) uncovered that "a MUD has become a context for discovering who one is and wishes to be. In this way, the games are laboratories for the construction of identity as reality becomes what is referred to as "RL" -- "Real Life" -- which presents itself as just another role-playing game."

Andrew, an MUD user she interviewed said that 'you are what you pretend to be...you are what you play.' She finds it misleading to call it play though, as he spends his time in the virtual world constructing a life that is more expansive than the one he lives in physically.

MUDs essentially blur the boundaries between self and game, self and role and self and simulation.

There is the thought that simulation and reality will one day merge or become indistinguishable as progress continues. An expression of this idea is found in a passage of the novel 'The City and the Stars' (Clarke, 2011: 8). The passage describes an inhabitant in a future city living inside a room or chamber that generates perfect physical illusions on his command:

> *"Another wish, and machines which he had never seen would fill the chamber with the projected images of any articles of furniture he might need. Whether they were 'real' or not was a problem that had bothered few men for the last billion years. Certainly they were no less real than that other imposter, solid matter...."*

What this reveals is the way the society of simulation, entertainment and fantasy is creating a vision of the universe fashioned after itself. It now has growing importance and therefore has the potential to become an ideology and ultimately a source of cultural legitimation.

As the universe becomes a metaphysical theme park, the self ends up as a series of themed attractions. Little is demanded, the stakes of life aren't so large and consequences of actions aren't final. Life no longer imitates television as Sherry Turkle makes clear in the title to her book, as "...it is us that we are watching on the screen." Humans are reduced to mere characters, with no more emotion than a Facebook profile. Instant chatting becomes more appealing than face-to-face conversations and the number of Facebook friends determines a person's sense of popularity. Little effort is needed to 'friend' someone, with the word being reduced to a mere noun, no longer a verb; the act of becoming friends. A person's interests are laid out, leaving no intrigue for what similar interests could be discovered of others.

A young child's mind is learning how to be in the world, it is not already known but all of the instincts exist in them that allow growth into that role. A lack of physical stimulation and experience leads to a lack of empathy, as human encounters are required in order to understand others. Insincere gestures will replace sincere gestures as every sentence, picture and outfit becomes about creating and building on a character.

Image will replace personality, presenting the virtual world as the most harmful shadow room, ingeniously disguised as a figure room.

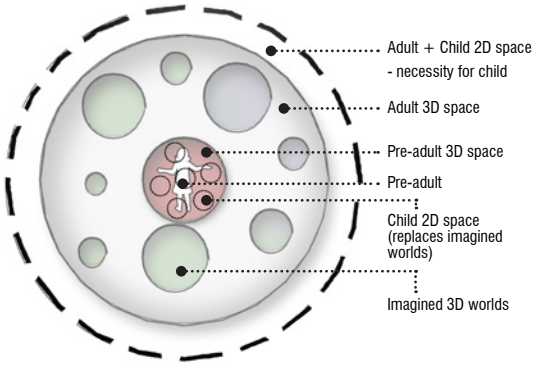


Figure 4.5(a): The virtual world as one that currently permeates into child spaces to replace their imagined worlds. (Diagram by: Author)

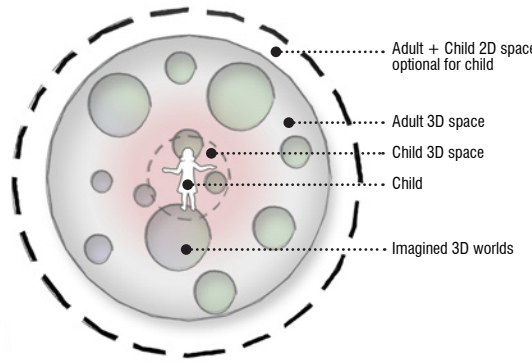


Figure 4.5(b): The proposed virtual world as one that becomes only an option to a child as their real life child spaces accommodate their experiential needs. (Diagram by: Author)

4.6 School grounds that Teach_Designing Child spaces

"We often forget what our ideas, feelings and thoughts were as children; what spaces, places, colours and activities we liked. It is usually without these considerations that adults design spaces for children, resulting in delimited, defined and contained places. In most cases, children count the seconds until they can escape to the outdoor, to retreat into their imaginations and worlds of fantasy." (Edna Perez 2005: 83)

Professor Ismail Said's research paper, 'Architecture for Children' (2000), explains how children's functioning and development is shaped by interaction with their surroundings and spaces designed for them. They should therefore conform to their physical, cognitive and social needs. What is required of an urban environment to support child development is audio, tactile and motor activities. An exploration of these is what forms the basis of their learning.

Young children are continuously experimenting, uninhibited by goals, time limits and expectations and guided by their intrigued senses. Touch is said to improve a child's perception of form and space. An ideal environment for young children offers movement and stimulation of the whole body, from small to larger muscles, both physical and mental. "Bodily movement extends to the inner states of sensory awareness." (Hugo, 2012: 400/09). The diversity and complexity of experience and the child's ability to interpret and grow with their environement's features are fundamental to their physical development. (Fjortoft, 2004).

Unfortunately, tension has developed between physical activity and safety. While both are important, the dominance of 'risk anxiety' has led many to believe that risk is too much risk and unstructured play physical activity is too unsafe. School grounds are more likely to reflect what adults believe to be risk free rather than what children would desire in terms of challenging and stimulating environments.

"Play is how children experience the world and discover and learn about themselves and others. It involves taking risks, problem-solving and interacting with people and places." (Freeman & Tranter, 2011: 63).

Environmental learning occurs through trial-and-error play events. Play (the informal curriculum) is defined as 'the spontaneous activity in which children engage to amuse and to occupy themselves' (Burdette & Whitaker, 2005: 46). It is not only pleasurable and engaging, but also without purpose, alleviating any pressure to be right, good, better, tougher, prettier and smarter.

School grounds should ideally provide four elements as outlined by Wendy Titman (1994: 58):

- a place for doing_physical activities and scenarios that fulfill their need to extend themselves, develop new skills, find challenges and take risks;

- a place for thinking_intellectual stimulation outside of the classroom, granting discovery and exploration alone or with friends;

- a place for feeling_through colour, beauty, interest and a sense of ownership, pride and belonging, where they can feel small without feeling vulnerable or where they an care for and feel cared for;

- a place for being_allowing them to ‘be‘ themselves, recognizing their individuality and their need to have a private persona in a public place: a place in which to be a child.

“Planners do not seem to realize how high a ratio of adults is needed to rear children at incidental play, nor do they seem to understand that spaces and equipment do not rear children. These can be useful adjuncts, but only people rear children and assimilate them into civilized society.” (Jane Jacobs, 1961)

*A little girl, once **encouraged** to uncover and discover,*

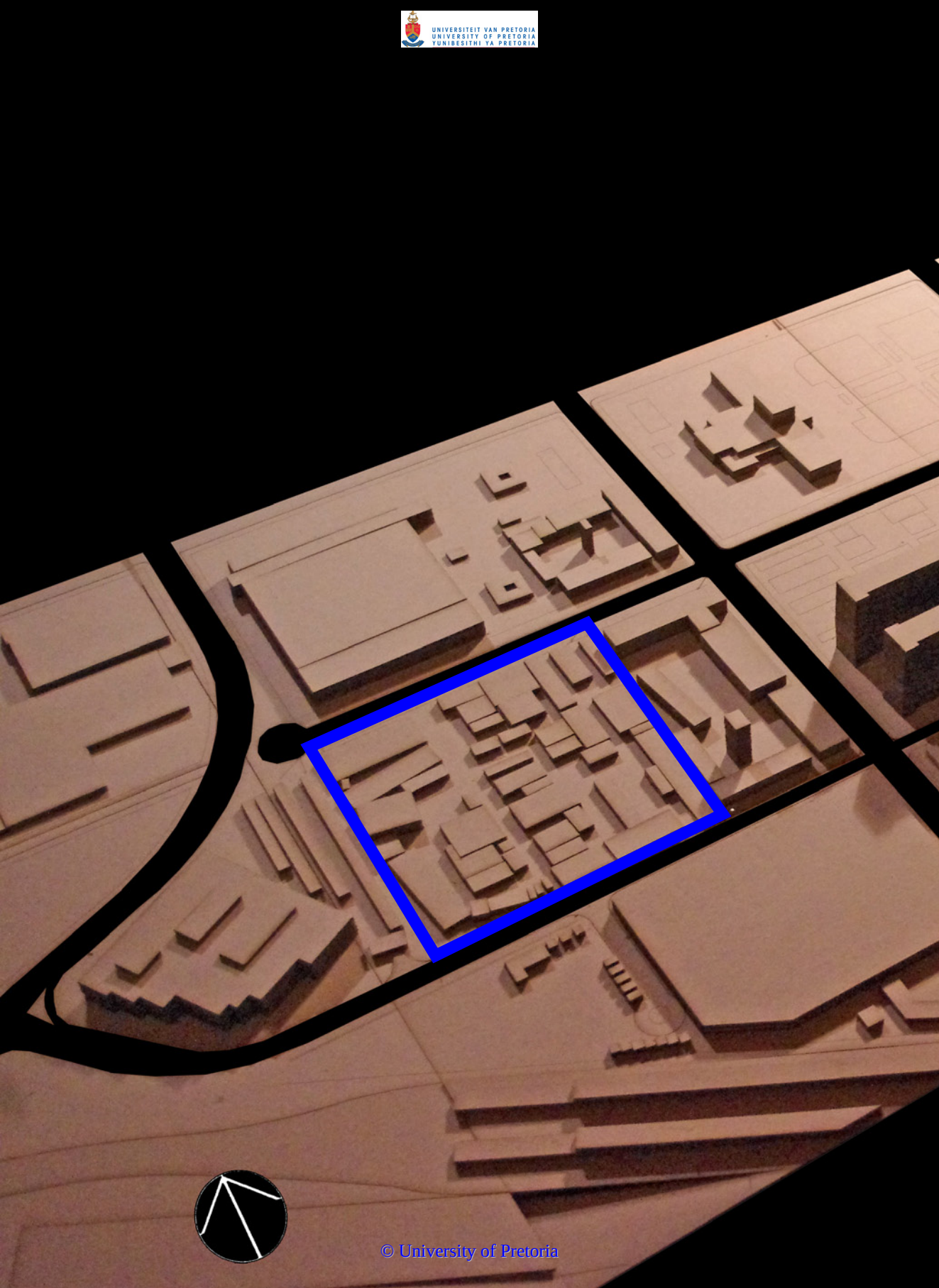
as a woman fears what to do with what she was **not meant to see**.

Why was I granted the opportunity to see it?

CHAPTER 05
Concepts + Visions

In Brief

Chapter 05 lays out the larger (Museum Precinct) and smaller (PWD) frameworks and visions.



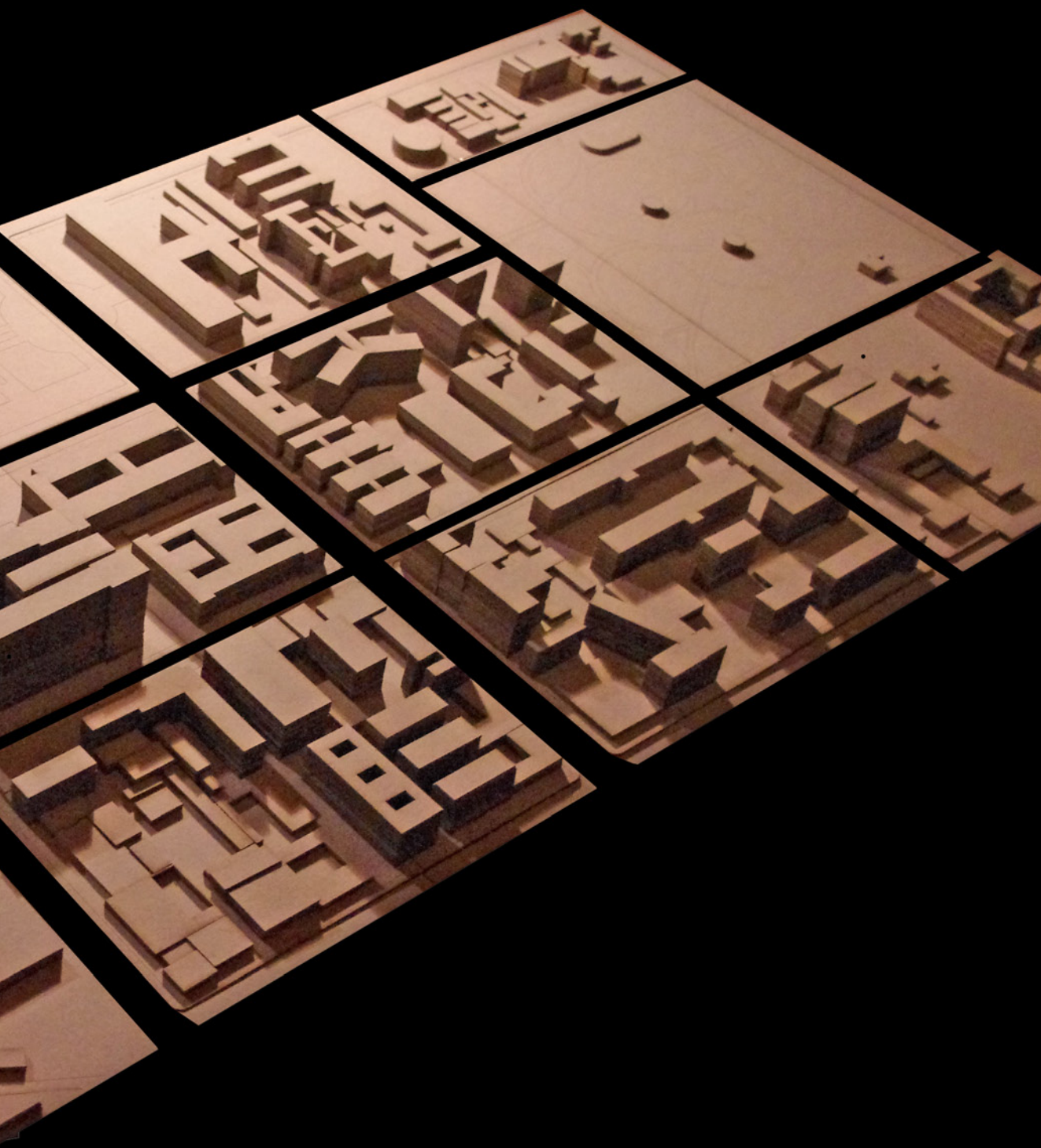


Figure 5.1: 1:1000 scale cardboard model of the Museum Precinct as is. (Photo by: Philip Slabbert)

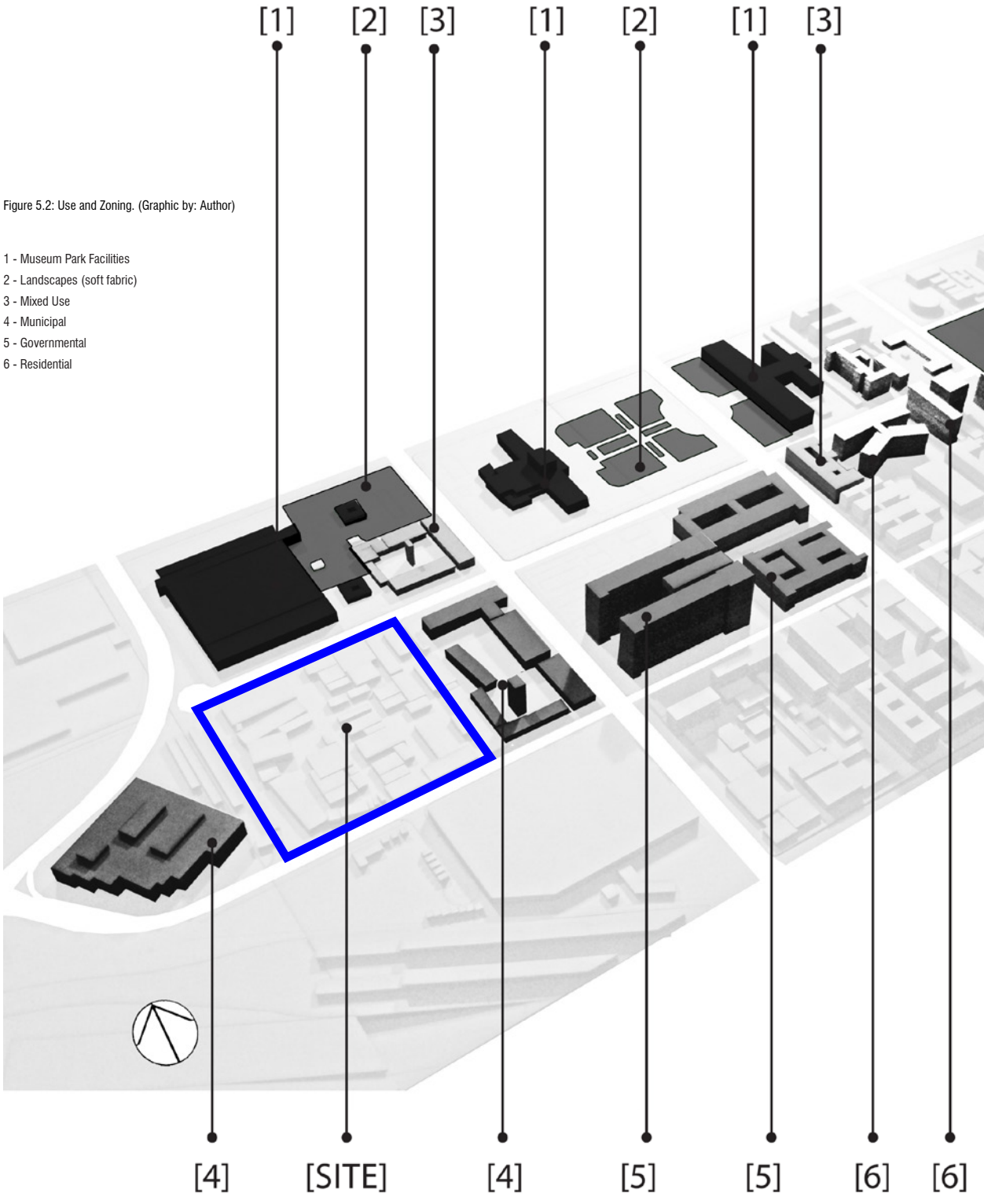
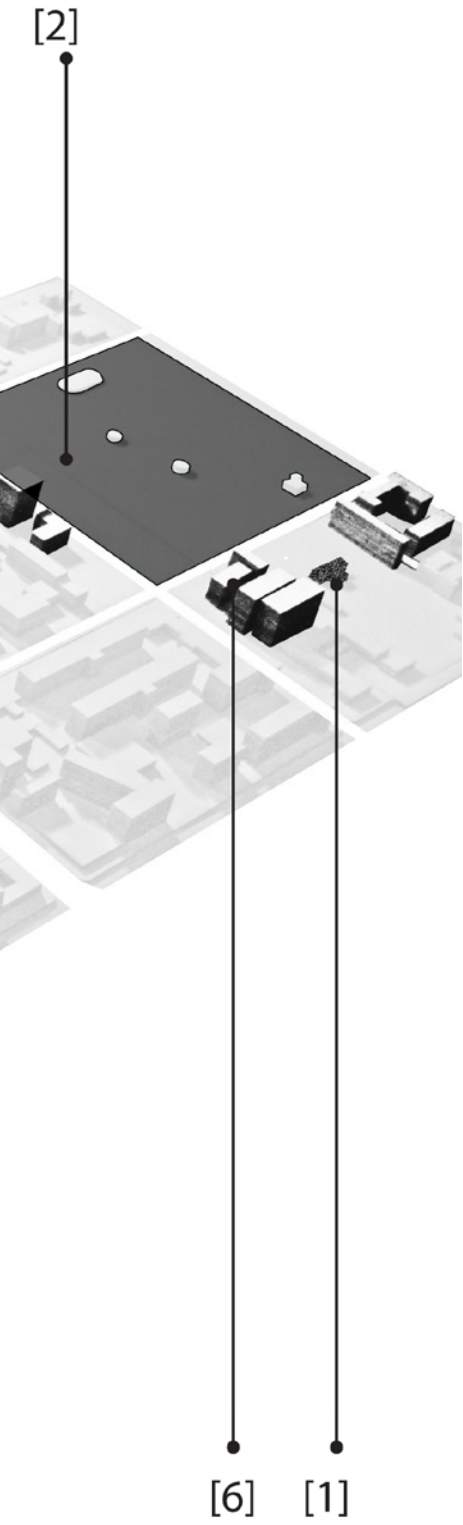


Figure 5.2: Use and Zoning. (Graphic by: Author)

1 - Museum Park Facilities
2 - Landscapes (soft fabric)
3 - Mixed Use
4 - Municipal
5 - Governmental
6 - Residential



5.1 Use and Zoning

Use and zoning aided in understanding what is working and not working, what is lacking and what has the potential to become more than what it is. An understanding of the way that programs are grouped helps to expose any gaps in the urban configuration.

[1] Museum Park Facilities

Although carrying much potential for tourist revenue and public engagement, the buildings remain desolate behind its high fences and security guards. Its urban rooms are rendered useless as city users walk along its inactive edges.

[2] Landscapes (soft fabric)

Besides an appropriately edged Burgers Park, all of the other urban rooms (soft fabric) is unused. A lack of access, an inadequate amount of shading and a lack of programming are some of the possible reasons for its daily neglect.

[3] Mixed Use

Part of the reason for the success of the Museum Precinct's surrounding urban context is due to its mixed use component of shopfronts on ground floor and residential quarters above. This precinct, located close to a taxi rank and both the Bosman train station and Gautrain, acts as a feeder to the city centre for these public transport commuters. The shopfronts respond to the fast-paced nature of the travellers.

[4] Municipal

These buildings' presence are appreciated due to convenience. They unfortunately have no urban edge response and are designed introvertedly. Considerations could me made in terms of enabling its edges to respond to its surroundings.

[5] Governmental

The most out of scale building of the precinct now acts as a bland landmark to the precinct.

[6] Residential

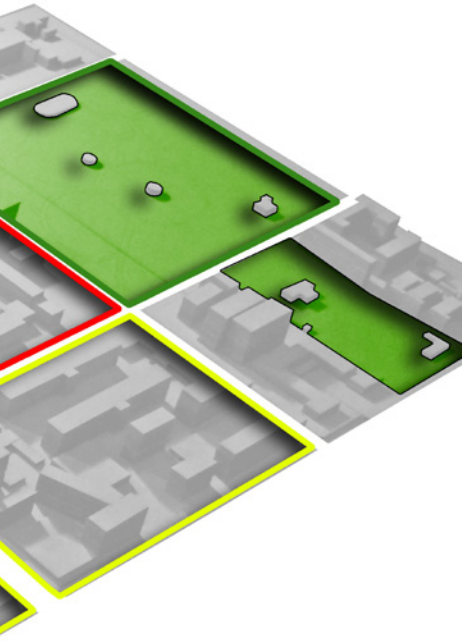
The residential component allows possibilites for exploration in the urban rooms, as it is them who will be most likely to frequent them. They, along with their children, are currently the majority occupiers of Burgers Park. The become the indicators of what is working and what is not working.

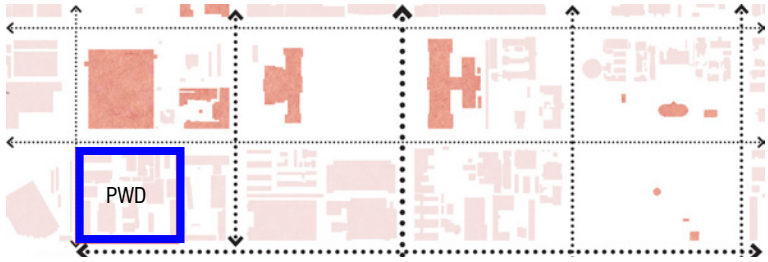
5.2 Boundaries and Edge conditions

The existing boundary conditions and pedestrian flow were mapped in order to establish the current spatial and movement limitations responsible for inhibiting the Museum Park's integration with its surrounding thriving urban context.daries

The monolithic city block typology, as stated in Chapter 03, is reinforced by the red boundaries as outlined below. This highlights the first condition to confront in order to address the Museum Park's currently introverted nature.

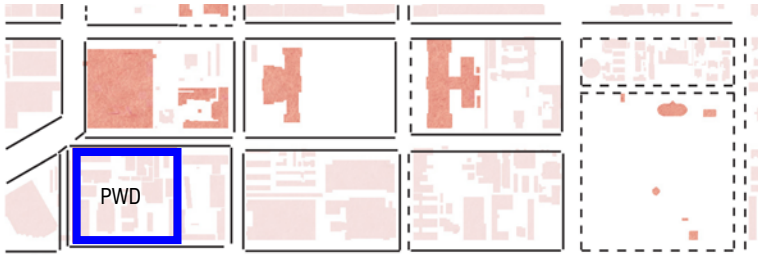
Figure 5.3(a): Boundaries. (Graphic by: Author)





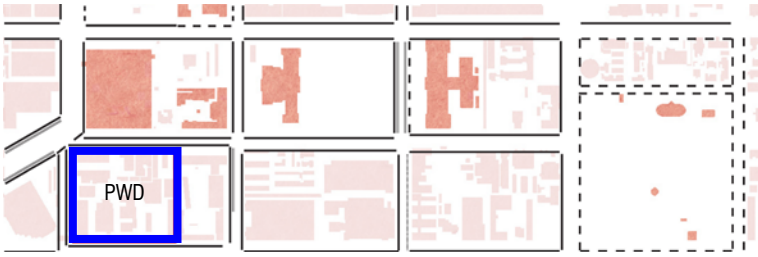
Existing pedestrian use - most to least used roads

Most used
Least used



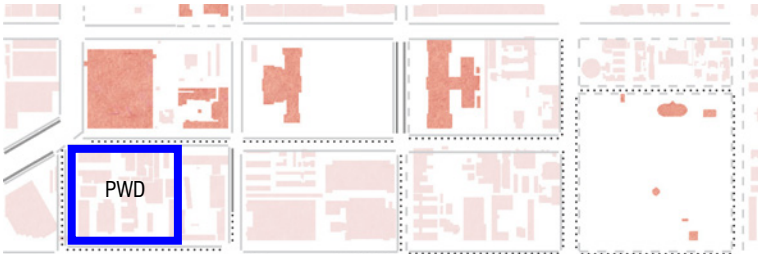
Existing permeable and impermeable block edges

Permeable
Impermeable



Existing enabling and inhibiting block edges

Enabling
Inhibiting



Proposed active and inactive edges

Active
Inactive

Figure 5.3(b): Different edge polarities currently found in the Museum Precinct. (Diagrams by: Author)

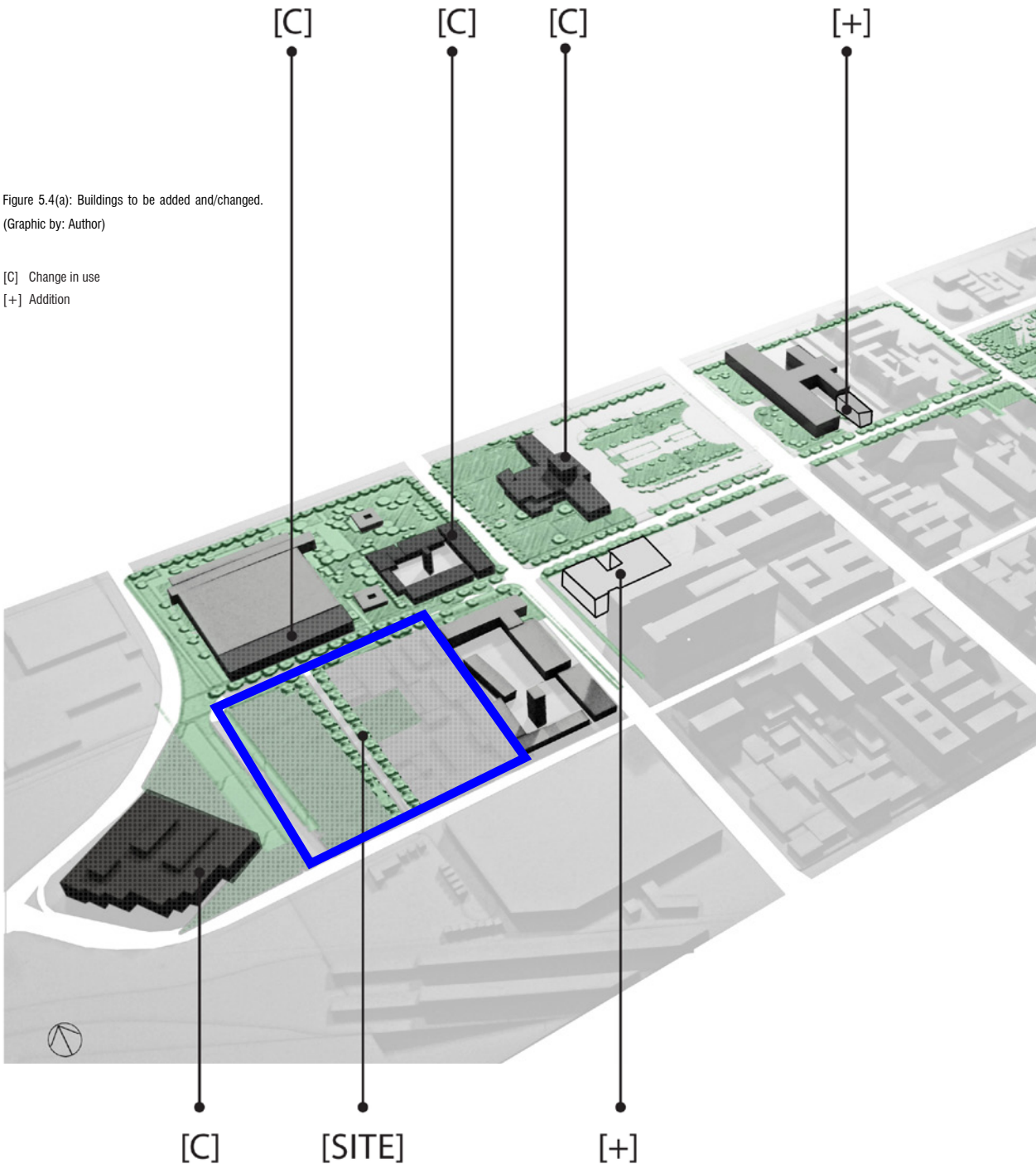


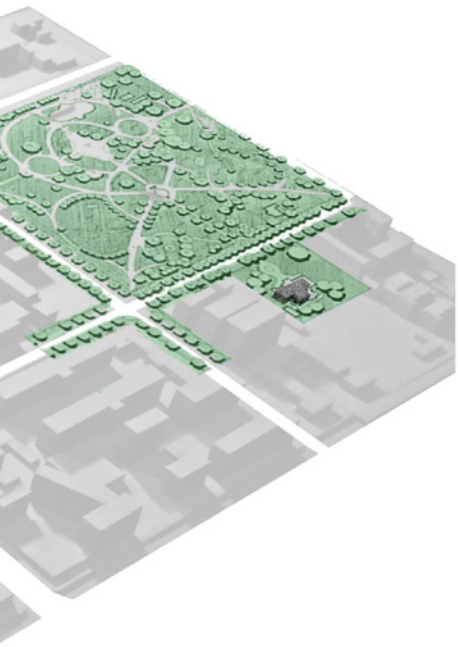
Figure 5.4(a): Buildings to be added and/changed.
(Graphic by: Author)

[C] Change in use
[+] Addition

5.3 Proposed Changes

The proposal includes change in both program and boundary, i.e. the way in which it establishes an urban edge.

The additions proposed are in response to the Minnaar street edge requirements, regarding the balance between open urban rooms and tall buildings to define edges and exploit pedestrian energy.



The diagram below shows an overlay of the above mentioned proposal to the existing implemented Museum Park.

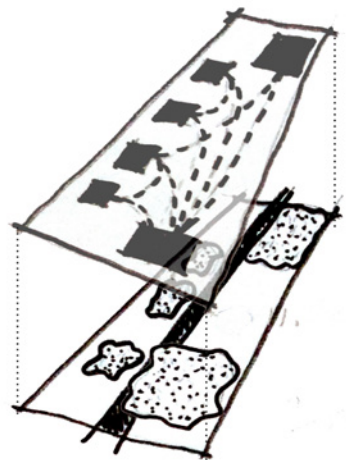


Figure 5.4(b): Museum Park Vision Overlay (Drawing by: Author)

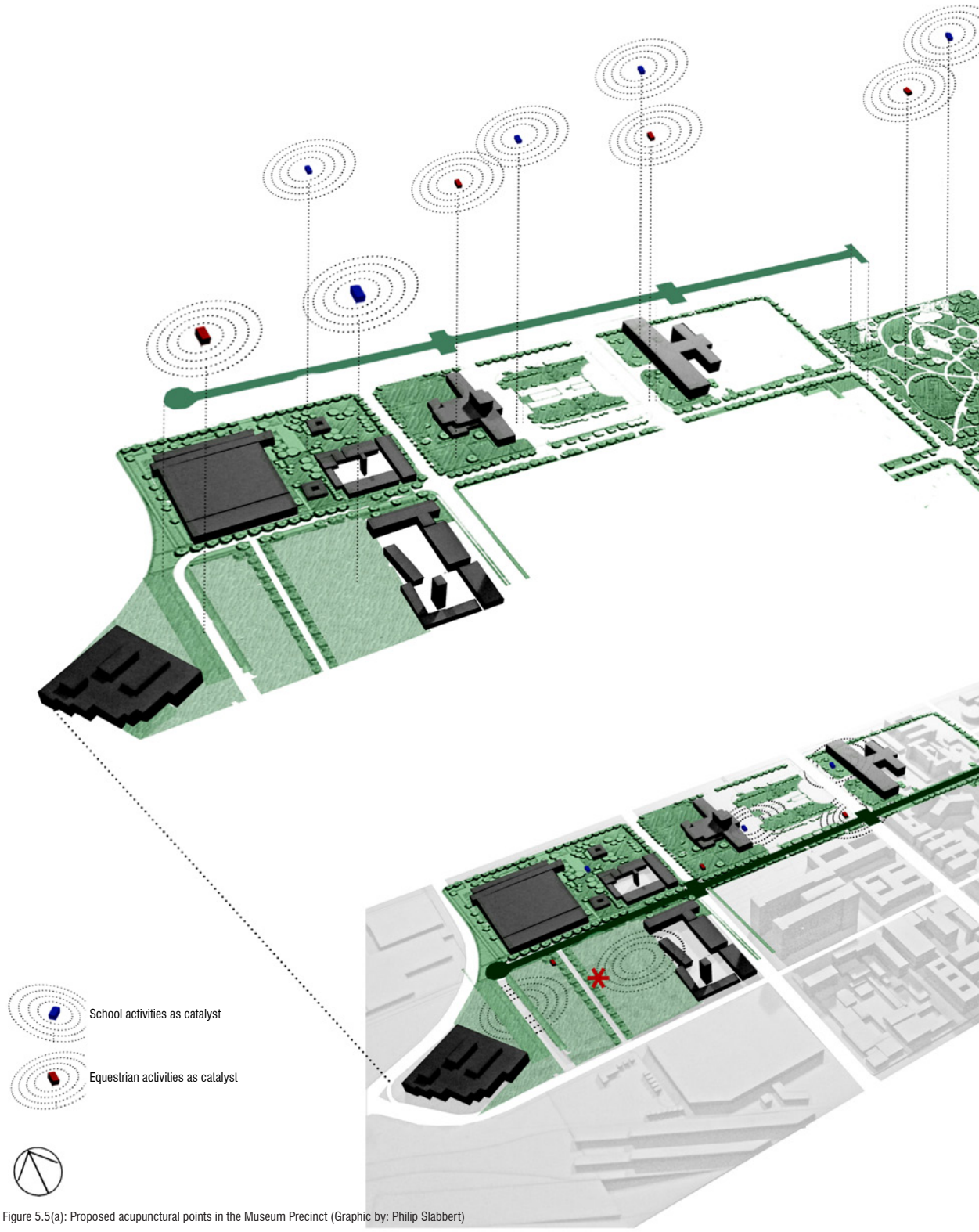
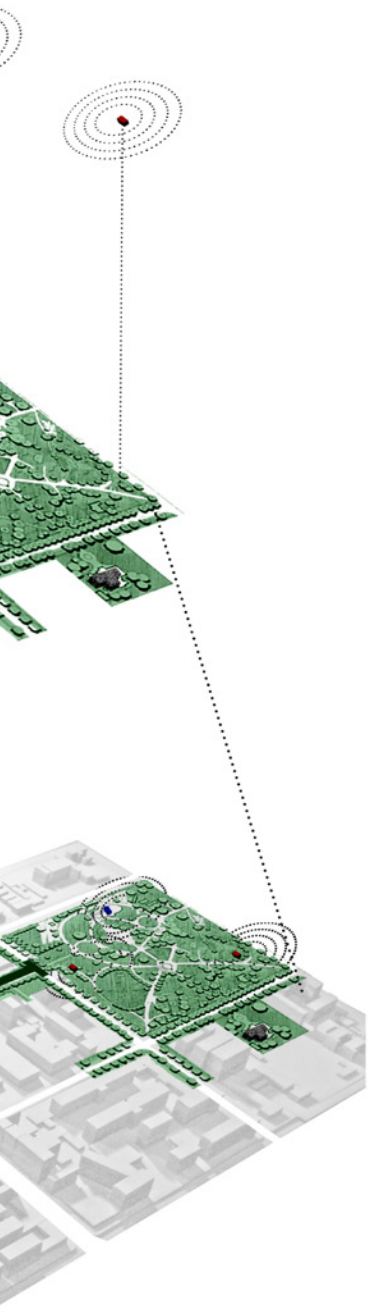
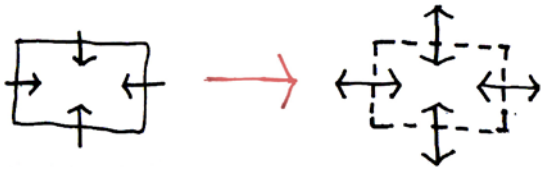


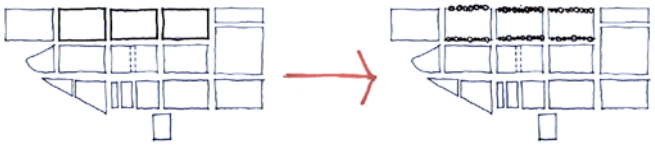
Figure 5.5(a): Proposed acupunctural points in the Museum Precinct (Graphic by: Philip Slabbert)



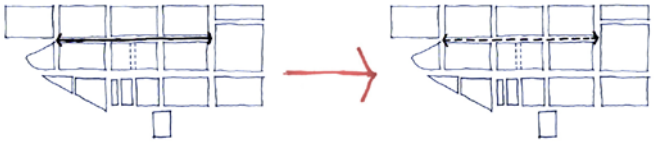


Introverted and isolated

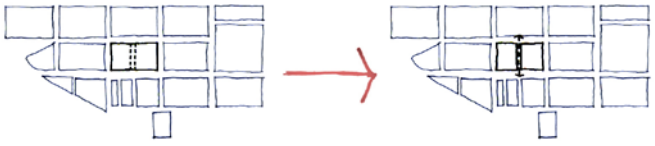
Extroverted and integrated



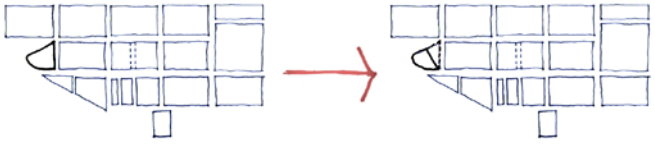
Reinstatement of urban rooms to the publice through the removal of fences



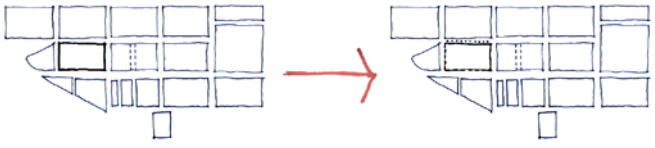
Shared pedestrian and vehicular street along Minnaar street (semi-paved)



Reinstatement of closed off Christina street to break up the monolithic city blocks



Removal of the wall and parking at the Post office; create a public space



Activating the currently hard-edged PWD site with activity and access

Figure 5.5(b): Progressive change proposed to the Museum Precinct. (Drawings by: Author)

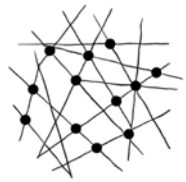
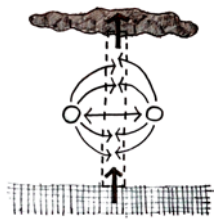
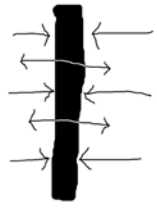
5.4 Existing Polarities_Its Concepts

Several polarities present themselves from the context, theoretical approach and pedagogical theories. These concepts were derived in order to understand how to mediate between these conditions to find some kind of middle ground.

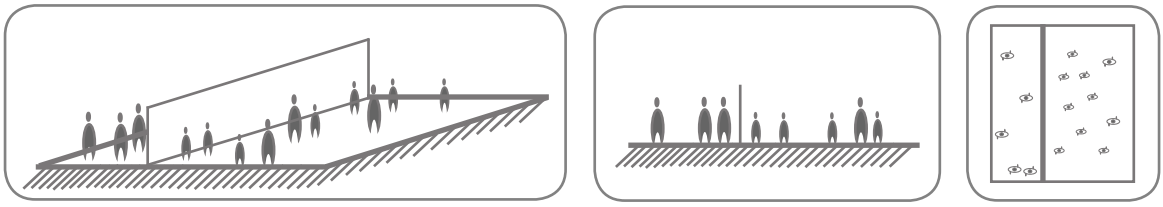
Concept [3] is highlighted as one that has surfaced from the beginning and has continued to drive the design. It, along with concept [4] come together to inform the way forward. What is important to note is how all of these concepts, namely the joint, buffer, point of control and the wall are all **threshold** conditions. This notion will be extended further on into the technical approach to the building, as seen in Chapter 07.

The following page shows a series of explorative diagrams done in order to understand how a building can function as a wall, presented as concept [4].

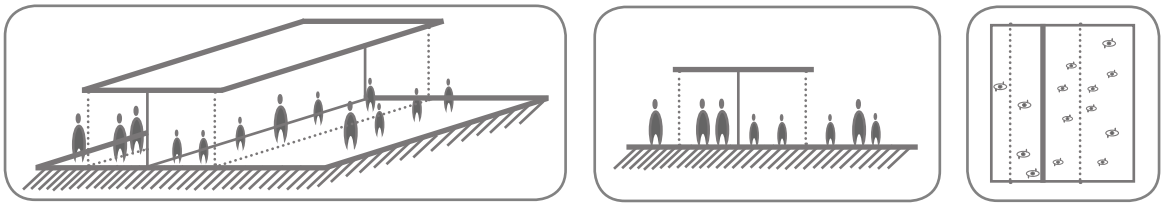
Table 5.1: Polarities to confront. (Compiled by: Author)

Condition	Polarities	Icon	Description	Function - Architectural translation
[1] Push-Pull	Experiential - Facilitated learning		Determines what influences it and what does not, what it takes in and what it rejects, etc.	The Library and Hall public spine (both are functions that can be public and private) can allow engagement with the public realm when needed as well as isolate the school when privacy is required.
[2] Funnel	Urban - Museum Precincts		Acts as a buffer between very different urban conditions to ease the change from the one to the other	The proposed north-south public corridor (see page 122) which will be an activated spine, mediating pedestrian movement and engagement between the Urban and Museum Precincts.
[3] Joint	Adult - child (traffic lights)		Points of Control - monitoring of access and use, Establishes change both vertically and horizontaally, points of rest, points of engagement and opportunity.	The blocks that service the school with vertical circulation, toilets and shared recreational spaces. They establish identity, legibility and hierarchy.
[4] Wall	Public - Private		What the school is primarily doing; taking ownership of its own edge condition, dictating its own engagement with its surroundings	1 + 3 together

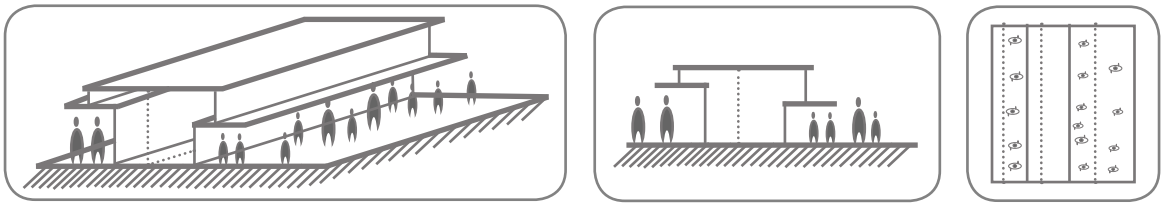
PERSPECTIVE SECTION PLAN



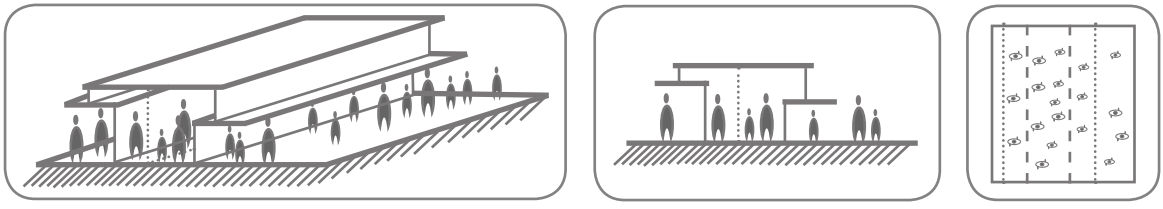
The wall condition currently present in the Pretoria CBD.



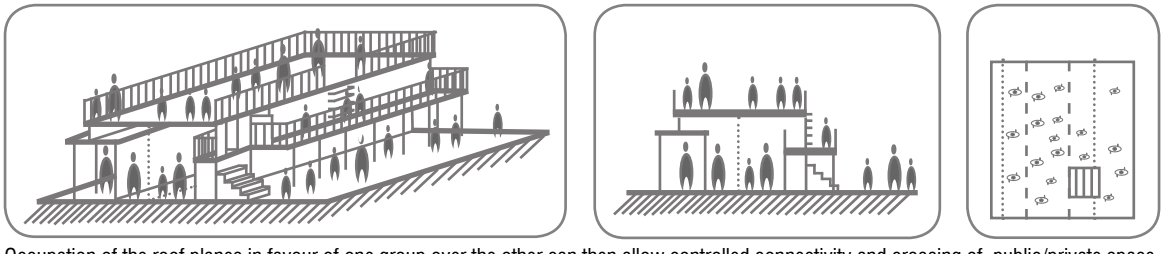
A shared roof over both sides of the wall creates space underneath it, allowing the wall to become a point of gathering depending on what starts to happen around it.



A manipulation of the roof plane can form smaller, more intimate spaces or just spaces for different programs to emerge. The original wall can then be removed to create a mediating space inbetween public and private users.



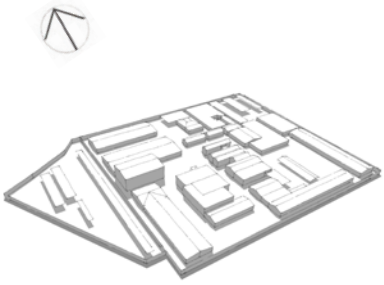
The mediating space can be a response to the spaces that edge it, allowing controlled or restricted access. Roof levels can also denote which type of user the space is made for.



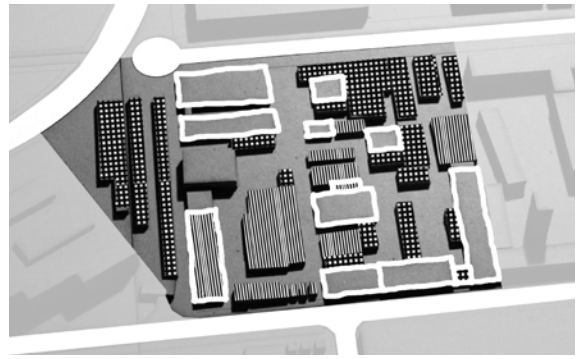
Occupation of the roof planes in favour of one group over the other can then allow controlled connectivity and crossing of public/private space, but not obtrusively.

5.5 Site Approach

The following diagrams outline the approach proposed to the PWD site in order to establish it as an acupuntural point in the Museum Precinct, considering edges, movement, access, connection and spatial legibility and hierarchy.



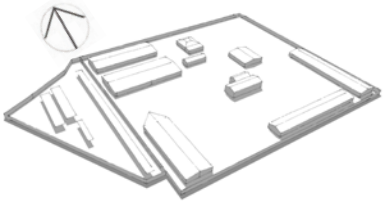
The PWD site as is.



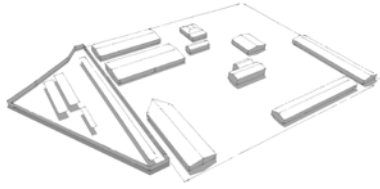
Parking structures

Temporary Storage Buildings

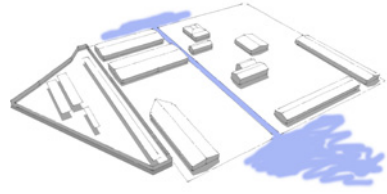
Figure 5.6(a): Buildings that can be demolished (Photo by: Philip Slabbert)



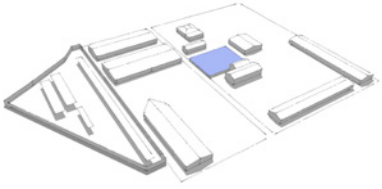
Removal of parking shading structures + redundant buildings; retaining of Historically significant buildings.



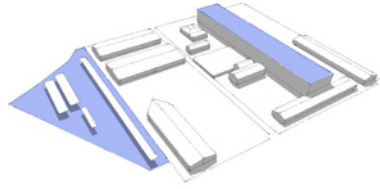
Removal of defensive wall edge.



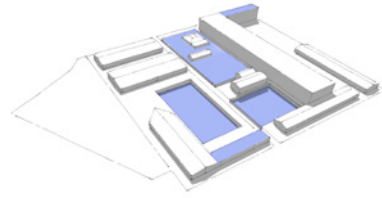
Introduction of north-south thoroughfare, connecting the very busy activity to its south to the currently lifeless Museum Precinct to its north.



Introduction of a central square, as a place of communal destination of both people and programs.



Inclusion of surrounding context as extention of program, for the purpose of integration. Buildings as edges are introduced as mediator between public and private spaces.



Buildings used to define spaces, along with sunken and raised ground planes. Heritage buildings are used to define the courtyard edges.

Figure 5.6(b): Progressive change proposed to the PWD workshops site. (Diagrams by: Author)

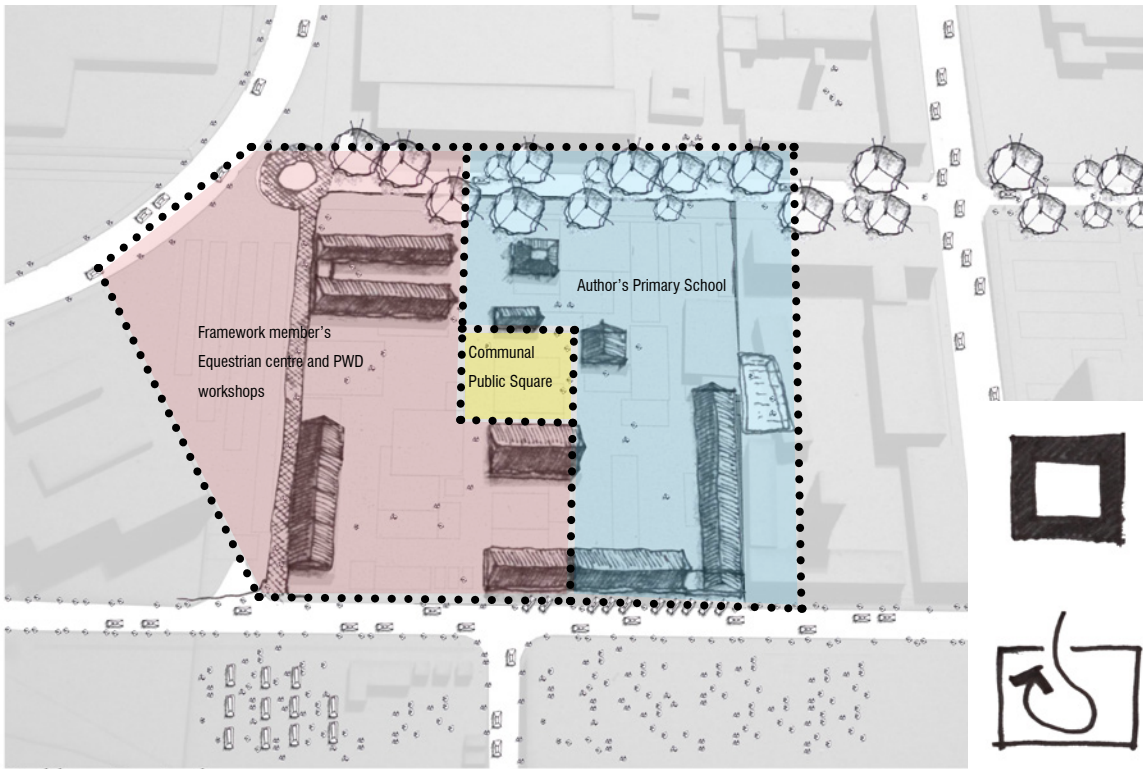


Figure...: Buildings retained

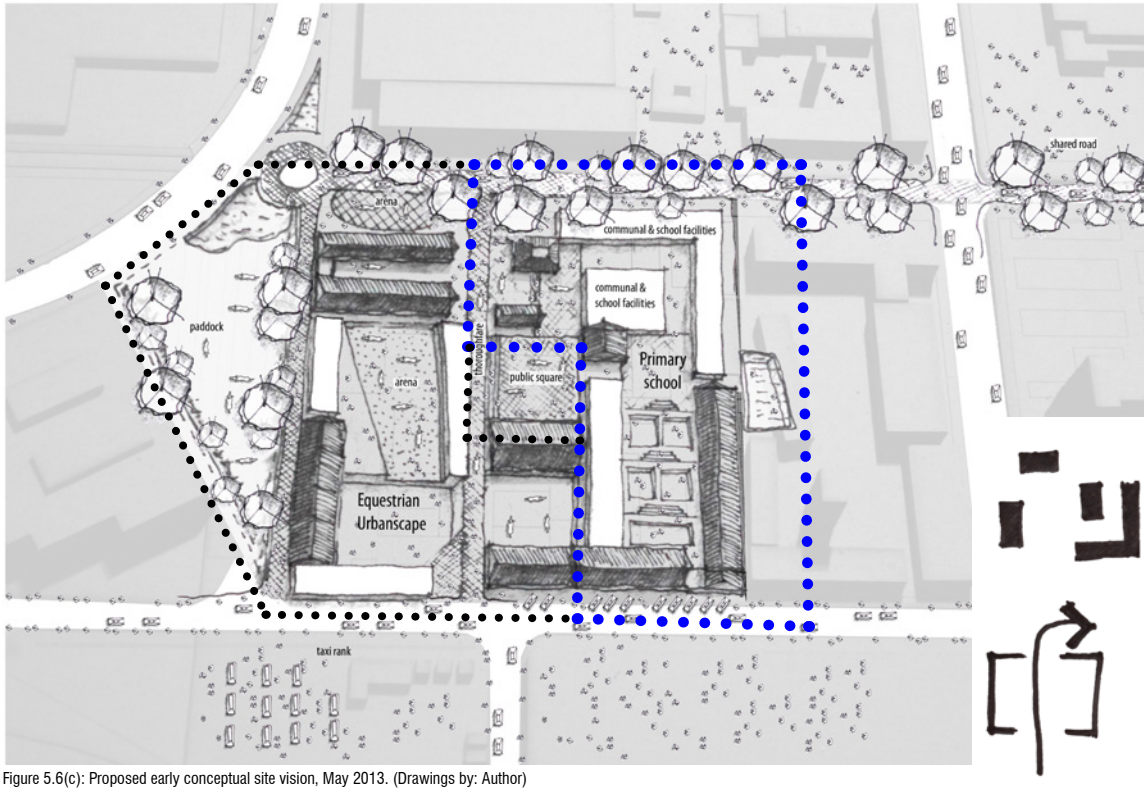


Figure 5.6(c): Proposed early conceptual site vision, May 2013. (Drawings by: Author)

5.6 Incremental Growth Strategy

As the Founders Community School suffers from rental constraints, the aim of the project is to derive ways in which they can generate a larger income than currently being done until ownership can eventually become a reality.

Currently, they rely on school fees as well as a government subsidy in order to run the school.

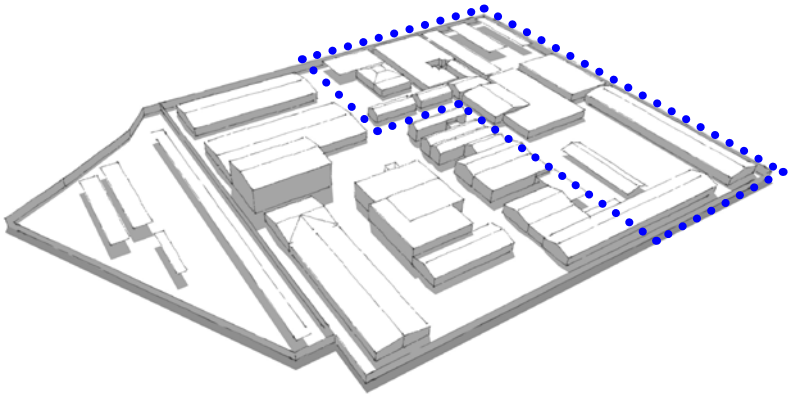
There are two realistic proposals that can be offered. The first is for the school to collaborate with the city library, in which ownership would belong to the library and it would be them that fund the erection of the building as well as handle its rates and taxes. The city library could then supply this school library, as well as stock it with tourist information on the Museums along Minnaar street. In time, through the many revenue generating programs proposed, the school would be able to own the entire building, even if it happened in parts over several years. They could remain in collaboration with the city library but eventually, the city library could pay rent to the school, again generating revenue for the school.

A second option is for the state to lease the land to a developer or non-profit organization, who would then fund the project. Similary, the school would be able to buy the school through their years of revenue generation.

The PWD no longer does maintenance work at these workshops, as they now tender the jobs to contractors who use their own workshops in order to fulfill the required tasks. For this reason, the workshops have become redundant, but can be kept for use as workshops just for when the school is being built.

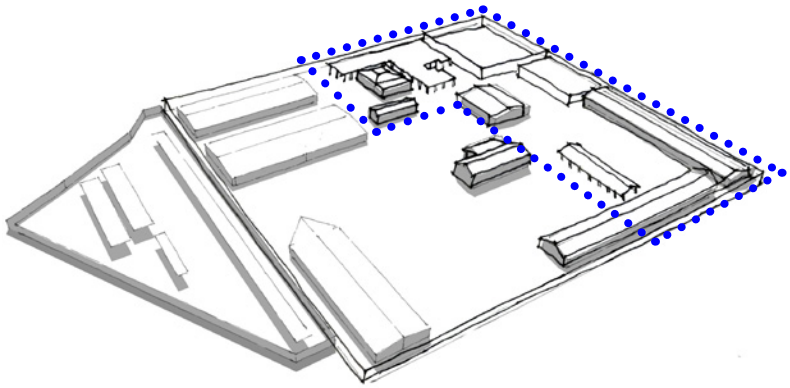
The remaining unused building materials found in the warehouses grant exciting opportunities for the building's material palette, which will be introduced in Chapter 07.

There is still a need for the office buildings and parking for works regulation. The assumption is that over time, the plot will be subdivided and sold. The city library, a non-profit organisation or a developer can then obtain this plot and commence with building.



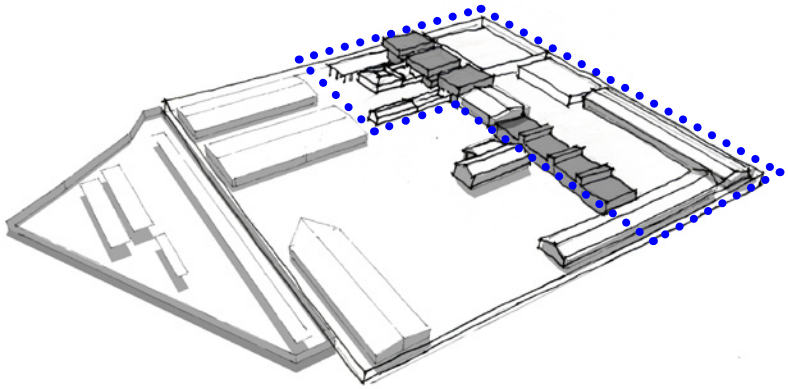
STAGE 1

Funder collaborates with Founder's Community School to build a school and library. This benefits the school as they can not yet afford it and the city library/ developer/non-profit organisation as they can now have a presence in a very tourist inclined part of the city.



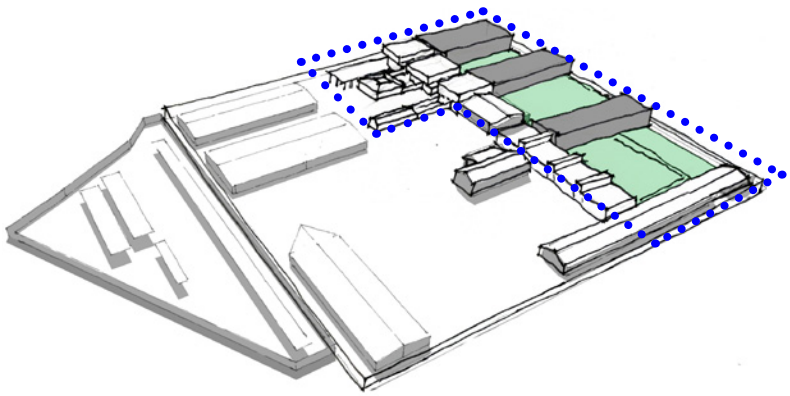
STAGE 2

The removal of redundant buldings and parking bays is necessary in order to create space for new functions and programs. Careful consideration is placed on buildings of historical significance.



STAGE 3

The publicly useable amenities are built first. These will also act as the school's mediating wall. This comprises of the library, school hall and administrative wing. The hall can be rented out for movie viewings on a daily basis or for other extramural activities such as boxing, karate or skateboarding lessons, etc.



STAGE 4

The final stage is the erection of the private school function buildings. Shielded and controlled by the administrative wing and public amenities, the school buildings are then given the freedom to open out onto courtyards, which after school can be open to the public to be used as open green space.

Figure 5.7: Proposed incremental growth strategy for the urban primary school. (Diagrams by: Author)

*A little girl, once inclined to **ask** every conceivable question,*

as a woman fears sounding

uninformed.

Why is remaining unsure even an option?

CHAPTER 06
Precedent Studies

In Brief

Chapter 06 is a study of the theoretical, typological, formal, spatial and social approaches in school architecture relevant to the dissertation's main aim.

6.1 Lessons from the Past

Four categories were used as an analytical approach to the understanding of educational design paradigms:

1. Theoretical analysis - Some schools were built in a specific school experimentatation paradigm. As designers were beginning to understand more how to manipulate space to suit its users, they found that school typologies were not engaged enough in this architectural discourse. They not only started the conversations, but proceeded to demonstrate their thoughts through their works that followed.

2. Typological and formal approach - All buildings have a typology, schools are no exception. Its components allow us to read its aims and intentions, as well as how it functions as a result of those aims. It is this that gives both legibility and identity to a bulding and hence a sense of ownership. Typology is very dependent on context, environmental conditions, cultural traditions and users. This study investigates how the school building has responded to those conditions in order to be what it is today.

3. Spatial approach - This explores unique design interventions that add to the quality and understandng of scale, comfort and use.

4. Social (sustainable) approach - A pertinent thought that a school can fulfill a certain social and societal needs is one that has been making regular appearances over the past decade and a half, especially in less privileged countries. With schools seen as a potential community centre, granting resources and open spaces, its presence and impact is felt by a lot more than its intended users. A school has the potential to change its environment drastically and it is these potentials that are explored.

The sequence in which the precedents are presented aims to establish a timeline of thought over the past 65 years, commencing at the time after World War II, which inspired a great mental shift in the making of schools and other child spaces.

Main Linear

6.1.1 Theoretical + Formal

Fagnano Olona Elementary School by Aldo Rossi, Fagnano Olona, Italy. 1972 - 1976

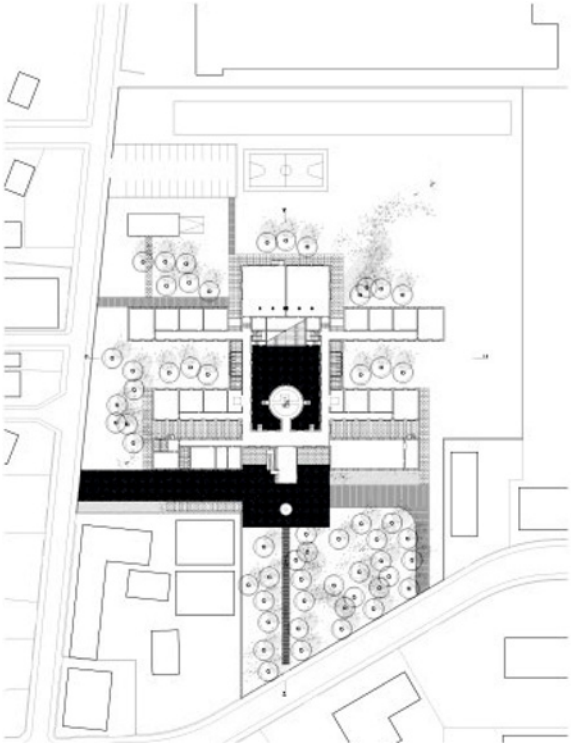
Approach: School as a city in microcosm.

Figure 6.1(a): The school library as an an object in the school landscape, establishing hierarchy and legibility. (McEwan, 2013)

Rossi believed in linking building types: school, cemetery, theatre; with their conceptual analogues: life, death, imagination. He believed in architecture as both material and idea.

His drawings of Fagnano Olona Elementary School show how he examined the relationship between observation, memory and imagination within an analogical framework to depict the type-forms, type-elements, monuments and anonymous architecture.

With the school as a city in microcosm as the approach, it is defined by its courtyard plan-form and axially-arranged accommodation. Within the courtyard, wide steps lead to the double height gymnasium, from which one can look towards the cylindrical library with its glazed roof. Analogically, one can equate the gymnasium with fitness and physical health, opposite the library which is for knowledge and between these are the square and steps; where the life of a city unfolds.



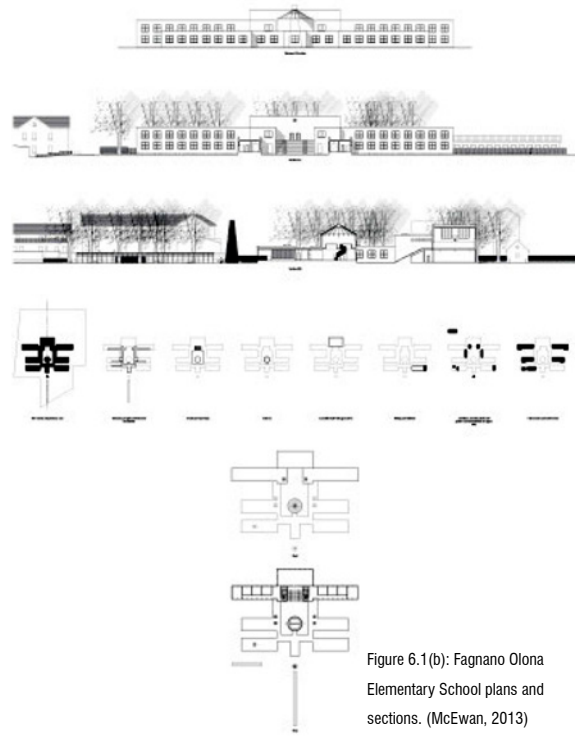


Figure 6.1(b): Fagnano Olona Elementary School plans and sections. (McEwan, 2013)


Unit Atria

6.1.2 Theoretical, Formal + Spatial

Playgrounds (±733) by Aldo van Eyck, Amsterdam, Netherlands. 1947 - 1977

Approach: The city as a child-space.

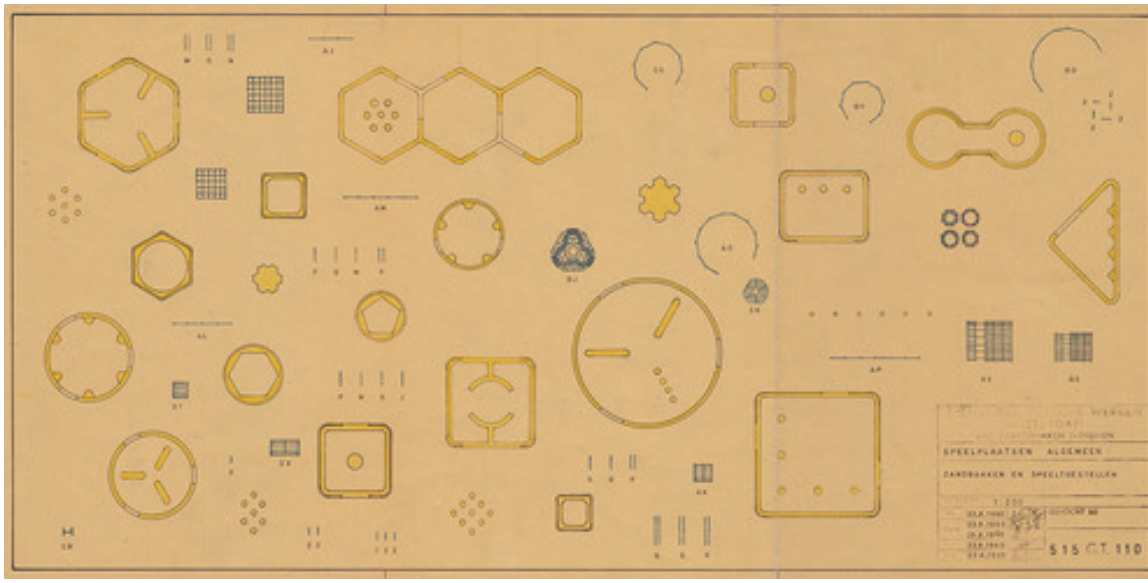
Van Eyck's playgrounds, as described by researcher Marina van den Bergen (1999) "do not look like deserted amusement parks when the children are gone. They become places that make sense to adults, places of rest or encounter." His premise was that "if cities are not meant for children, they are not meant for citizens either." (van Eyck: 1957)

Van Eyck believed that Modernist architectural concepts could be implemented immediately and on a small scale, rather than waiting for whole areas of the city to be demolished and rebuilt. He called this 'Inbetweening': the making of overlooked spaces; giving waste space a use.

In 1947, he designed what was to become the first of this network of playgrounds at a small experimental site in Bertelmanplein, Amsterdam. 20x30m in size and surrounded by school-style housing, the playground was designed as a simple space with a concrete moulded rectangular sandpit. This was to become the van Eyck trademark. It also included tumbling bars, space for free play and trees and benches for shade, shelter and comfort.

He used 'relativity' as a compositional technique. Relativity is when "connections made between elements are determined by their mutual relationships rather than by a central hierarchical ordering principle." (van den Bergen, 1999) No element within a playspace was to have

Figure 6.2(a): Prototype play elements designed by Aldo van Eyck. (van den Bergen, 1999)



supremacy over any other. Sandpits were set off centre with tumbling bars on a diagonal line. Each element had space to be used and explored by many children at once and many times. Those spaces created in between the elements offered a play value that was not concerned simply with movement from one piece to another but with the flow of the playing.

His playgrounds became the city's 'in between' places with the sense of 'place and occasion' as their activators. It showed extreme clarity of design, with a sense of understanding of proportion, light, shade and shelter.

The playgrounds have established an expectation of play opportunities at regular intervals throughout Amsterdam and its suburbs, fulfilling his desire to change the city into a place with a culture of play recognised as integral to its fabric.

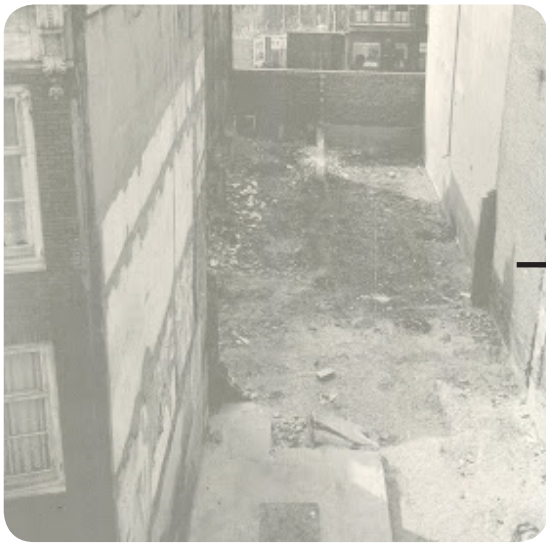
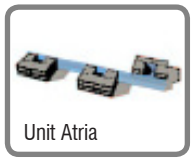


Figure 6.2(b): Post World War II dead end. (van den Bergen, 1999)

Figure 6.2(c): Post World War II dead end made into a playground designed by van Eyck. (van den Bergen, 1999)

Figure 6.2(d): A once empty Amsterdam street. (van den Bergen, 1999)

Figure 6.2(e): The now lively street as a result of the simple play elements designed and implemented by van Eyck. (van den Bergen, 1999)



Unit Atria

6.1.3 Theoretical, Typological, Formal + Spatial

Amsterdam Orphanage by Aldo van Ecyk, Amsterdam, Netherlands. 1960

Approach: The balance between a home and a small city_small urban study.

His design focused on a balance to create both a home and small city on the outskirts of Amsterdam.

It was commissioned as an orphanage for children of all ages and includes sleeping quarters, a kitchen, laundry room, gymnasium, library, and administrative spaces. Van Eyck spoke of the orphanage as a small urban study. He wrote that “a house must be like a small city if it’s to be a real house, a city like a large house if it’s to be a real city” in an essay published in 1962 titled ‘Steps Toward a Configurative Discipline.’

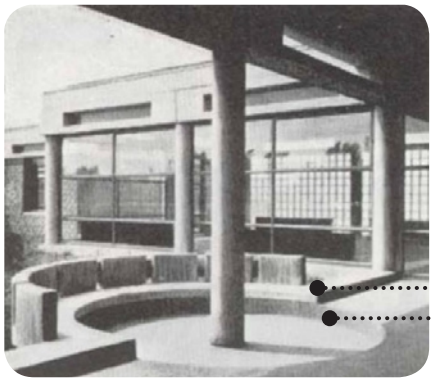
His designs for the orphanage were those of both a home for the children, as well as the plan of a small city. He created a decentralized urban node with many points of interaction within the plan. He was interested in a non-hierarchical development of cities and, inspiring the creation of many in-between conditions to break down the hierarchy of spaces inside the orphanage.

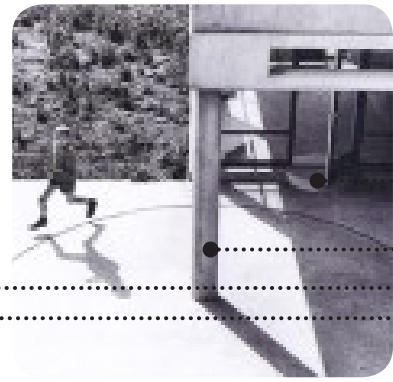
The building was constructed out of two sizes of modules, a smaller size for the residences, and a larger size for community spaces. The modules consisted of four round columns at the corners with a domed roof of pre-cast concrete on top. The façades in the building were either a glass wall or a solid wall made with dark brown bricks.

Within the orphanage, units of program were laid out on an orthogonal grid. The units projected off two diagonal paths so that each unit had multiple exterior façades. By projecting off of a diagonal within the grid, van Eyck created an equal amount of negative spaces from the positives he formed. Each individual unit was then neighboured by its own outdoor space.

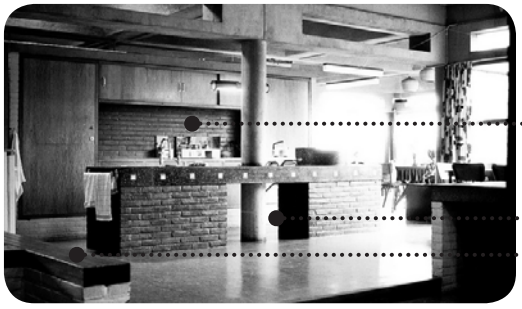
A larger courtyard was offset diagonally from the residential spaces, and the entrance and administrative spaces were connected with the street, the large courtyard and the residential units. Van Eyck avoided creating a central point within the orphanage by allowing for fluid connections between all spaces.

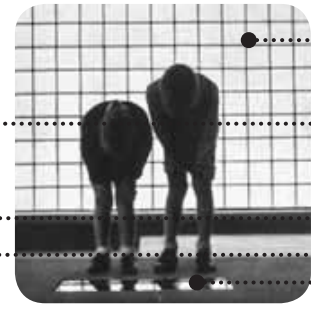
The orphanage is van Eyck’s vision of a balanced community.



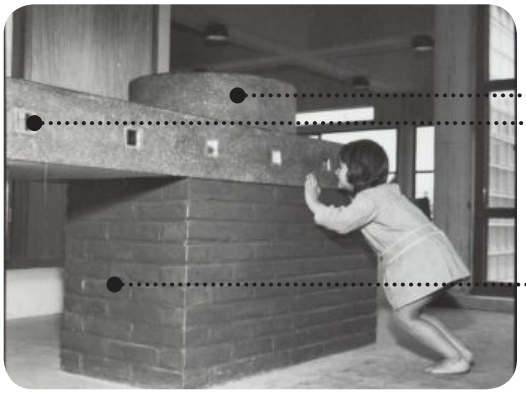


scaled threshold - seatable
focal point
continuity
level change

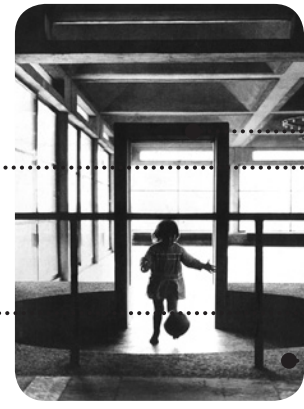




light and connection
scale change - niche
crawling space
seating areas
view and intrigue



useable elements as objects
views - peep holes
inside-outside connection
change in material
threshold edge raised - leaning; sitting, laying



framing and scaling
views
threshold as niche
seating surface as edge

Figure 6.3(a): Scale-conscious spatial elements of the Amsterdam Orphanage by van Eyck. (Balters, 2011)

Figure 6.3(b): Plan of the Amsterdam Orphanage by van Eyck. (Balters, 2011)


Unit Linear

6.1.4 Theoretical, Typological, Formal + Spatial

Delft Montessori School by Herman Hertzberger, Delft, Netherlands. 19??

Approach: City as a school.

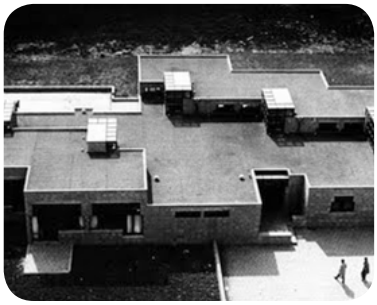


Figure 6.4(a): Aerial view of the Delft Montessori School by Herman Hertzberger. (Cresswell, 2007)

Hertzberger experimented continually with the idea of making the whole city a school as well as making a school into a city. He found the idea of learning perfectly applicable to urbanism.

”Everybody is trying to find standards for urbanism and everybody is talking about public space, but nobody knows what to do with it. So I try to see the city as a macro school.” - (Space and Learning)

He took Aldo van Eyck’s talks about the city for children and pushed the argument a step further as he felt that when a city is built as a macro school, it will function better for adults as well.
The answer to his briefs was not to provide utterly open-ended scenarios and then hope that the users will do unspecified “unexpected things.” He put in place rather, structure which enabled a certain range of possible outcomes.

high supply of light

deep mullions that acts as a shelf for display of children’s interests

edge work surface and storage at children’s heights with access to ample light

lower niche space

outside planting area

blocks that inspire mobility, assembly and composition

Figure 6.4(b): Carefully considered spaces of the Delft Montessori School by Hertzberger. (Cresswell, 2007)

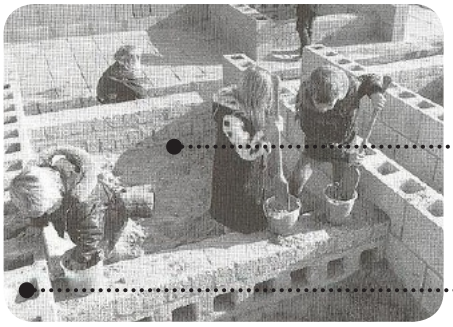
concrete block holes as useable pidgeon holes

stage in the school hall as centrepiece rather than edge - becomes useable for varying occasions as it does not feel like a prescribed stage

skylight towers as legibility and typological tool

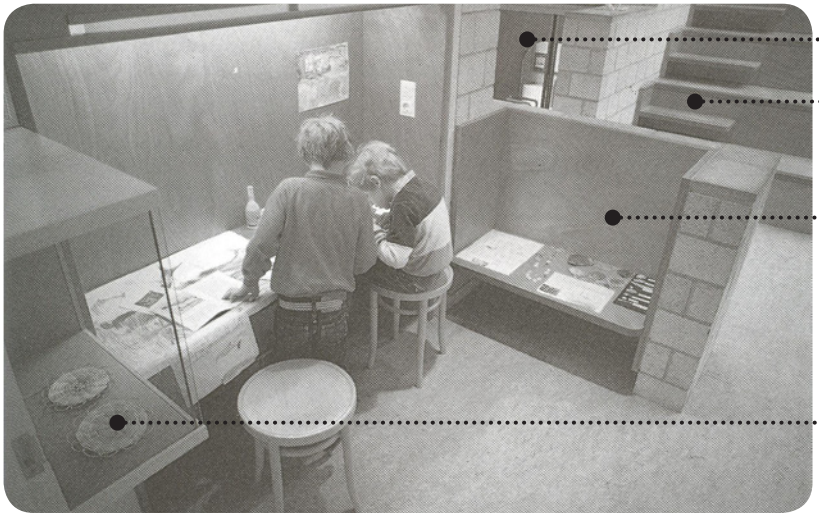
varying sizes and heights of openings enable ventilation and connection

stepped entrance at varying heights inspire gathering and seating



concrete block playground creates niches and innovative play opportunity

concrete block wall presents a place of rest, gathering, niches, scaling and connection



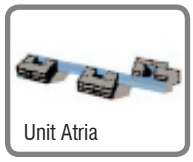
smaller scaled door suitable in size only for the children

staircase treads and risers vary in size to inspire different ways of use

niches established in front of the formal classrooms to create outside less formal learning spaces

display cases in front of classrooms which exhibit each classroom's artistic abilities

Figure 6.4(c): A series of innovative but affordable design solutions implemented by Hertzberger. (Cresswell, 2007)


Unit Atria

6.1.5 Formal + Spatial

SAHETI School by Mira Fassler, Senderwood, Johannesburg. 1974

Approach: Threshold importance.

This mostly single storeyed school is made smaller in scale by the tiled, hipped roofs, many of which are gabled with clerestory window on its one side. Not only does it address changes in scale, but also establishes identity and legibility, both functionally and aesthetically, by also providing lighting and ventilation benefits.

Facebrick, terracotta roof tiles and concrete beam and columns are its material palette, used to reinforce legibility and clarity in programming.

Concrete beam and column elements have been used to define and edge the open spaces and courtyards as well as to create focal and inevitably gathering points.

Figure 6.5(a): The well defined courtyard entrance space of the SAHETI school by Mira Fassler. (Author, 2013)

Figure 6.5(b): A view to a classroom in the SAHETI school by Mira Fassler. (Author, 2013)


Unit Linear

6.1.6 Typological + Spatial

Strawberry Vale School by Patkau Architects, Victoria, British Columbia, Canada. 1995

Approach: School as island.

The school comprises of classroom pods placed along a meandering circulation spine. The irregular configuration of spine and pods creates a variety of non-programmed spaces that support educational and social interactions, both spontaneous and planned, providing an architectural basis for a stronger sense of community within the school. The students use this area to plant and monitor plant species such as cattails and bulrushes, collected from the neighbouring marshlands, on their own initiative.

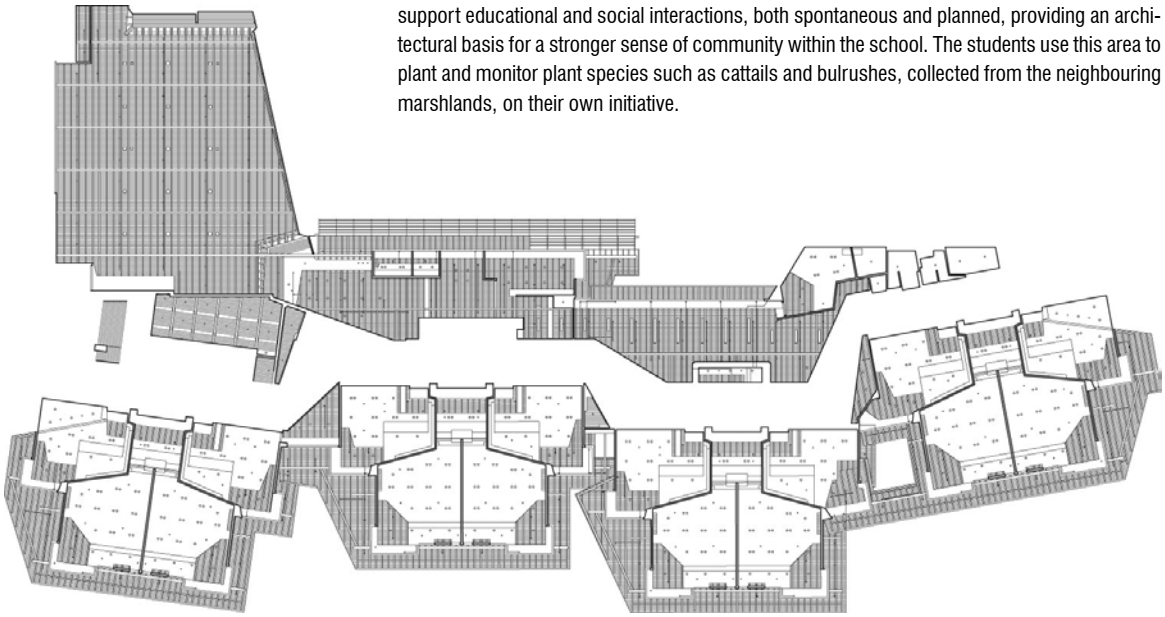


Figure 6.6(a): The well structured, legible unit linear plan of the Strawberry Vale School by Patkau. (Dow, Unknown)

Figure 6.6(b): Strawberry Vale School elevation by Patkau. (Dow, Unknown)

Figure 6.6(c): Spatial explorations found in the Strawberry Vale School by Patkau. (Dow, Unknown)


Multiple courtyard

6.1.7 Formal + Spatial

Inkwenkwezi Secondary School by Noero Wolff Architects, Du Noon, Cape Town. 2007


Figure 6.7(a): Aerial view of the Inkwenkwezi Secondary School by Noero Wolff Architects. (Wolff, 2007)

Approach: School as civic architecture.

The school created an outer "wall" with all play spaces and access points beyond the safety of the entrance gates. This outer "wall" of classrooms encloses an undulating court with an open end facing Table Mountain.

The location of the building is on a sloping site, on the edge of the settlement and was exploited to develop a civic architecture that distinguishes itself from the residential fabric around it by its scale and sculptural form. The hall rises to a tall corner that is exaggerated by vertical fluting. The same language is repeated in the library. The entrance façade is layered with the hall and the library/administration block, forming shifted profiles in the composite façade. The entrance to the school is along a ramp, through this façade.


Figure 6.7(b): Plan of the Inkwenkwezi Secondary School by Noero Wolff Architects. (Wolff, 2007)

With the brief being made up largely of repetitive classroom modules, the wall architecture becomes a binding device and sets the stage for the large scale undulations in plan, which breaks the monotony of the block forms and the corridors.

The windows on the long horizontal façades were bound together by a decorative device that drew inspiration from the way people paint on public buildings, be it lines or signage, which over time 're-articulates or de-articulates the architecture' (Noero: unknown). The decorative pattern, inspired by African weave work, shows constructional logic outlining the expansion joints between the concrete beams and block work and between various panels of block work.

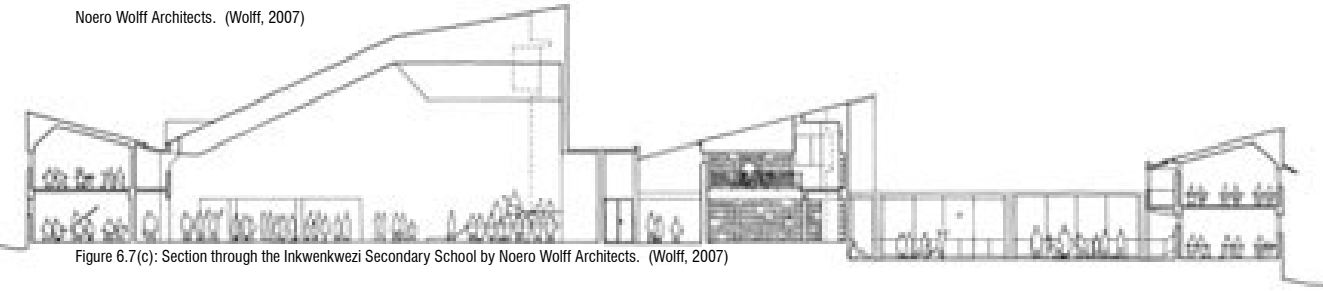
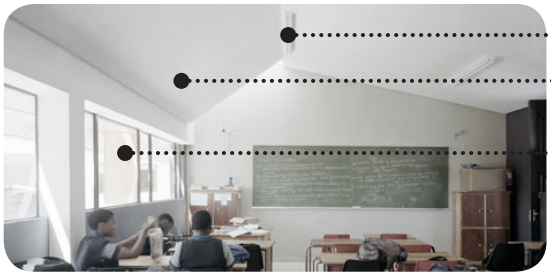


Figure 6.7(c): Section through the Inkwenkwezi Secondary School by Noero Wolff Architects. (Wolff, 2007)

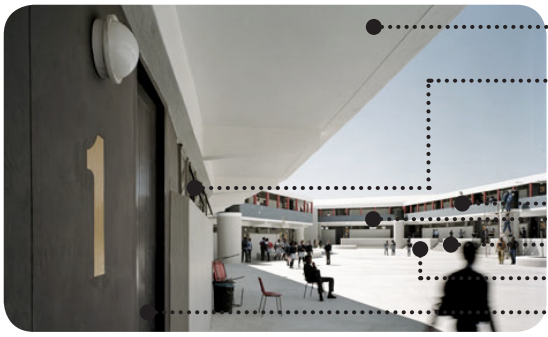


sliver of southern light

white walls to reflect light deeper into the classroom

large northern windows

school colour palette reflective of the colours of the surrounding context



roof planes used to bring the scale down

clerestorey strip windows increase the inlet of natural light

red columns define edges above; legibility

blue coloured balustrade with seatable edge

entrance stairs as gathering spaces

entrance platforms as seating

long windows provide light and connection to the outside

roof plane lowered to define entry

stark colour change used to focus eye

columns used to frame

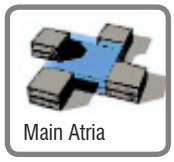
stairs leading to entrance becomes a very successful social platform

white walls reflect light deeper into the hall; the height reflects the amount of children likely to use it

light used as focus element to hightlight the main part of the space

planes are manipulated, with the floor raised and wall recessed to define the stage

Figure 6.7(d): Well considered elements found in the Inkwenkwezi Secondary School by Noero Wolff Architects. (Wolff, 2007)


Main Atria

6.1.8 Typological + Spatial

Panther Lake Elementary School by DLR Group, Federal Way, Washington, USA. 2009

Approach: School as civic architecture.

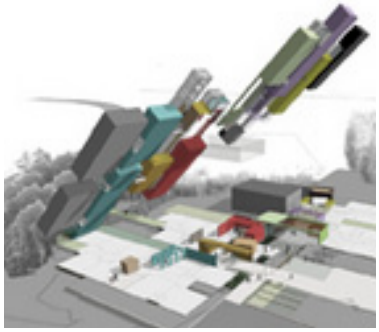


Figure 6.8(a): A 3D model of the Panther Lake Elementary School, explaining the school's layout logic, with its spine as the school's main atrium. (Roberts, 2011)

For Panter Lake Elementary School, striking a balance between the communal and individual aspects of schooling was a primary design goal. It focussed on bringing the learning and common areas together in order to enrich the students' educational experiences.

Long rows of formal learning spaces run parallel to each other, with a corridor running through the rows at a diagonal that contains the school's major common areas, bisecting and connecting the separate learning areas. As a result, although seeming separate in colour and structure, the various formal learning spaces remain connected to each other.

The classrooms are not divided by curriculum, but by the learning activities that take place inside them. Different learning activities are broken down and distributed throughout the school's block-like rows based on size, system needs and function to allow for greater adaptability over time.

The corridor that links all of the formal learning rows together consists of a group learning area, display cave, library, story corner, outdoor learning patio, cafeteria and auditorium. These areas are grouped into social, resource and event spaces and are each connected by an open space. The airy, continuous quality of the common corridor encourages engagement between students from different classrooms and promotes exploration in addition to focussed learning.

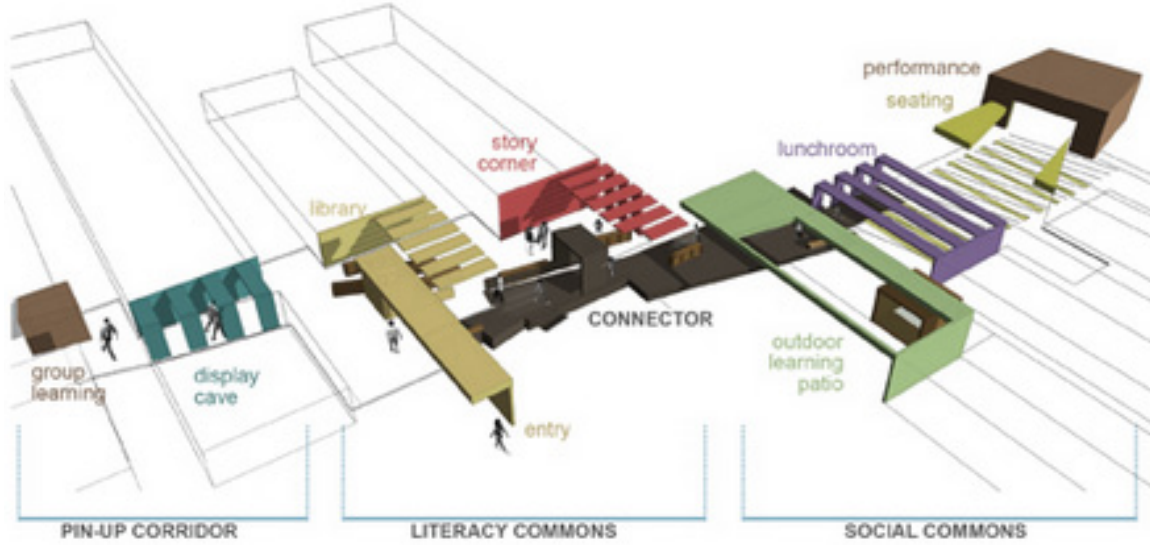


Figure 6.8(b): An exploded diagram of the Panther Lake Elementary School, showing the school's common zones. (Roberts, 2011)

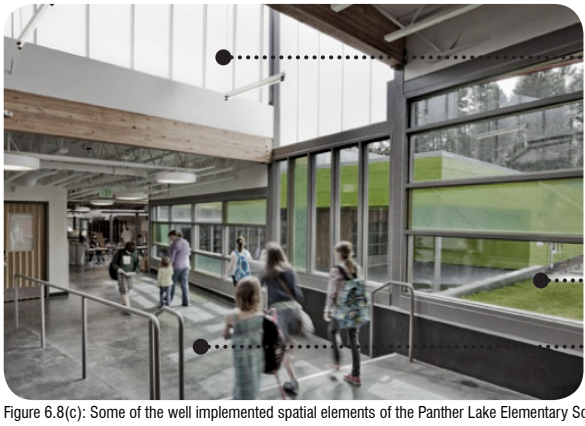
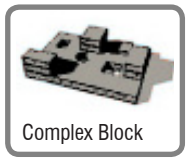


Figure 6.8(c): Some of the well implemented spatial elements of the Panther Lake Elementary School. (Roberts, 2011)


Complex Block

6.1.9 Typological, Formal + Spatial

DPS Kindergarten School by Khosla Associates, Bangalore, India. 2013

Approach: Replicable school.

Figure 6.9(a): Plan of the DPS Kindergarten School by Khosla Associates. (Patil, 2013)

The brief was to design a franchise for a popular north Indian school chain called Delhi Public School.

As the model was to be replicated across several schools in South India, the architects were asked to create a simple and cost effective language that could be adapted easily to different site conditions and slightly varying programs.

A balance was explored between cost effectiveness and creating a warm, playful and welcoming environment that would be filled with natural light and ventilation.

The architects established a modular system to be used as building blocks, by looking at the basic module of a 66m^2 classroom (11m x 6m) that could be repeated horizontally or stacked on top of each other. Those classrooms open onto a 2,5m wide corridor that leads to the central outer courtyard.

The simplicity of the repetitive exposed concrete structure allowed more flexible layers to be added on as skins, such as the corrugated metal wall along the corridors. They serve a dual purpose; they facilitated speed of construction and are durable for the wear and tear that school corridors usually need to withstand. This then also provided the opportunity for a sense of ownership by painting the sheets with the tropical colours found on the vernacular architecture of the region.

The central linear outer courtyard that runs the entire length of the building is the soul of the school and facilitates learning outside of the classroom.

Energy efficiency and cost effectiveness was achieved by utilizing minimal electrical load during the day due through harnessing of breezes and adequate natural light during the day.

Figure 6.9(b): South-east elevation of the DPS Kindergarten School by Khosla Associates. (Patil, 2013)

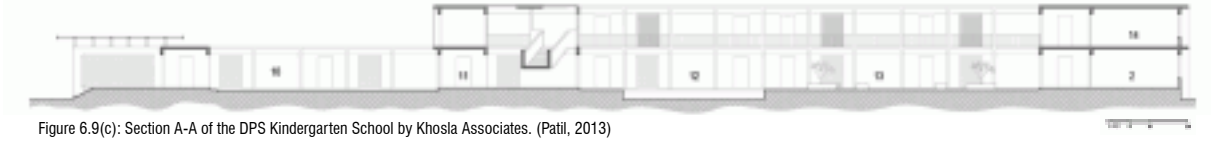
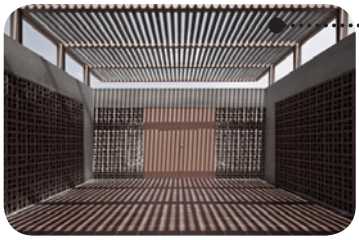


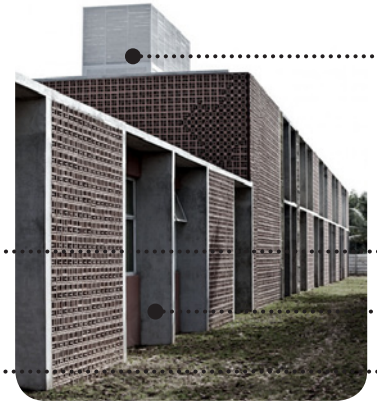
Figure 6.9(c): Section A-A of the DPS Kindergarten School by Khosla Associates. (Patil, 2013)



light as material; intimacy

colour as marker; legibility

steps scaled for children's comfort as threshold between courtyard and walkway



landmark as orientation tool; legibility

change of colour and material

repetitive concrete fins as formal language

objects that intrigue and are multi-functional; not inhibiting

concrete framing continued to emphasize the direction of the concrete fins

change in colour between different class-rooms and functions

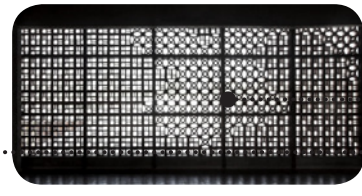
grand ceiling height and skylights to denote central space

rendered light through patterned screen

visual connections

lower ceiling as threshold

shared play space, remains a sand box without the toys



patterns - rhythm and change

continuity and coherence

Figure 6.9(d): The legible language elements of the DPS Kindergarten School by Khosla Associates. (Patil, 2013)

6.2 CHILD as a Competent Social Actor

Problem Statement: Young children are confined in child spaces rather than surveyed in adult spaces. This limits their natural freedom and undermines their capable ability to make informed decisions about their environments and how to engage with it.

Research Question:

1. To what extent can the boundaries of child space be manipulated to create stimulating child environments, without compromising on safety?

2. Do current learning spaces promote education alone or a balance of both education (classroom) and learning (experience)?

Hypothesis: Children can and should inhabit adult space.

Aim: The aim is to design a rightly termed urban school by exploring the complex urban adult environment as a component of an experiential and everyday child-learning environment.

Delimitations: The dissertation will not address the current state of the South African school curriculum. It will rather focus on the spatial qualities present in current learning habitats.

PART 2

The Sense

"Rebel children, I urge you, fight the turgid slick of conformity with which they seek to smother your glory."

Russell Brand

*A little girl, once told that **life***
will always have more to teach,

as a woman fears never **arriving**
to a mature state of competence.

Who's benchmark have I been working towards?

CHAPTER 07

Design + Techné

In Brief

Chapter 07 outlines design explorations and aims to balance the relationship between design and technology. It also presents the users as well as sustainable design strategies.

7.1 Accommodation Schedule

The urban primary school can be classified as an A3 building as per the S, with the hall and fields complying to A2 and A5.

Nr. of rms.	Name	Urban contribution	Max. Nr. of ppl.	min. sqm/p	min. total sqm.	WCs, WBs, URs, SHs				Important Spatial Trait/ consideration
						WCs	WBs	URs	SHs	
5	Offices	Semi-private	5	12	60					Visual access to children and visiting parents
1	Hall	Semi-public	450	1	450					Versatile for indoor sports, meetings and rehearsals
2	Change Rooms	Semi-public	60			Male 6	8	9	5	Should allow adequate ventilation to prevent water build-up
1	Library	Semi-public	150							Spaces that encourage individual and group learning
1	Biology + Science Labs	Semi-private	60	3	180					Connection to the outside for experimental purposes
1	Computer Labs	Semi-private	40	3	120					Shared space for adults and children
21	Classrooms	Private	420	3	90/class 1260 ev					Requires unique character but also flexibility
18	Storage	Private								Ventilation in some instances
1	Staff Room	Private	30							Visual access to children
1	Music + Drama studio	Semi-private	60							Audio and visual access to children; should be able to host courtyard space(s)
1	Art studio	Semi-private	30			Female 15	8	0	5	Audio and visual access to children; should be able to host courtyard space(s)
4	Playgrounds/ courtyards	Semi-private	420							Should deal with doing, learning, being and feeling
	Circulation spaces and routes	Semi-private	450							Should encourage social engagement, group learning and sense of place
1	Home Economics	Semi-private	30							Should promote innovation and design
1	Craft and Stationery story	Public	45							
1	Thrift store and clothes repairs	Public	10							

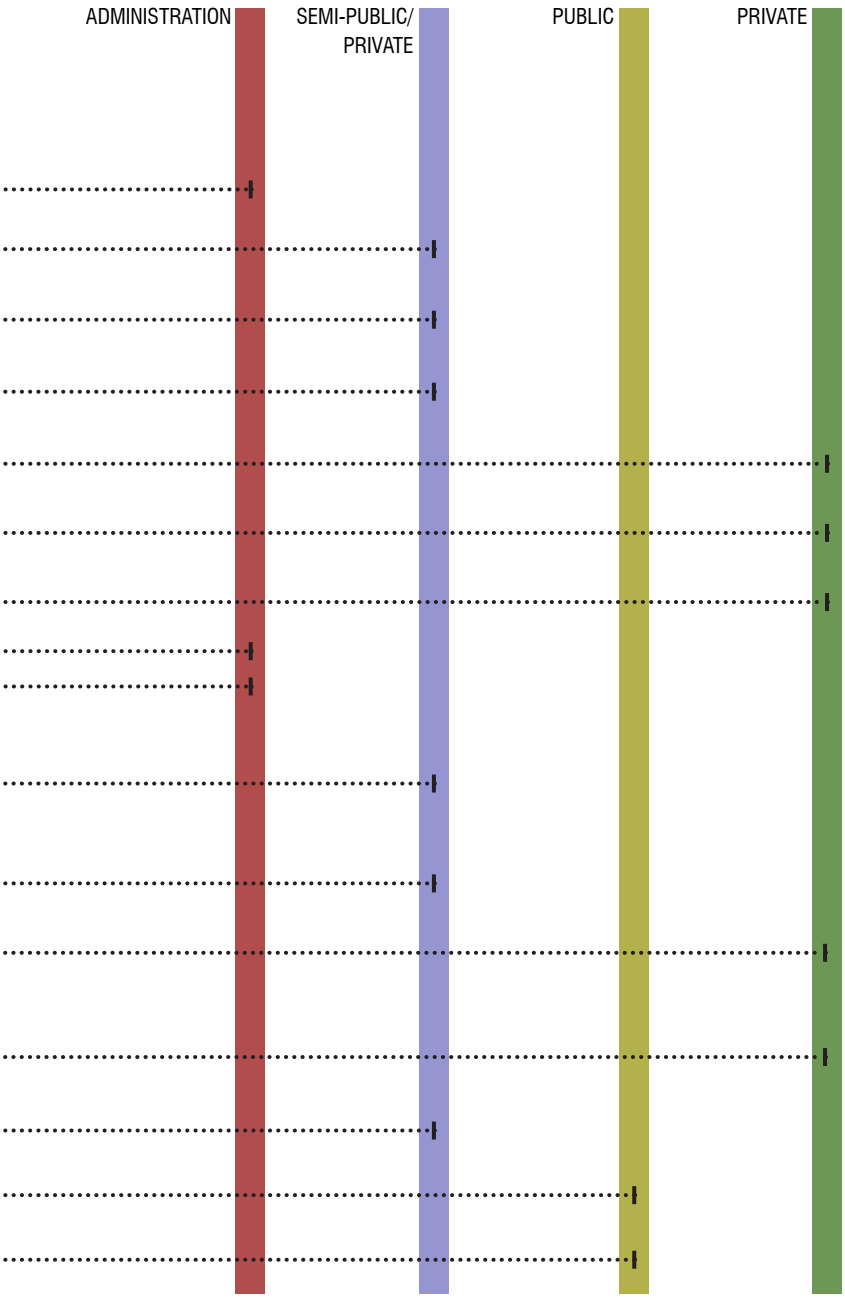
Table 7.1: Accommodation schedule (SABS 2011: 35;127)

Occupancy or Building Classification

School = A3 (1person/sqm)

Hall and fields = A2 and A5 (1person/sqm)

showers for 80ppl = 5 (x2) for 60 (4)



The building is made up of four main components. This is for the purpose of sustainability and integration into its surrounding city fabric. Its public component also creates a platform for experiental learning by the students of the primary school.

Administrative

Regulation of both the public and private functions of the school are conducted here. Queries are handled as well as security, as it is the threshold between the public city users and the school children.

Semi-public/private

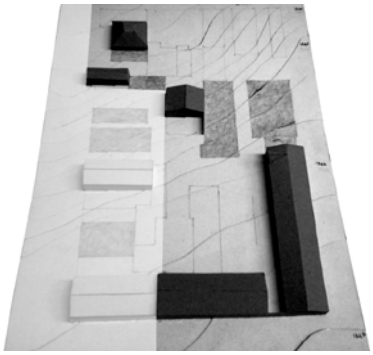
These amenities are shared only at certain parts of the day.

Public

Constant public accessibility is allowed in these parts of the building, not compromising on the security of the school children.

Private

These amenities are used exclusively by the primary school in the day and the adult school at night. Renting of space is not prohibited but accommodation of these premises should always favour the primary school.



Administration

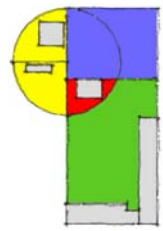
Semi-public/private

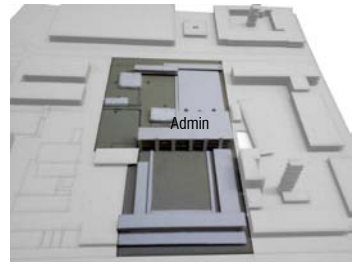
Public

Private

Existing

[1]





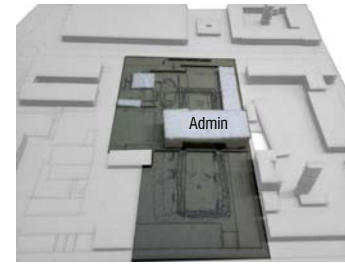
Multiple courtyard

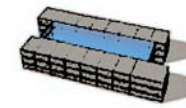
With the existing PWD site buildings highlighted in grey in the above diagrams, an myriad of explorations began in order to understand the school's presence in the site as well as its urban contribution.

This first configuration explored an administrative wing placed in the centre of the varying programs which would act as the mediating point of engagement. The concept of a joint as explained in Chapter 05 is what inspired this, with the aim to free edges by filling them with more public functions due to the presence of the 'joint' holding them together.

CRITIQUE: This configuration neglected to take a proper stance on the Heritage buildings present on site. The typology also lacked rigour and legibility and was too small a scale for the area.

[2]



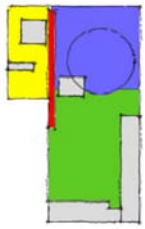


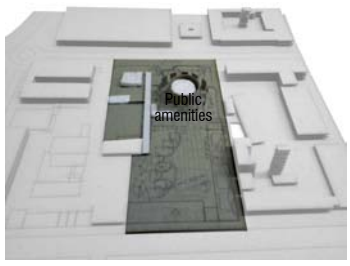
Block learning street

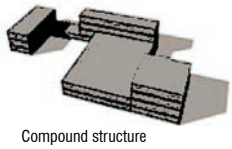
The above proposal explored the idea of a street in the school, allowing public functions to exist on one side of the 'street', and private functions to exist on the other. Again with mediation and control occuring through the administration block in the middle, an exploration began in order to understand what the possibilities for the street could become.

CRITIQUE: Although seeming promising at first, very deep spaces began to form as well as odd relationships. It eventually began to waste space for the sake of accommodating everything.

[3]





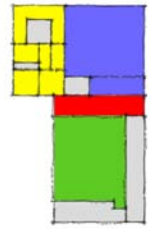


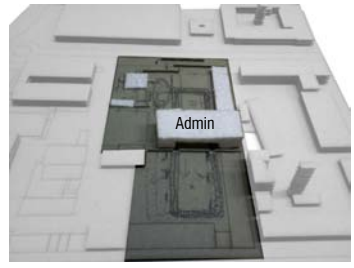
Compound structure

To respond to the Museums' typology of urban square as front yards, an exploration was done in order to understand what the implications of this typology would be in this area.

CRITIQUE: Unfortunately, the realization came that this would add to the already very underutilized urban rooms along the street, making a proposal for another urban room redundant and contrary to the urban engagement proposal.

[4]



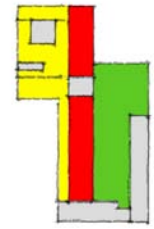


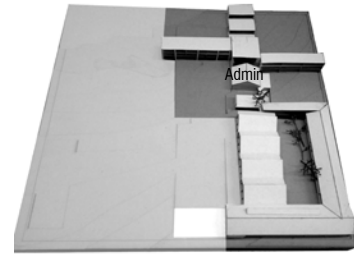
Multiple courtyard

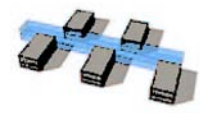
In order to spatially respond to the Heritage buildings' surrounds, an exploration was done in order to break-up the open spaces into a series of smaller spaces with uniquely defined edges. The aim was to hierarchisize the series of public spaces by giving it order.

CRITIQUE: Very deep spaces and awkward placements again became a problem. Not enough was informing the handling of the open spaces.

[5]





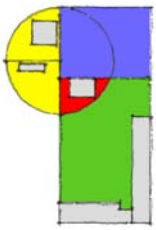


Main linear cluster

A very defined administrative edge, which would act as a mediating spine was explored in order to control the presence of both the school children as well as the public. Entrances were explored to establish connectivity but and controlled access.

CRITIQUE: The constant presence of public users resulted in too many separations of circulation routes. The spine failed to read as a spine and legibility was lacking due to an aim to respond to the heritage buildings.

[1]



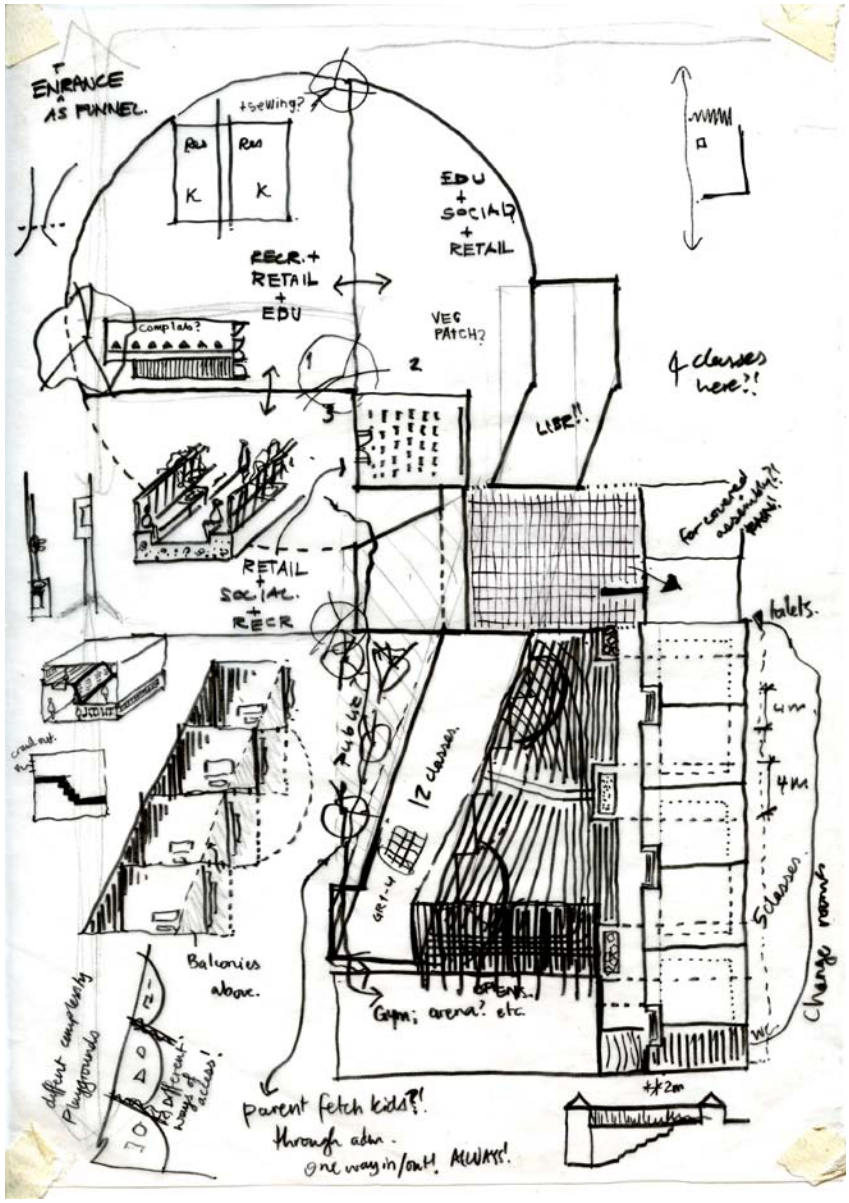
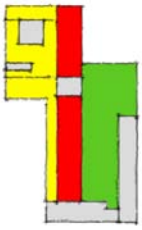


Figure 7.1: April explorations. (Author: May 2013)

[5]



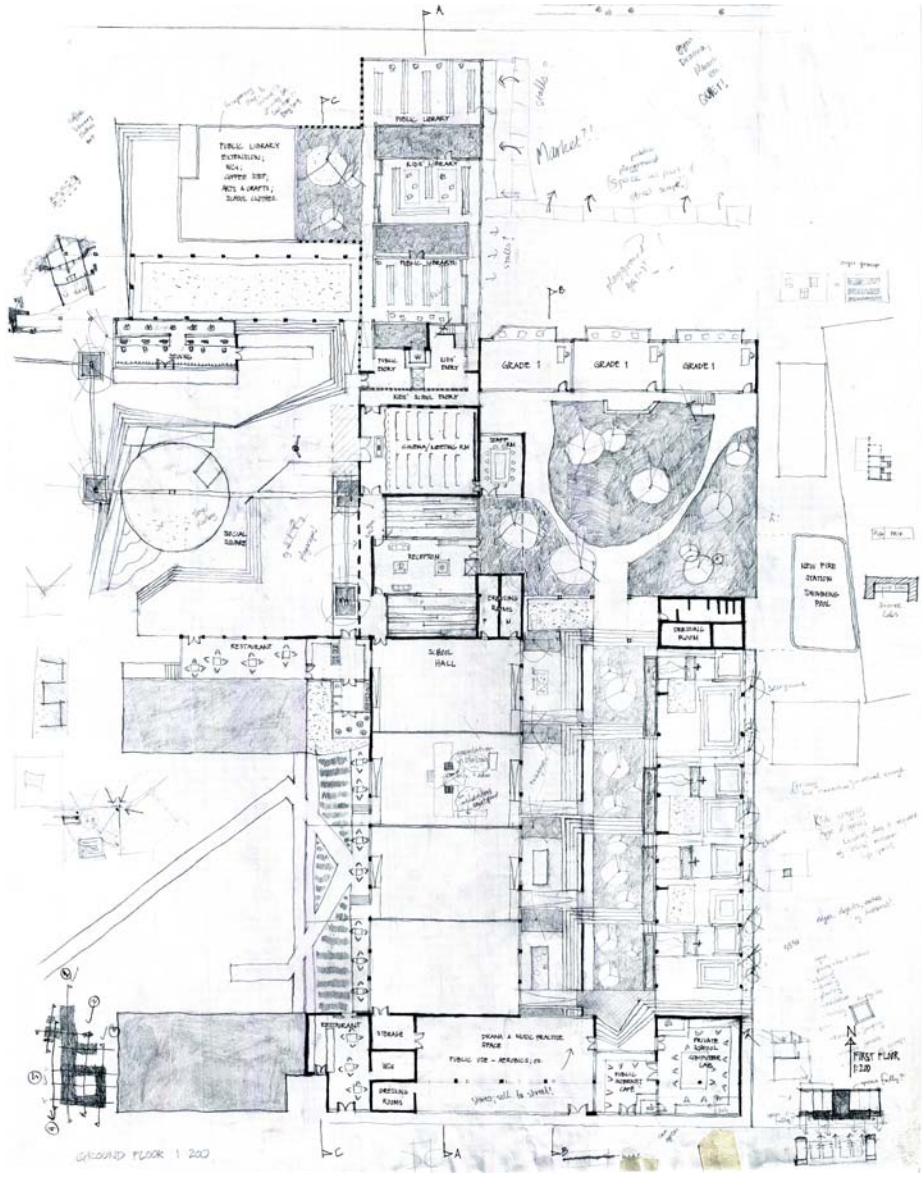


Figure 7.2: June explorations. (Author: June 2013)

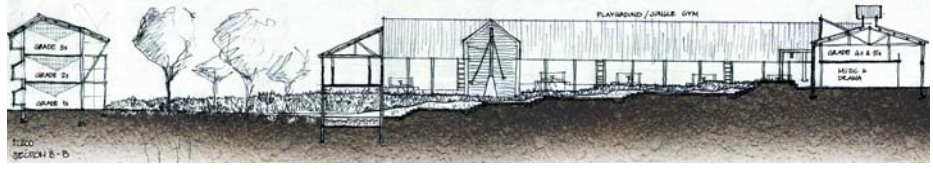
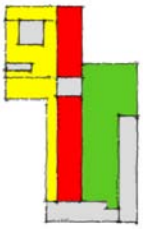


Figure 7.3: June sectional explorations. (Author: June 2013)

[5]



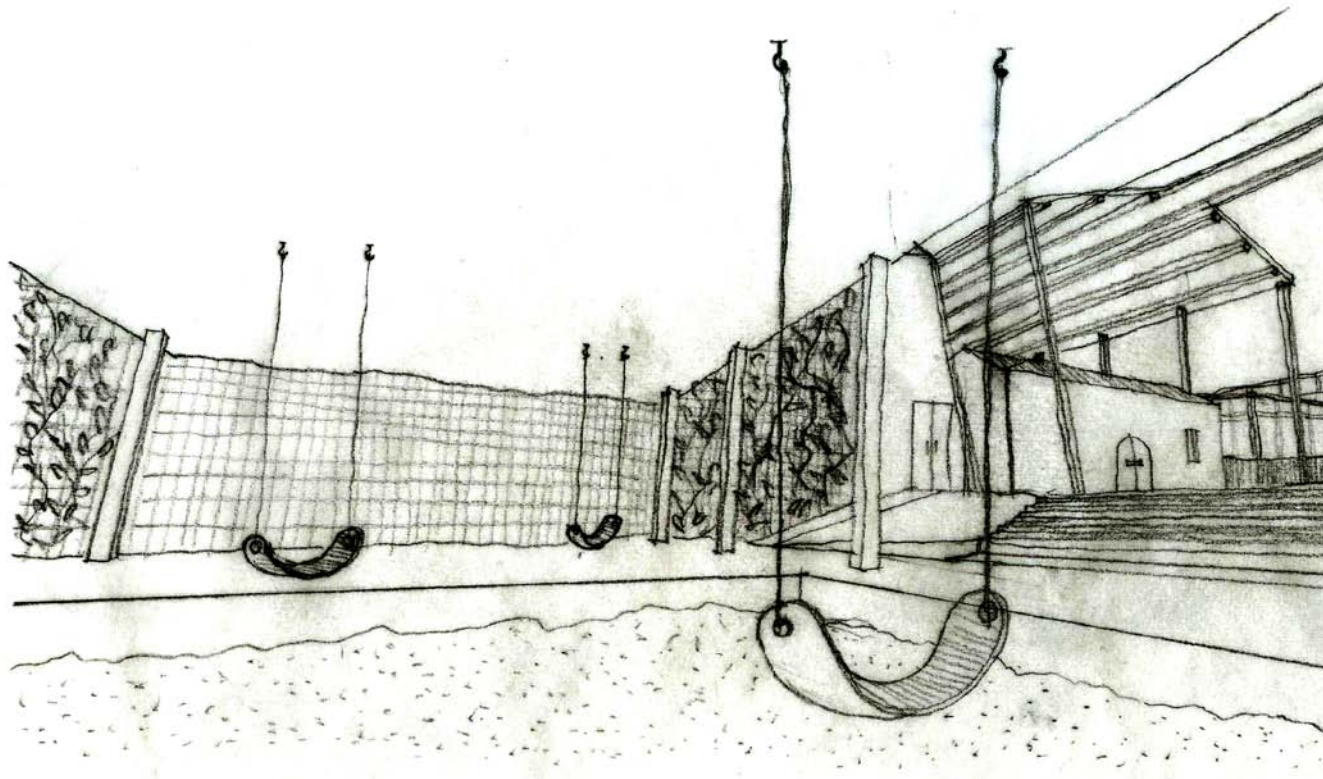


Figure 7.4: Preliminary drawing of potential use of space underneath classrooms. (Author: June 2013)

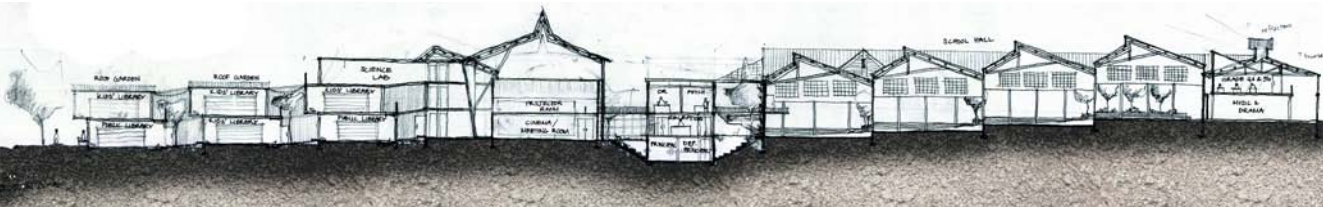


Figure 7.5: June sectional explorations. (Author: June 2013)

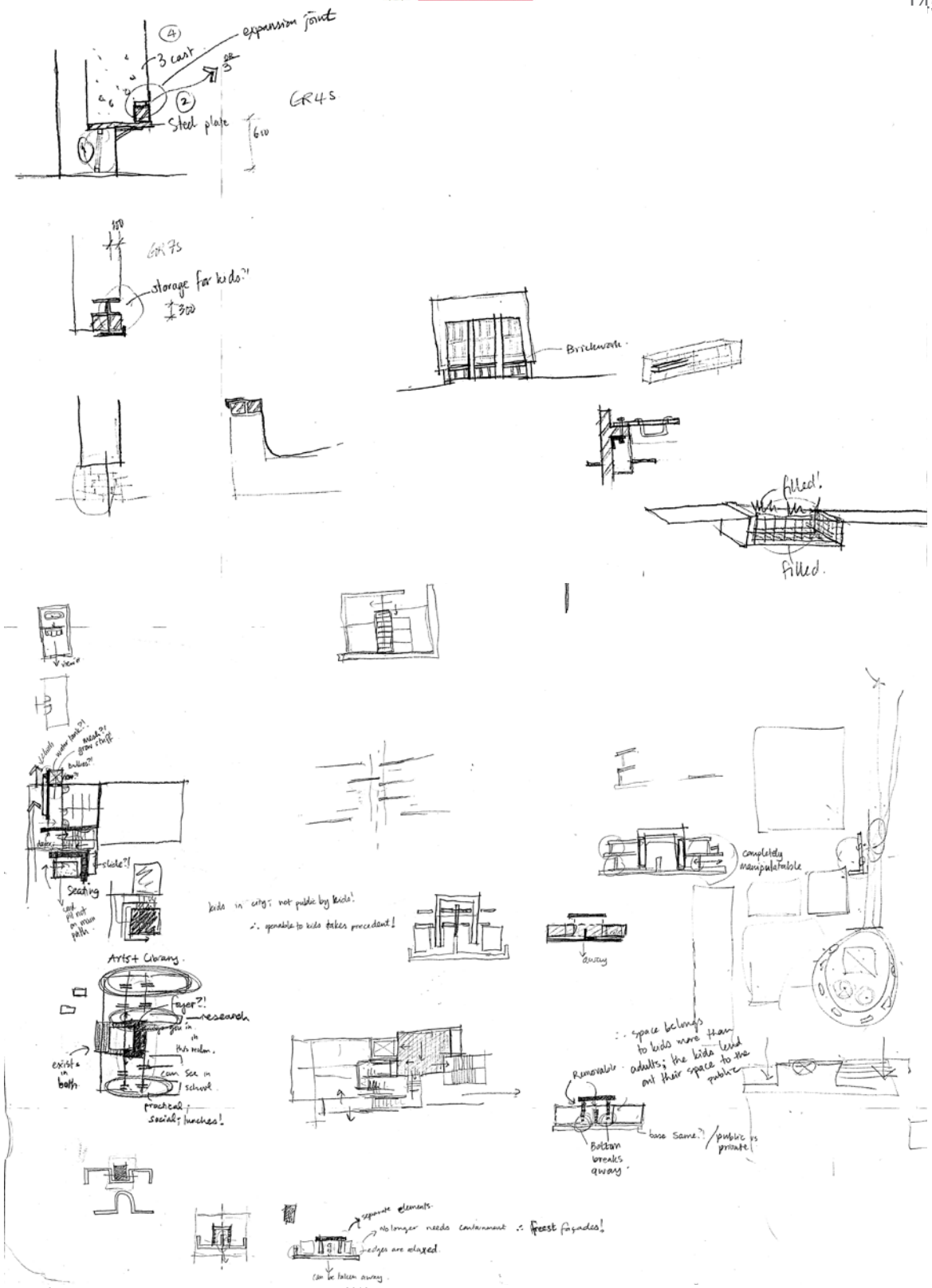


Figure 7.6: Further explorations after a dismal June crit. (Author: June 2013)

Figure 7.7: The robot city. (Author: April 2013)

7.2 Main Design informant: Robot City_The Pause

Traffic Lights (robots) are an important legibility tool in any city. They serve several purposes, all of which add to the richness and character of a city and how it is experienced. The traffic lights, as introduced in the KIDS' CORNER in Chapter 03, page..., deserves both an physical and psychological analysis of its effect on the city, as it is the most urban component to the children of Founder's Community School.

7.2.1 Planned Functionality

A robot in a city's main purpose is to regulate flow. It awards opportunity to some as it inhibits others only temporarily. It constantly creates pause and movement, as well as change in direction. It is for this reason that signage and information boards are found here, at a place that creates pause and allows orientation.

Pause is an invaluable and sometimes rare condition in some cities. Business owners thrive on it, while pedestrians need it from vehicles in order to safely move from one area to the next.

7.2.2 Emergent Possibilities

The opportunities that exists around a component that creates pause is large. As can be seen in the image on the left, along with the presence of trees, sitting becomes a comfortable action. This is not usually the case in parts of the street where there is always movement.

Taxis stop here to pick up clients, as pedestrians find this pause space the safest place in which to climb a taxi besides a taxi rank.

Where taxis feel comfortable to stop, informal vending thrives. Formal retail stores are also often found at every traffic stop, as it provides not only opportunity, but consideration. They know that no one would have to cross a dangerous part of the road in order to reach them.

7.2.3 Psychological Imprints

The robot stop can be considered as a city guardian angel. It is a tool that will more often that not do what it is meant to do; protect. This notion is mostly felt by dependent individuals, i.e. children. They are introduced to it by parents and are told that when on their own, the robot will perform the role of ensuring their safe arrival. This establishes pause as a means of understanding and manouvering a complicated environment.

It is this idea that will drive the rest of the design in terms of establishing legibility in the urban school.

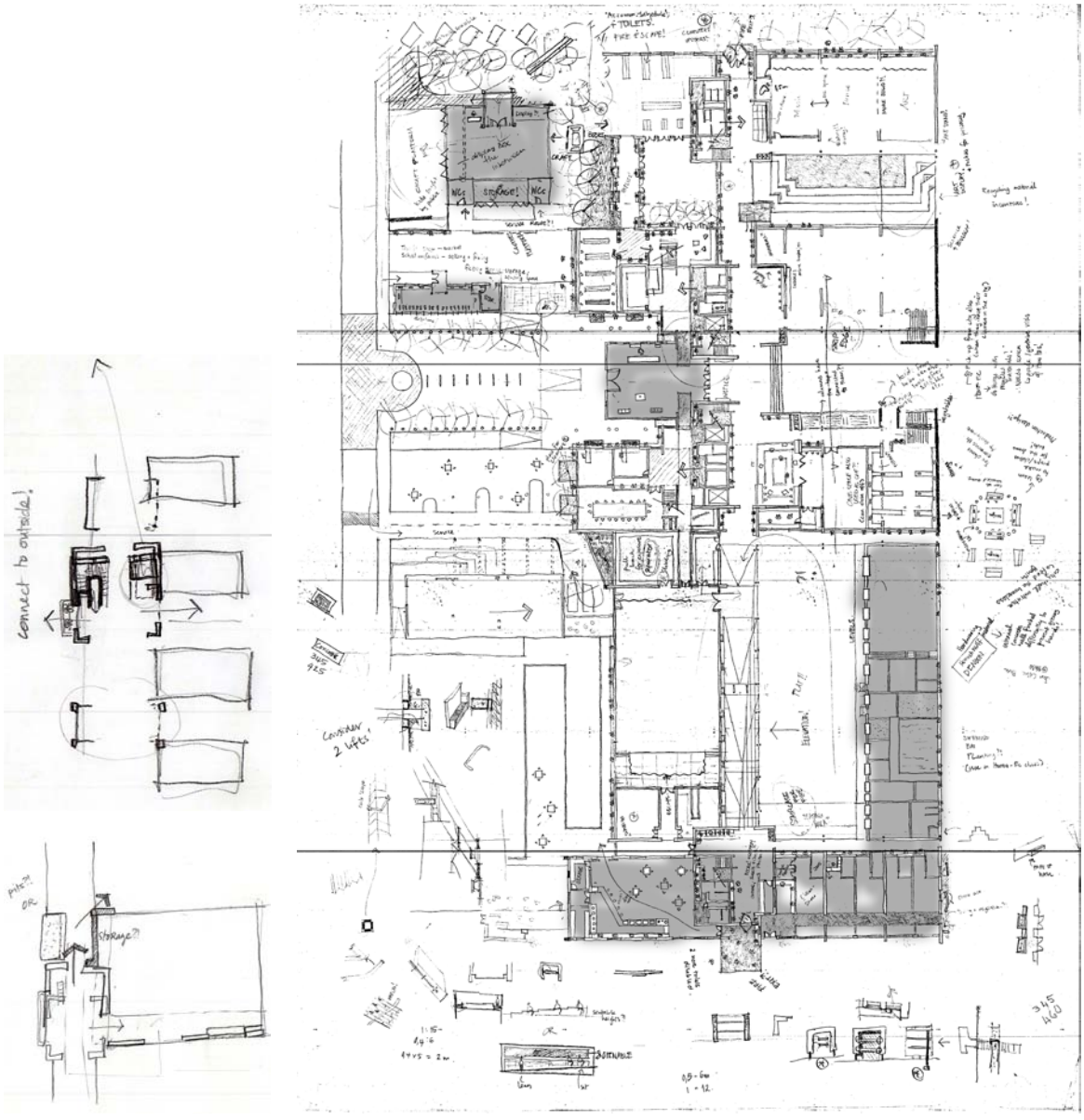
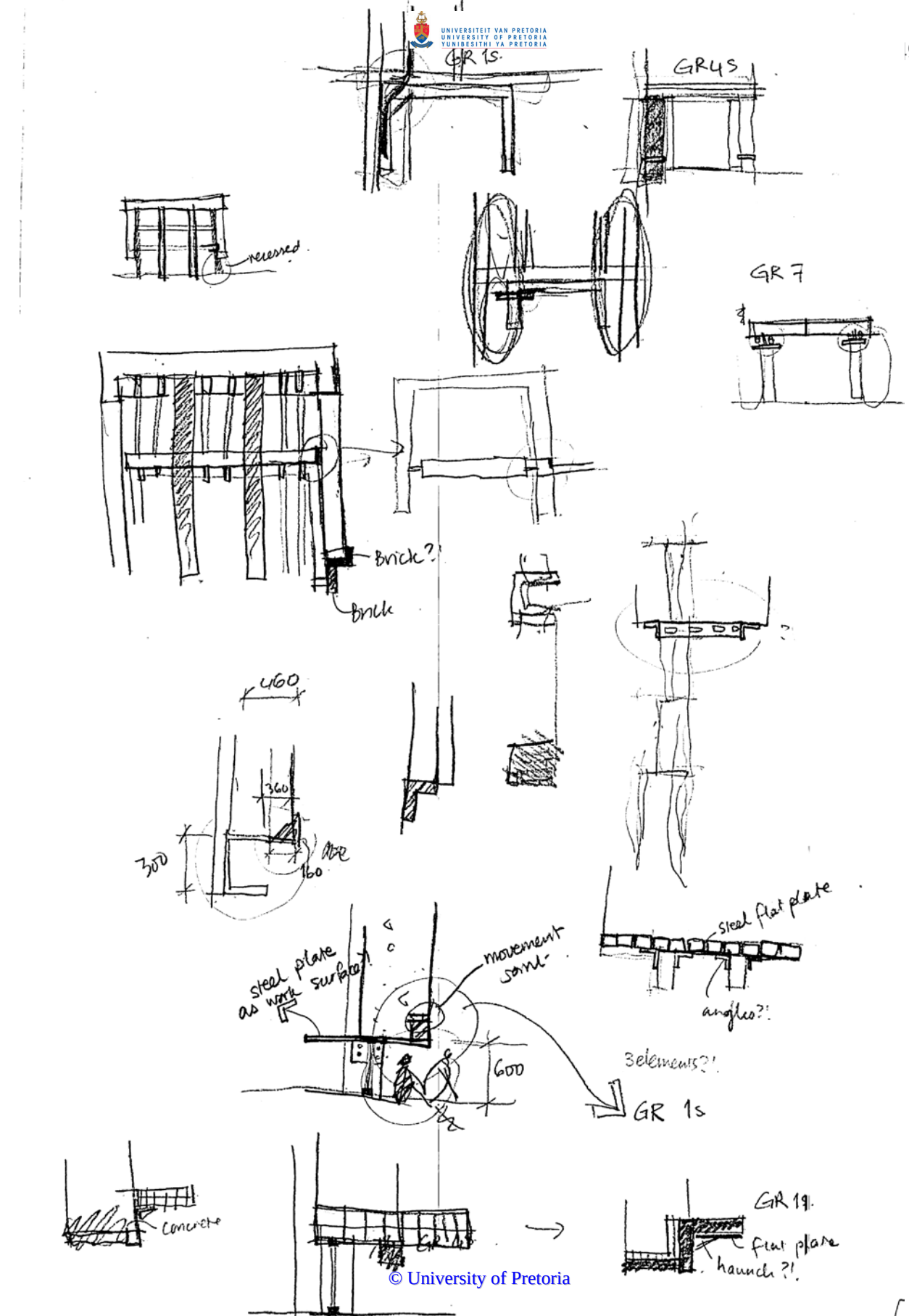


Figure 7.8: Plan threshold developments as a result of the robot concept. (Author: August/September 2013)



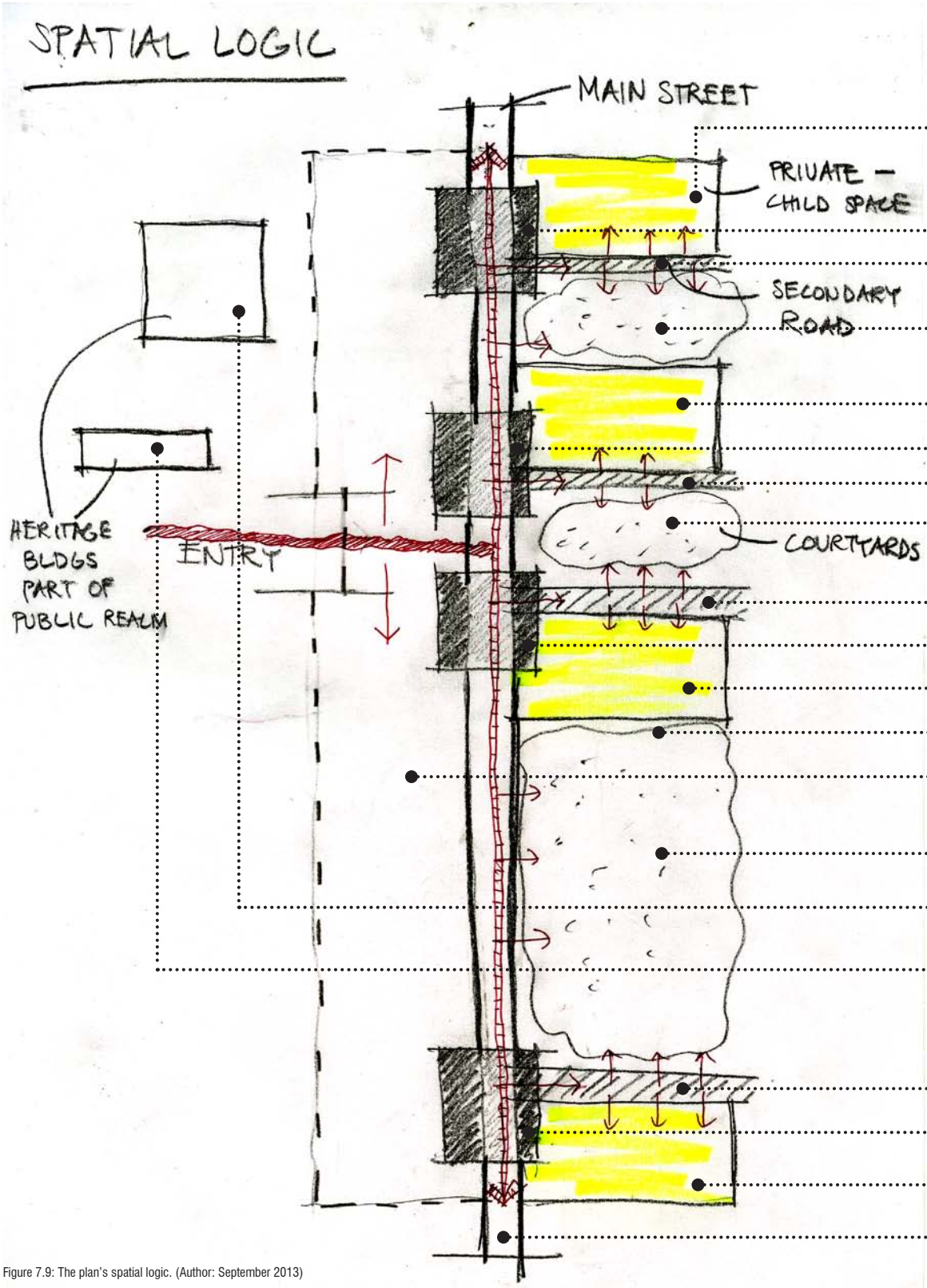


Figure 7.9: The plan's spatial logic. (Author: September 2013)

private school facilities: music, dance and art; grade 7s

reading corner (near piano)

SECONDARY ROAD

seating courtyard and biology gardens

private school facilities: computer lab, science and biology labs; grade 5-6s

internet café

SECONDARY ROAD

entrance courtyard

SECONDARY ROAD

cafeteria spill-out space

private school facilities: cafeteria, home economics; grade 2-4s

seating for teachers: viewing spot

hall, storage and change rooms

jungle-gym ruin and sports field

stationery and craft store

thrift shop (includes school clothing), clothes mending and the occassional market

SECONDARY ROAD

child-run shop

public and private school facilities: small convenience shops; grade 1s

MAIN STREET

7.3 Robot City_Spatial Logic of the proposed Urban Primary School

The proposed urban primary school is derived from the role of the robot in the city.

It is made up of four sections in a unit linear cluster typological configuration as shown in figure 7.9:

- the public interface and mediator (library, administrative wing and hall);

- the 'robots', which service the building both functionally and socially;

- the private classrooms and other learning facilities (which become useable after school hours, such as the computer lab and tuck shop) and

- the playgrounds and courtyards.

These four component all connect by the main street and secondary roads, with the main street running straight through all of the robots and connecting them. Where each road meets the main street, a robot is found. The robot comprises of the toilets, the active and passive ventilation systems, water storage tanks and water filtration system for grey water re-use (FUNCTIONAL) and the block-related social spaces (RECREATIONAL).

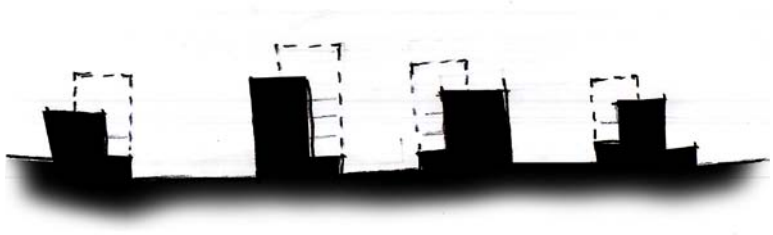
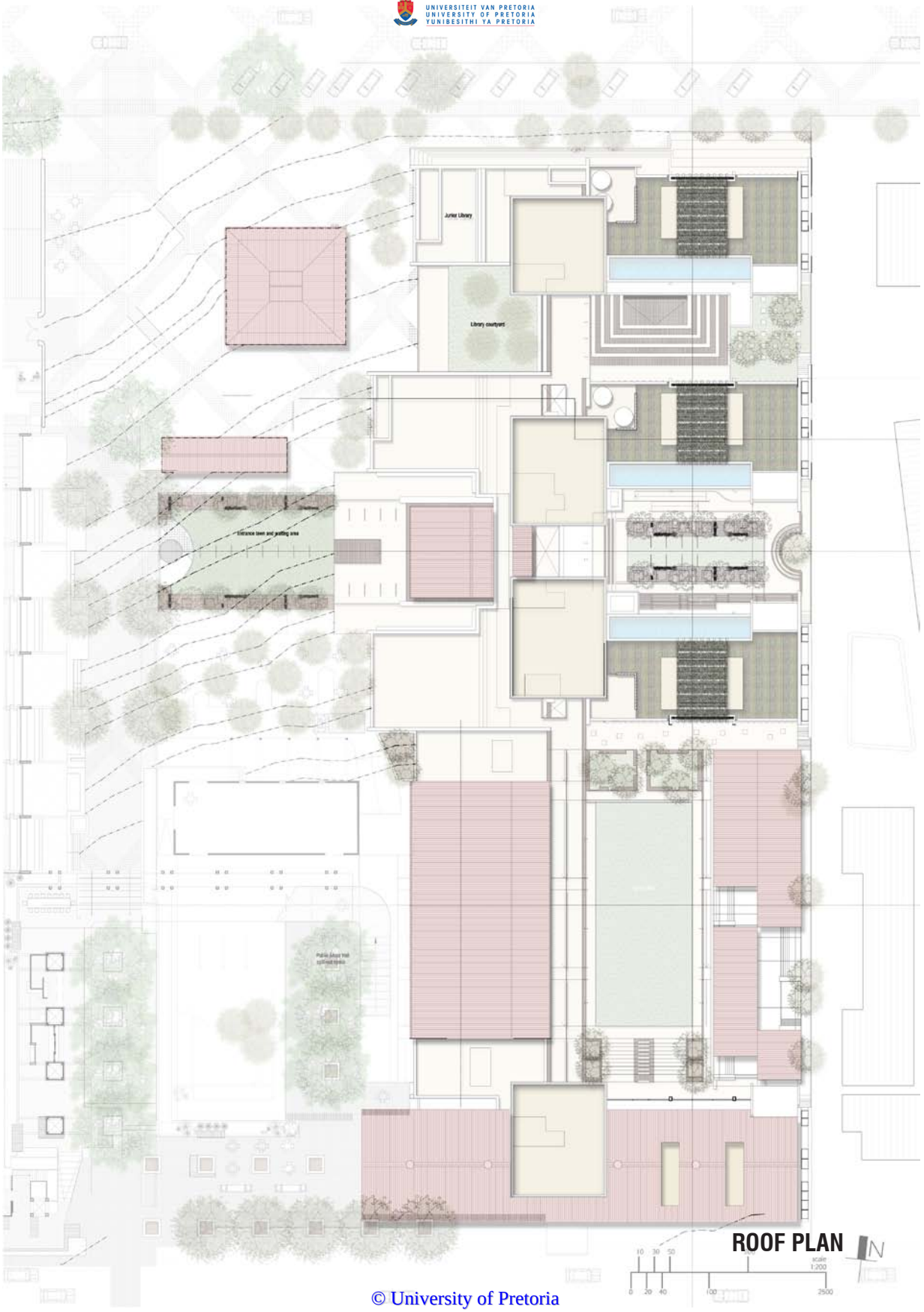
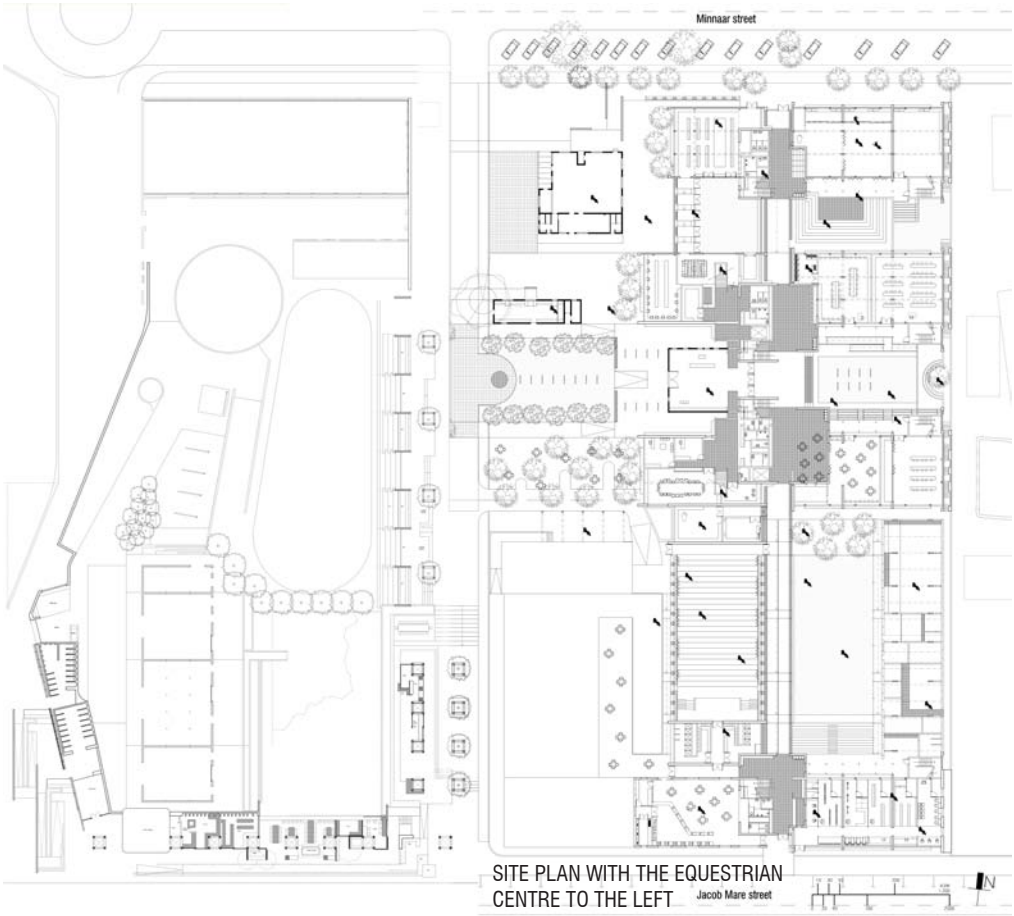


Figure 7.10: Robot as backdrop to the school and beacons to the city. (Author: September 2013)



ROOF PLAN



SITE PLAN WITH THE EQUESTRIAN CENTRE TO THE LEFT

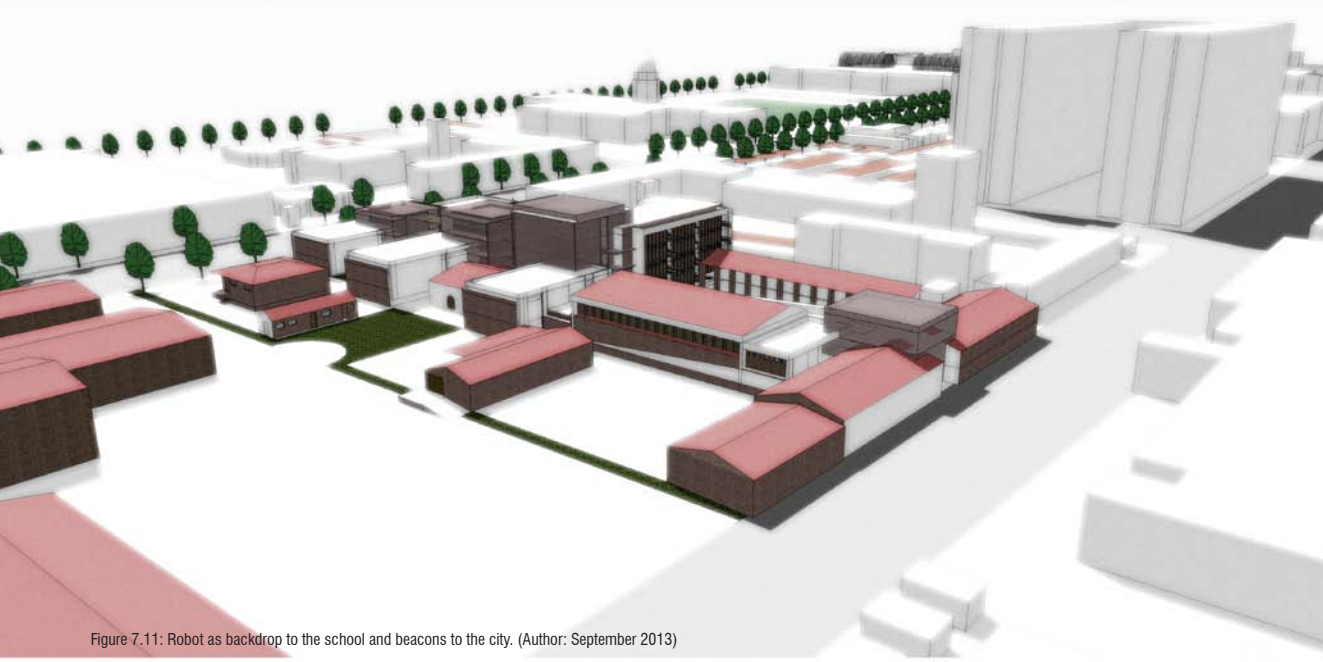
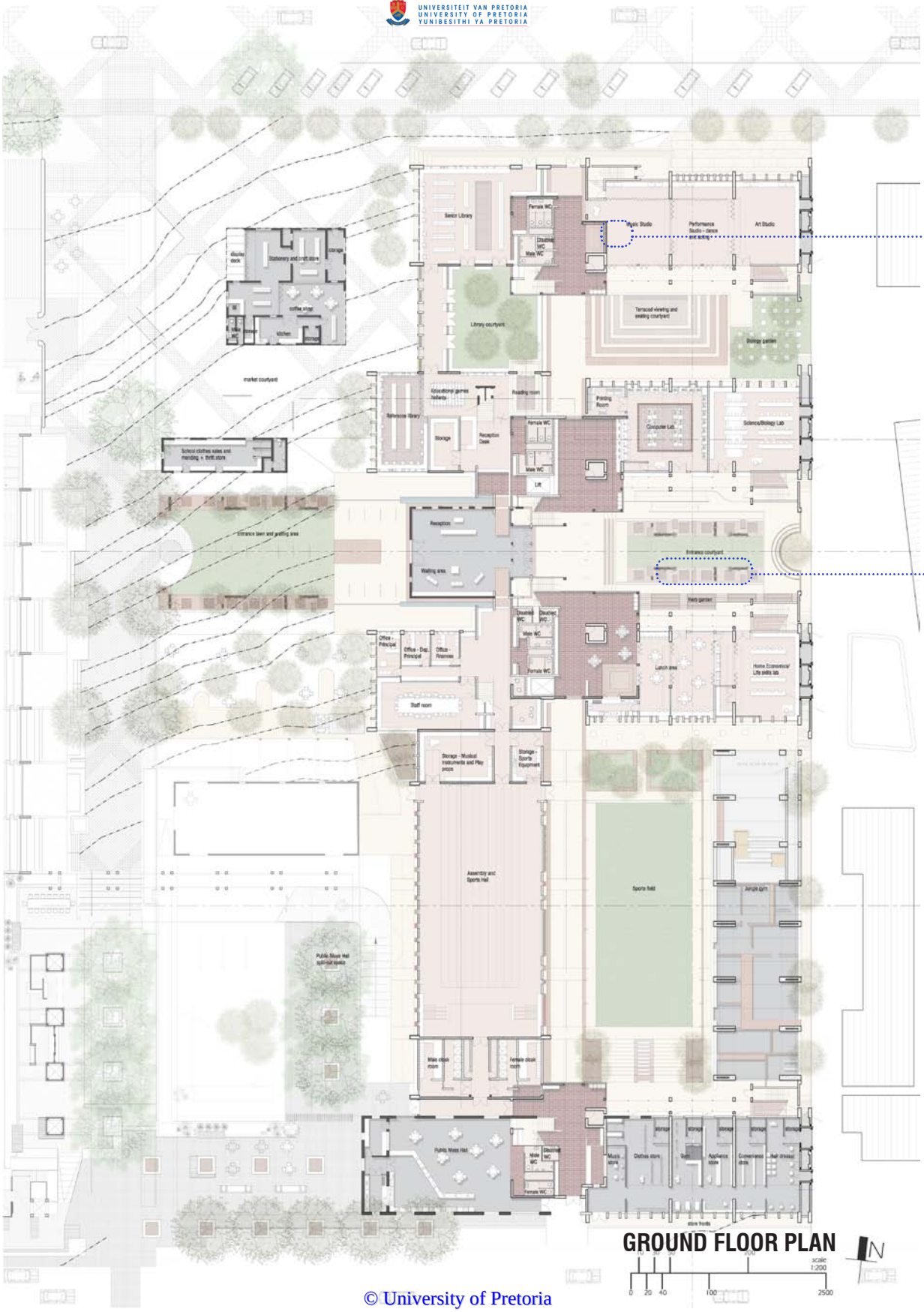


Figure 7.11: Robot as backdrop to the school and beacons to the city. (Author: September 2013)



GROUND FLOOR PLAN

scale 1:200

0 20 40 100 2500

N

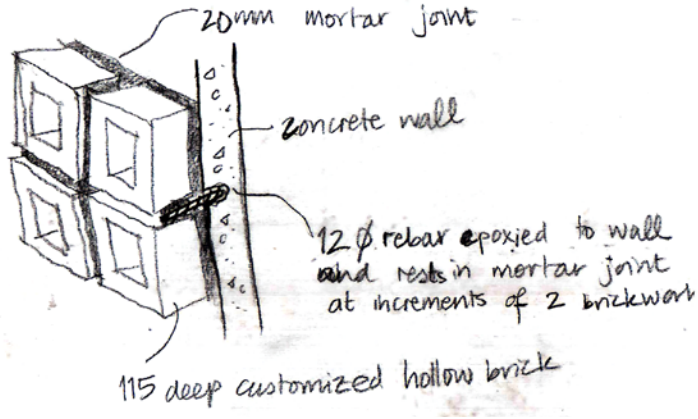


Figure 7.12: Custom made terracotta travertine hollow bricks. (Author: October 2013)

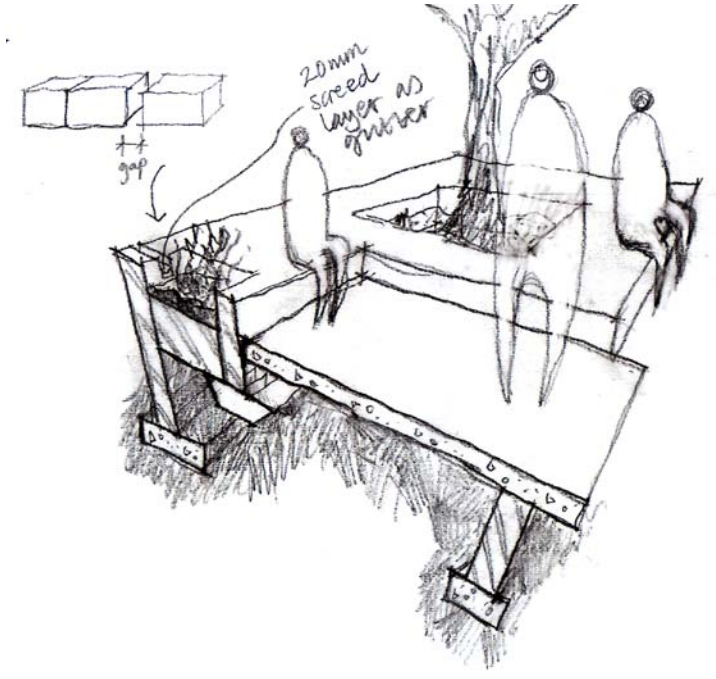
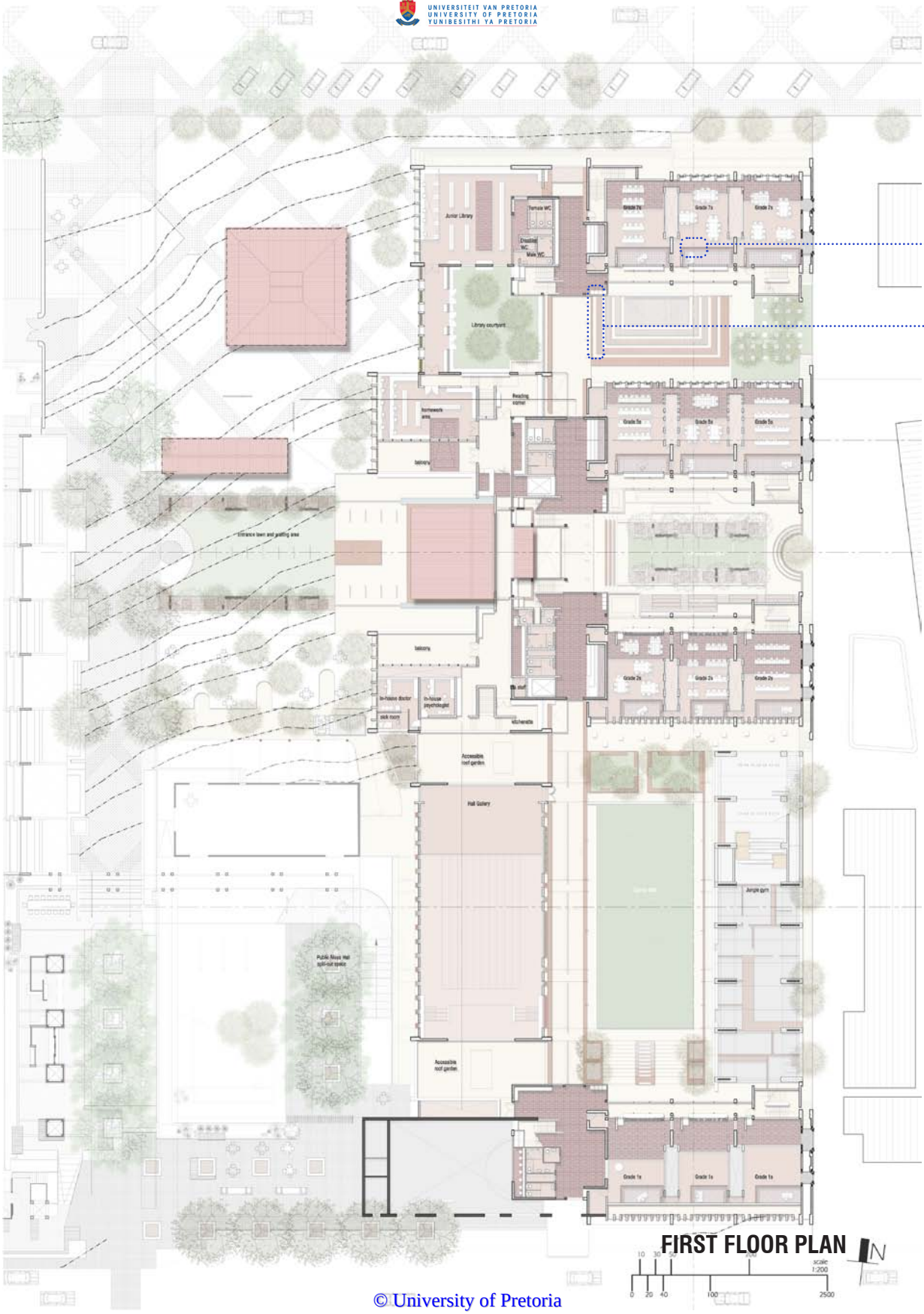


Figure 7.13: Proposed brick planters and concrete slab planters. (Author: October 2013)



FIRST FLOOR PLAN

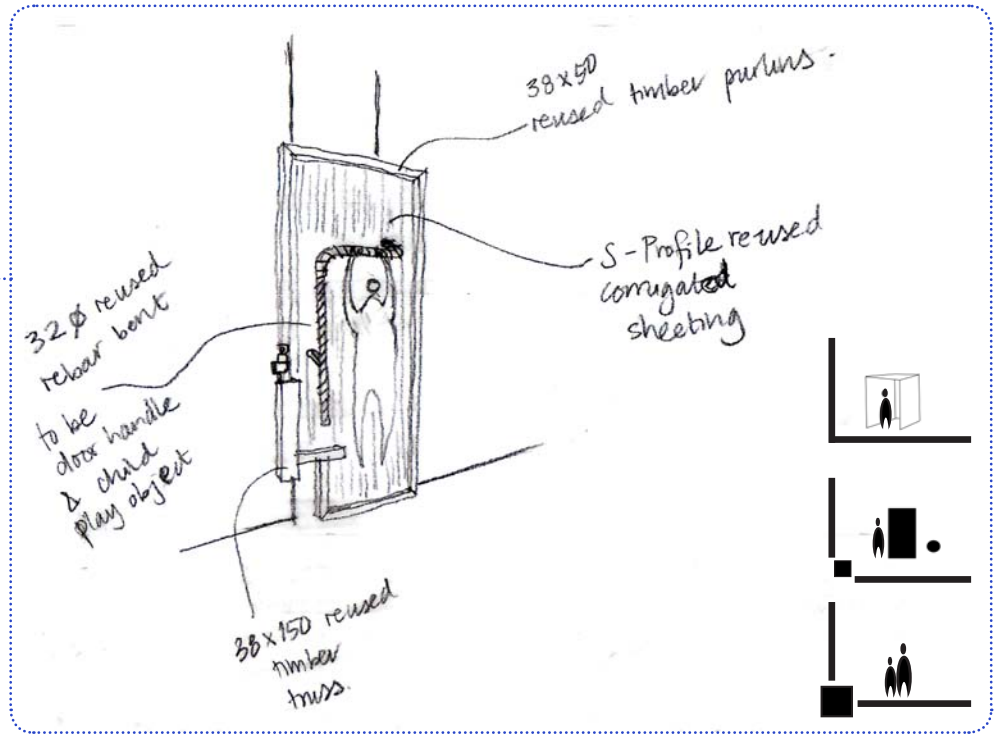


Figure 7.14: Proposed door for the Grade 1s - 3s. (Author: October 2013)

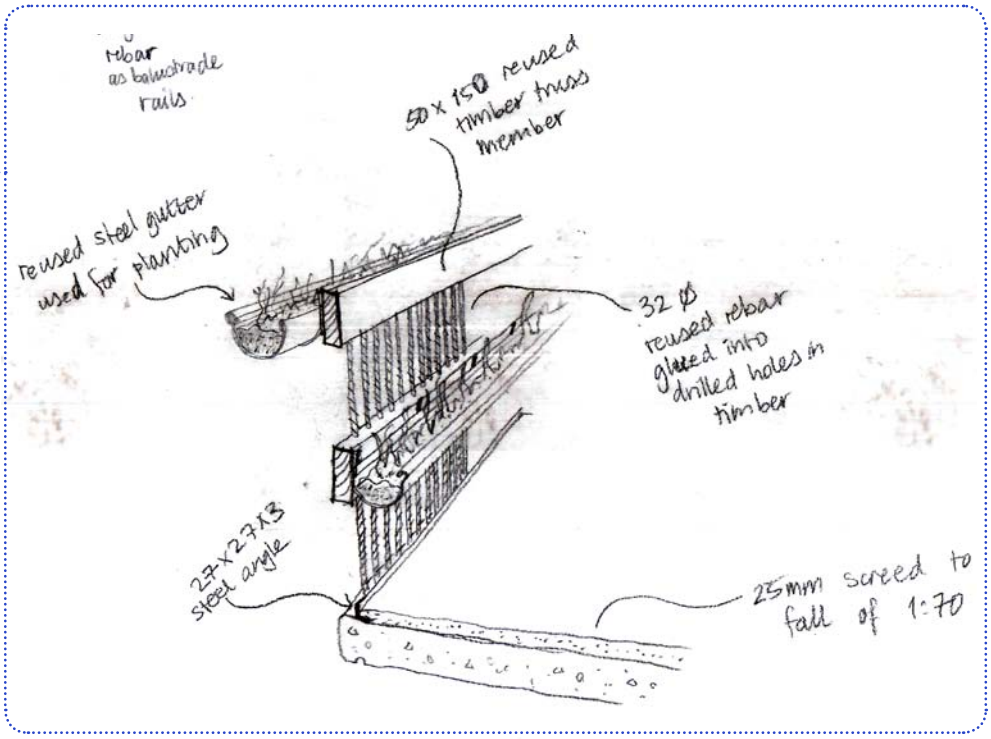


Figure 7.15: Proposed main street balustrade. (Author: October 2013)

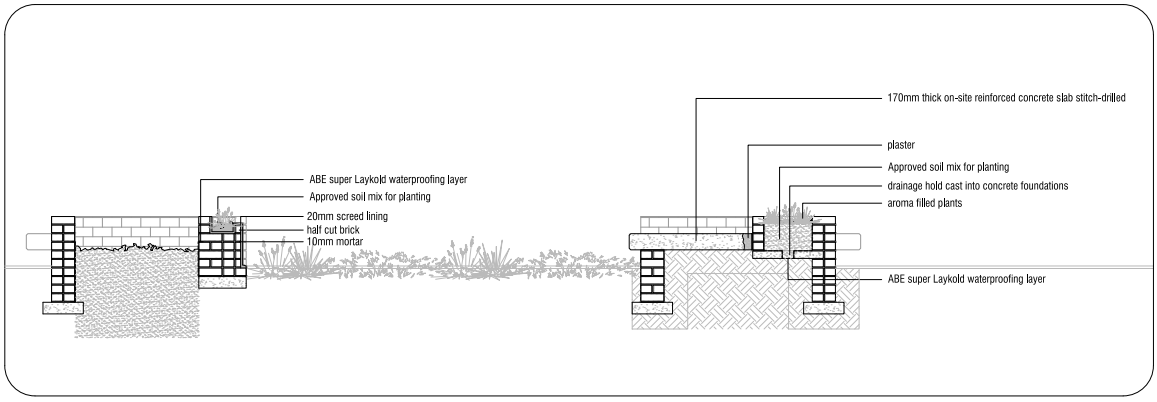


Figure 7.16: Finalized brick planters abd concrete slab planters. (Author: October 2013)

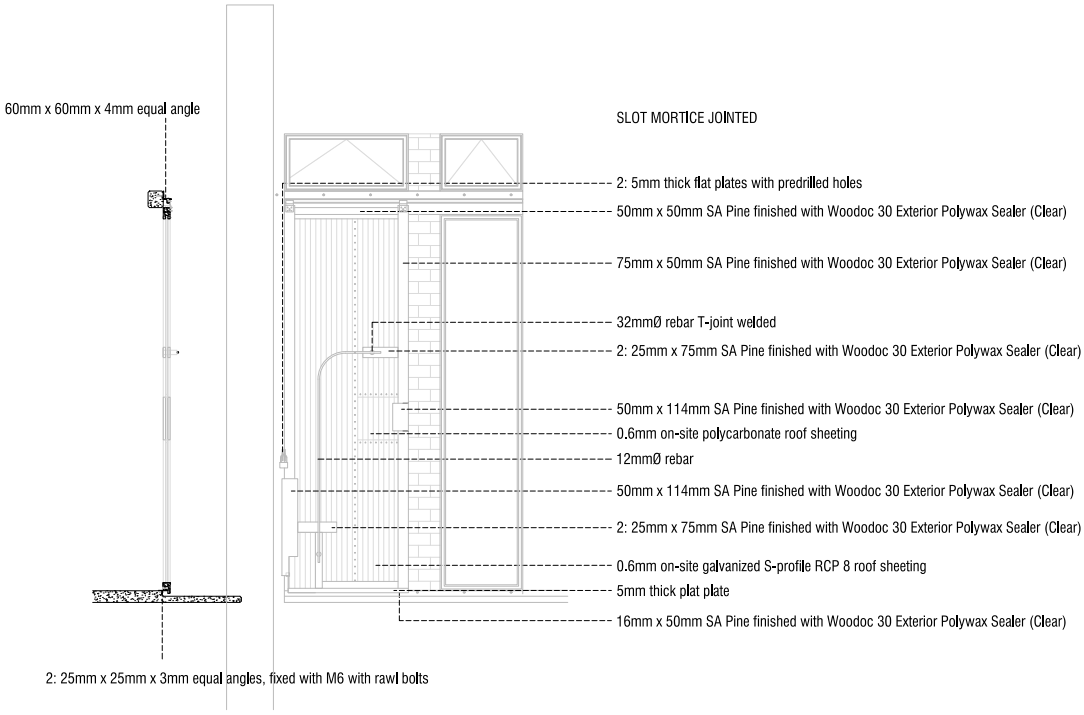
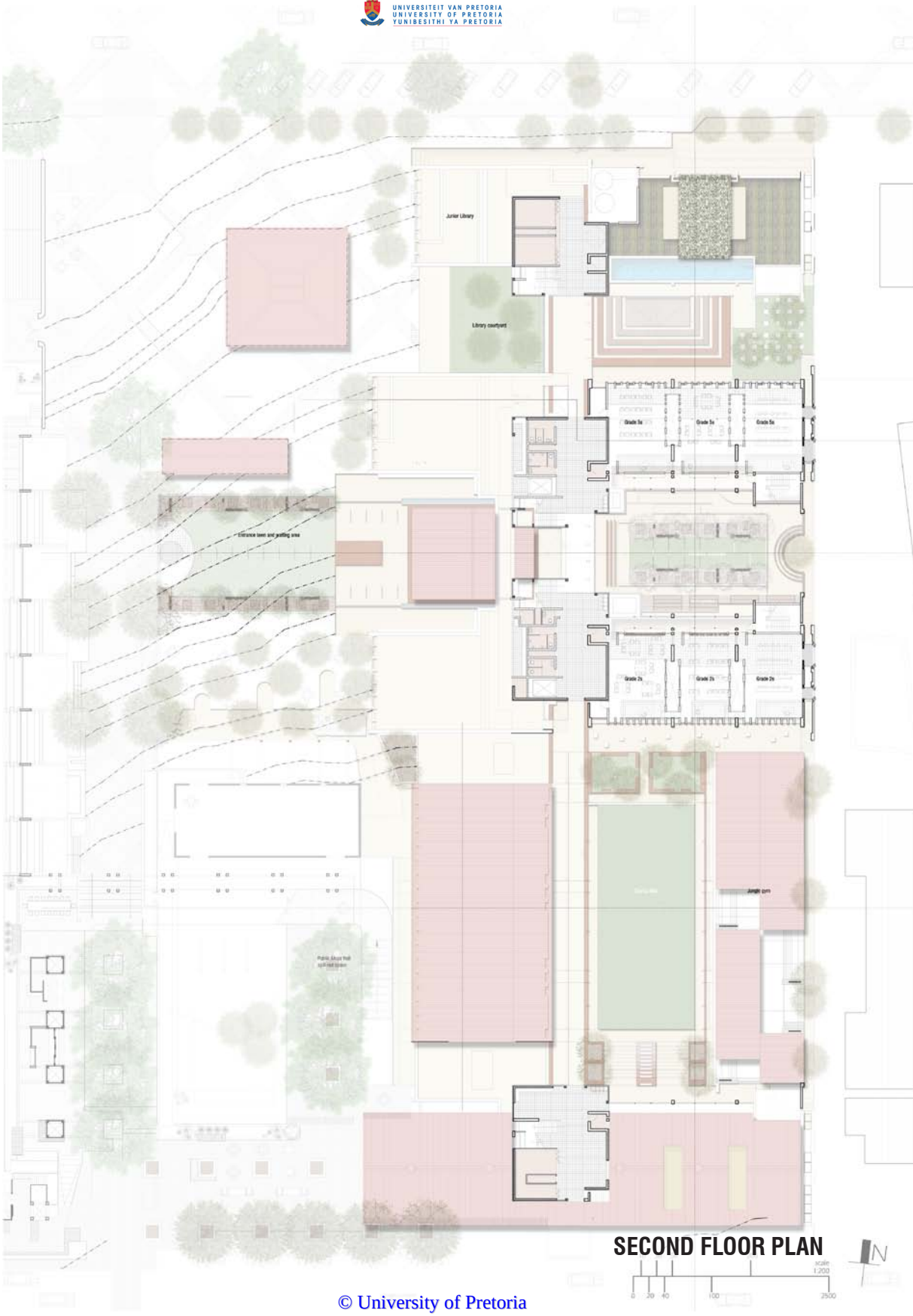
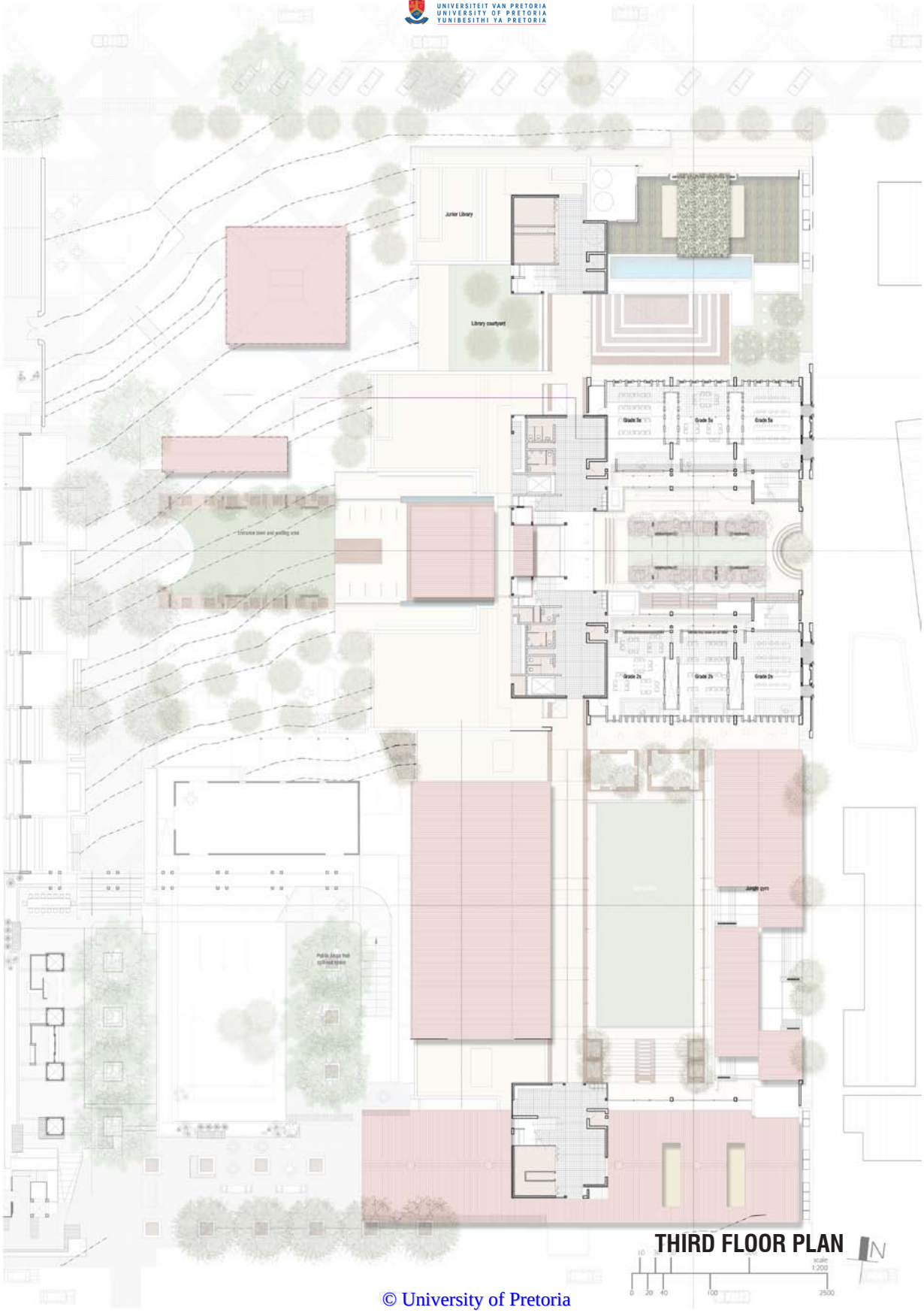
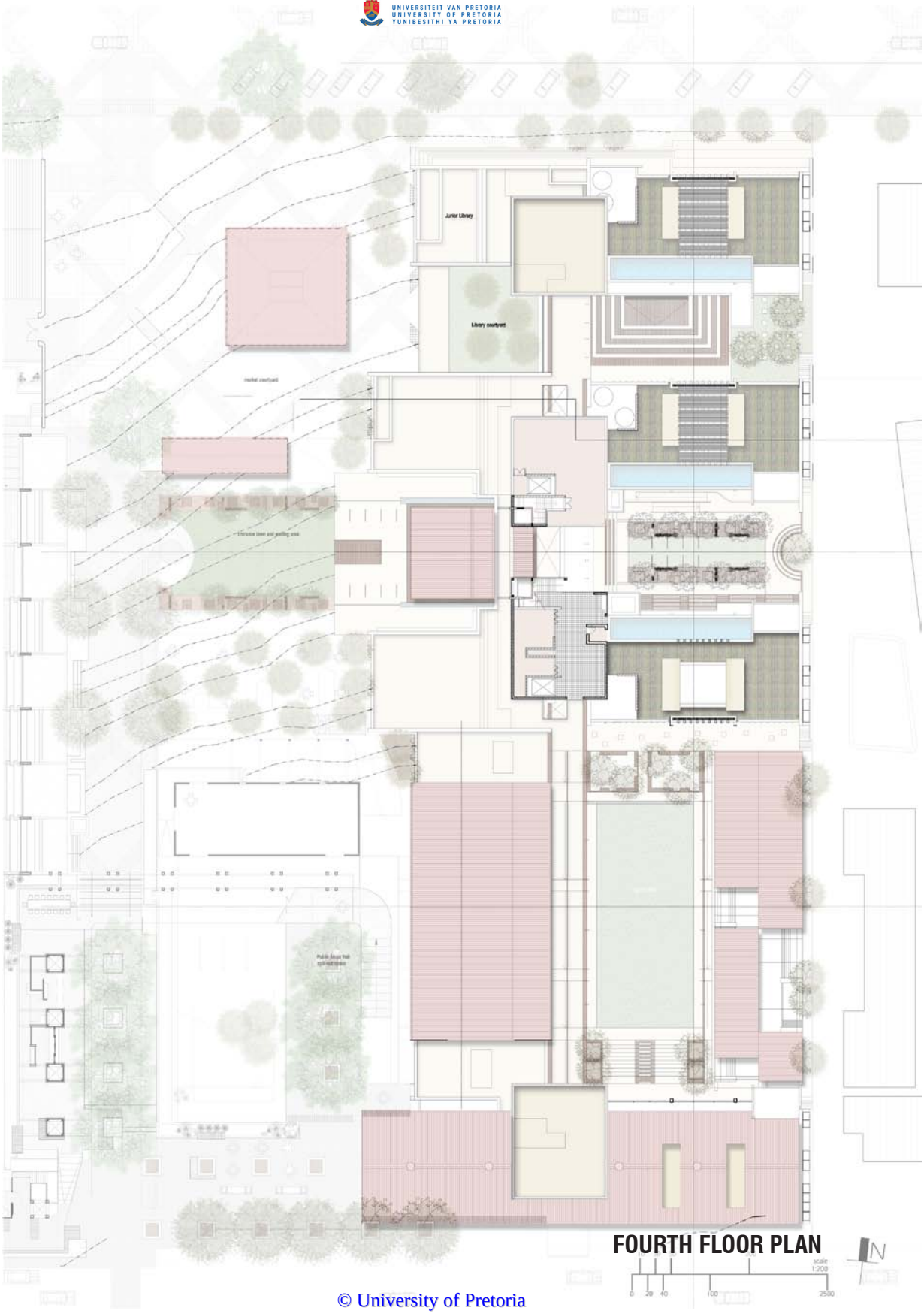


Figure 7.17: Finalized door for the Grade 1s - 3s. (Author: October 2013)

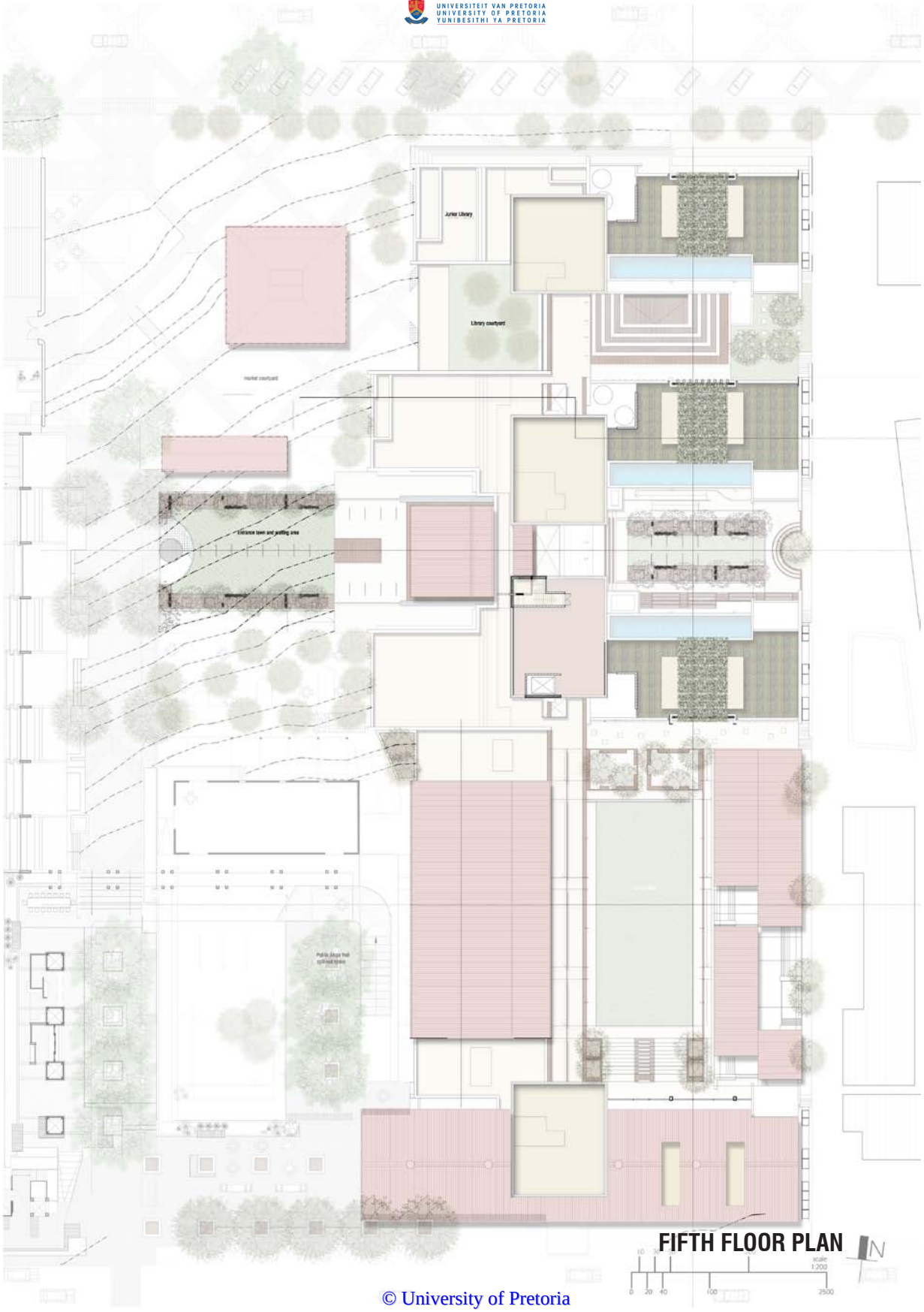


SECOND FLOOR PLAN

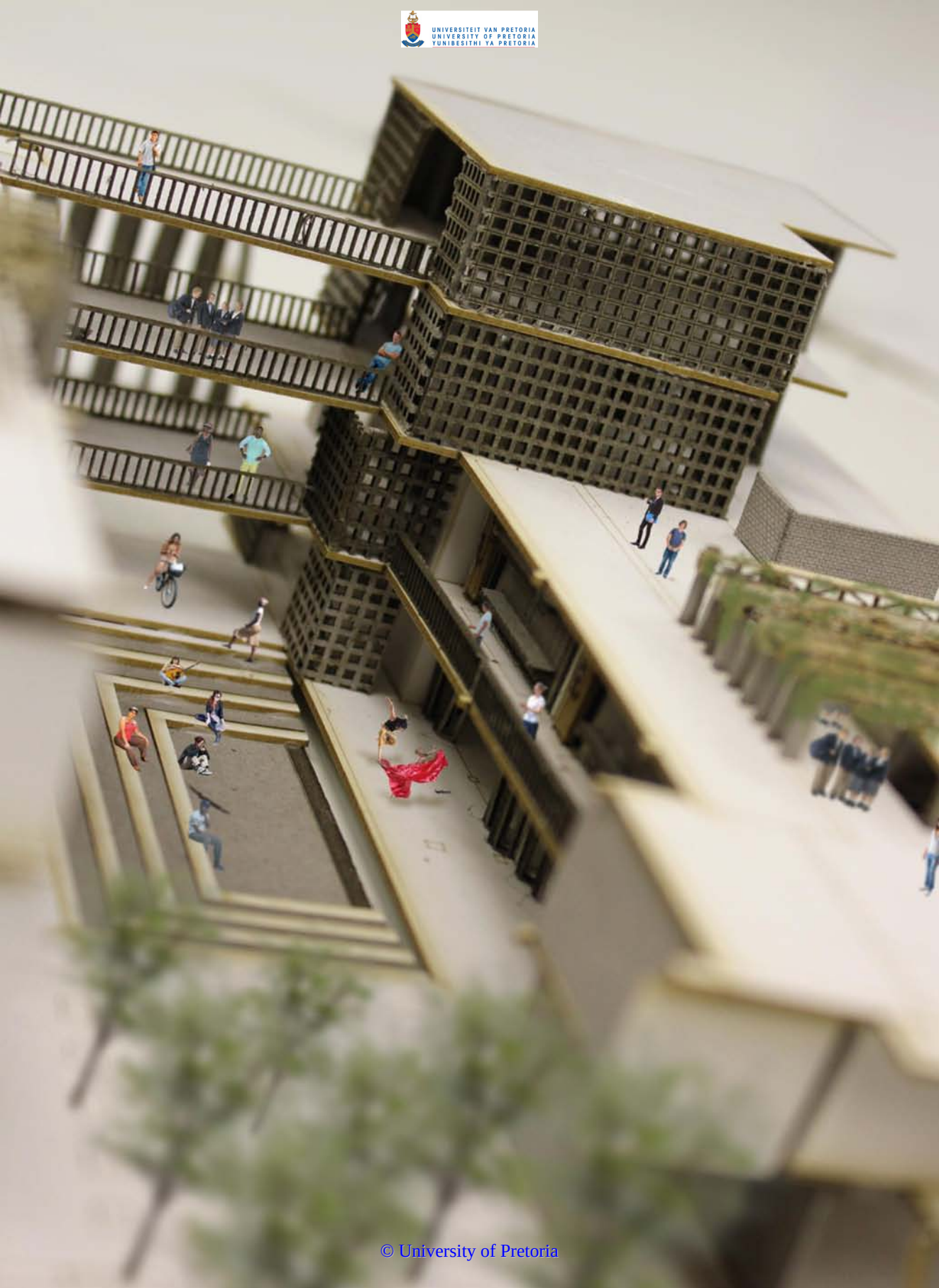




FOURTH FLOOR PLAN



FIFTH FLOOR PLAN



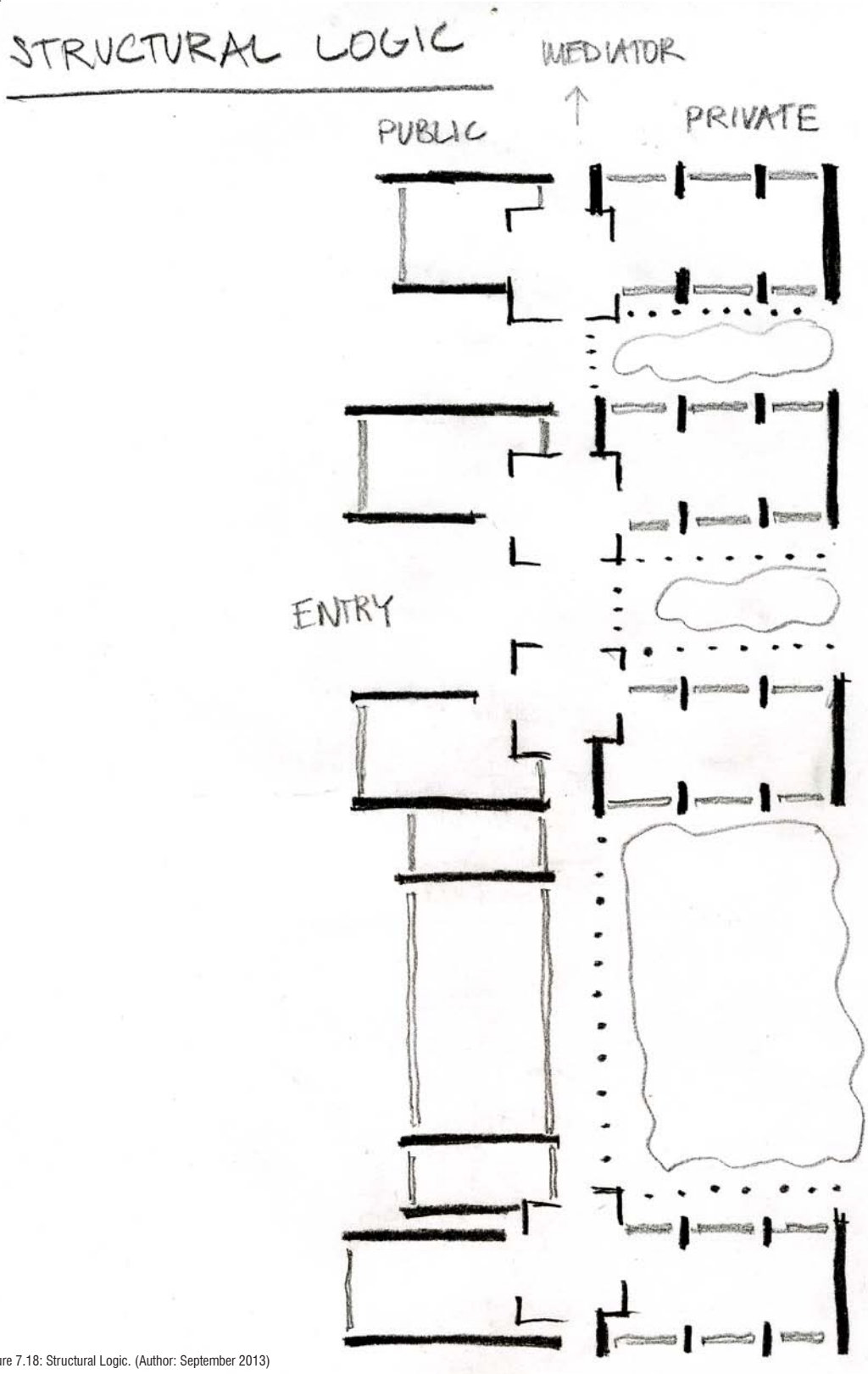


Figure 7.18: Structural Logic. (Author: September 2013)

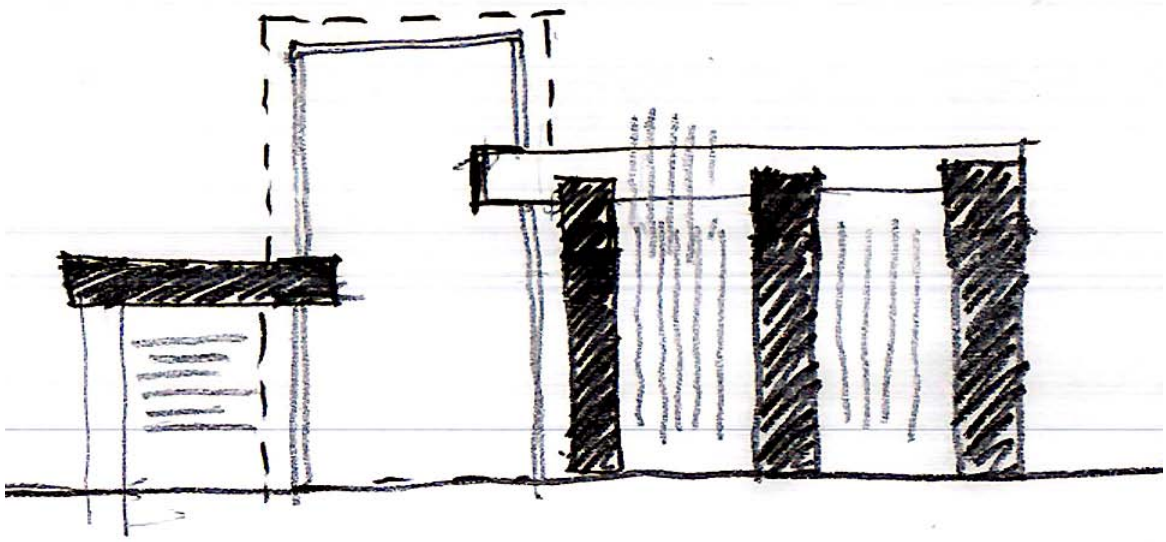


Figure 7.19: Structural Logic weighted on section with the robot as a screen with internal structure. (Author: September 2013)

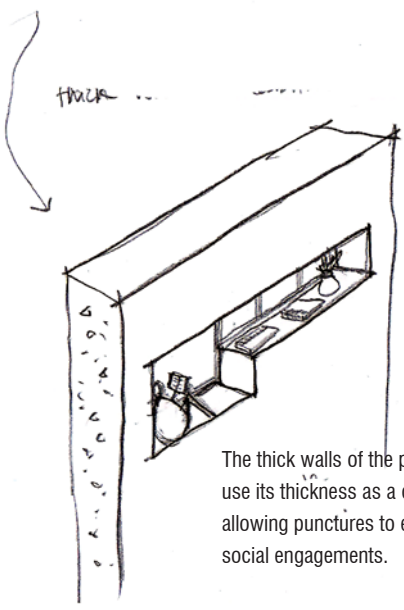


Figure 7.20(a): Habitable punctures in the thick concrete walls. (Author: October 2013)

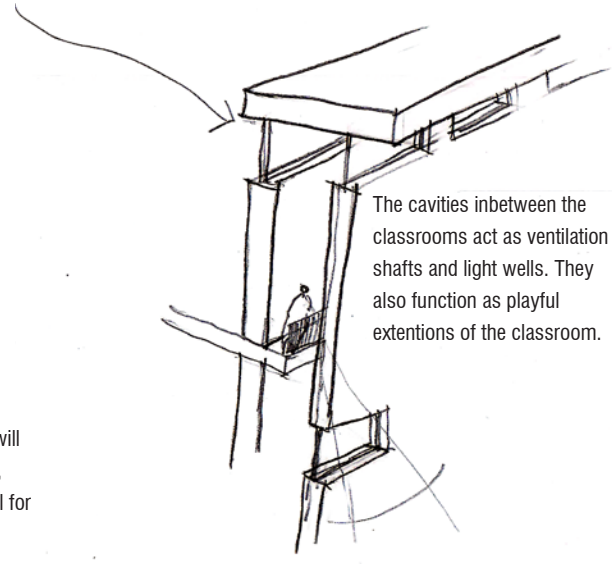


Figure 7.20(b): Habitable cavity in between the classrooms. (Author: October 2013)

7.3 Material potential from the existing heritage buildings

Below is a list of salvagable materials found on site as well as from the buildings that are proposed to be demolished. This forms a large part of the accessories palette, as outlined later.

timber purlins

steel trusses, columns and beams and individual members

bicycle chains

nuts, washers and threaded bolts

gears

S-Profile corrugated metal roof sheeting

Timber trusses

Timber frames

Steel channels, sections: beams and columns

steel cold rolled sections

ceiling boards

aluminium window frames

old lockers

old desks, benches and chairs

old extractor fans

old kitchen appliances

old stonework

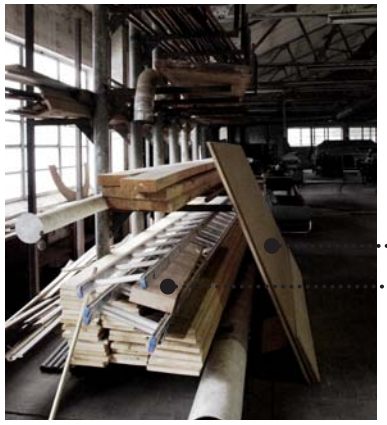
steel base plates

deeper timber beams

IBR metal roof sheeting

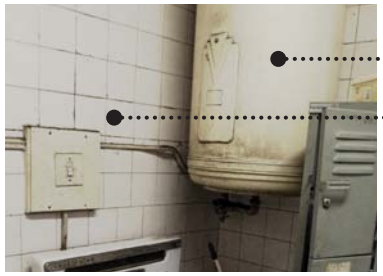
steel wire mesh (fence)

gutters and gutter brackets



timber panels

timber planks and structural members



geysers

wall and floor tiles

metal sheeting

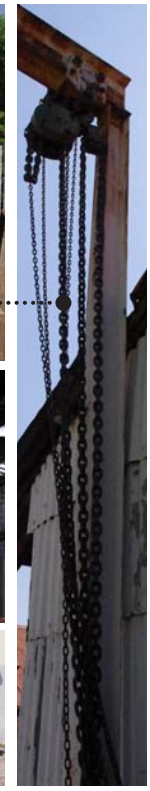
steel webbed beams

deep steel I-beams (4)

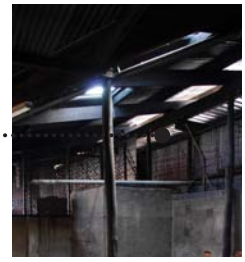
down pipes and down pipe brackets

shipping containers (2)

metal chains



skylights and translucent metal sheeting



machine components

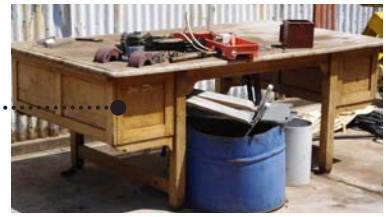
concrete slabs

internal lighting

steel bracing members

external lighting

custom-made timber furniture



timber window frames

concrete window cills

7.4 Material Palette

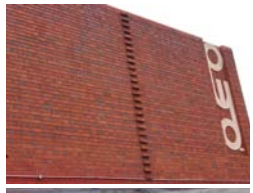
Below is an outline of the primary and secondary structure's materials.

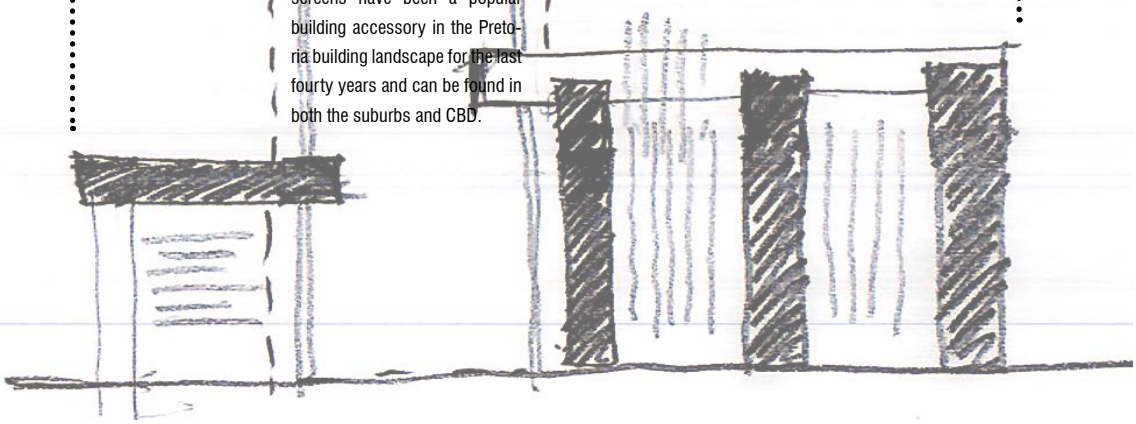
PUBLIC INTERFACE

ROBOT

The language of the building is one that frames, creating defined and sometimes useable thresholds. The robot is made of custom square hollow terracotta travertine face brick which acts as a screen with an internal concrete support structure. It hides its support as it provides support to the school. Ceramic screens have been a popular building accessory in the Pretoria building landscape for the last fourty years and can be found in both the suburbs and CBD.

PRIVATE SCHOOL FACILITIES





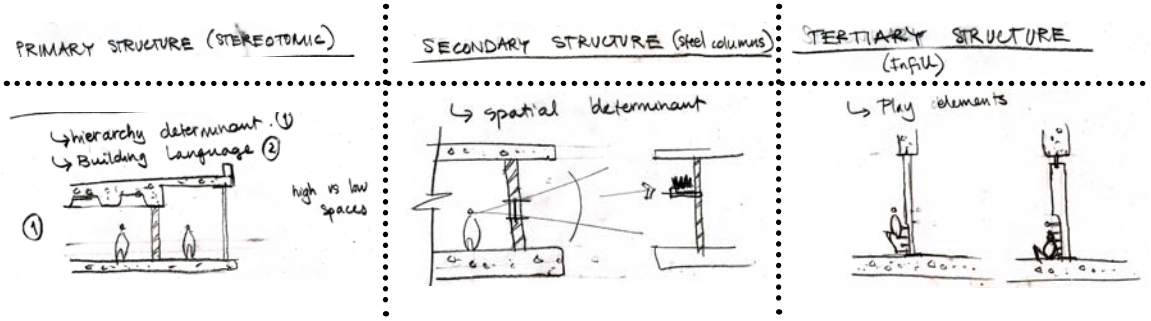
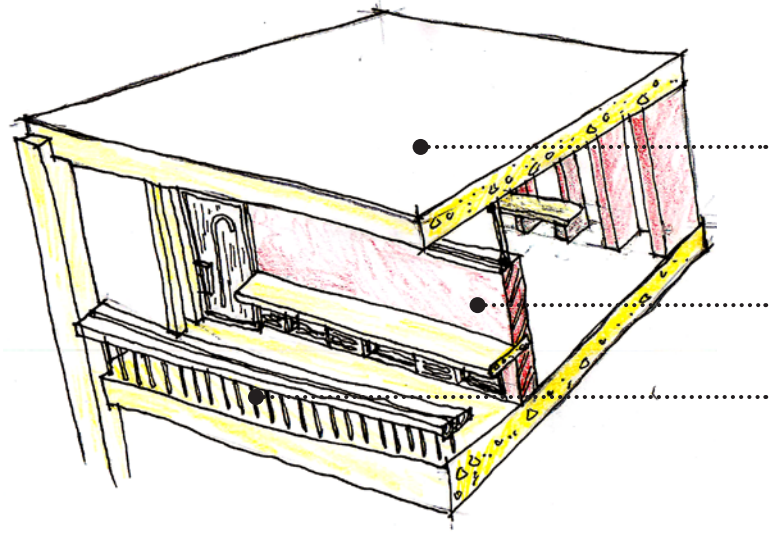


Figure 7.21: Material palette conceptual drawings. (Author: August 2013)



PRIMARY - concrete wall floor and column frame structure

SECONDARY - brick infills establishes edge engagement

ACCESSORIES - become both functional and recreational, mimicking the robot's twofold convenience

Figure 7.22: Primary, secondary and accessory layers. (Author: October 2013)

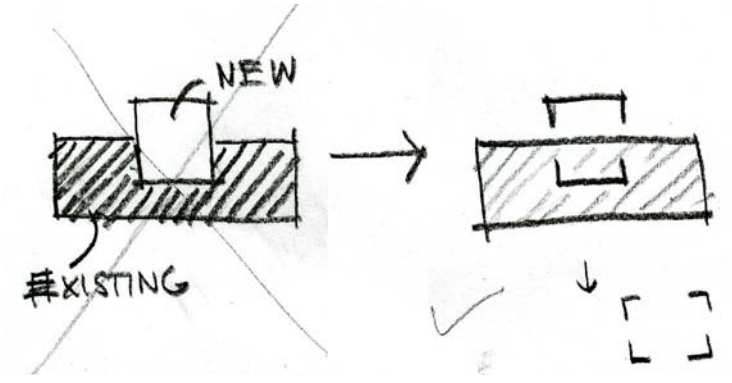


Figure 7.23: Primary, secondary and accessory layers. (Author: September 2013)

HERITAGE RESPONSE - The figure to the left demonstrates on plan how an approach to the heritage buildings when it is pierced through with the new robot structure. As the heritage buildings came first, the robots, although overbearing takes a secondary presence in relation to the existing wall as is to frame their co-existence.

The proposed school's primary structure of concrete column, wall and floor frame is inspired by the heritage building's current scale. The conrete frames the large school into smaller units, similar to the site's current scale.

The building material palette was also directly influenced by the existing heritage palette, as it is the only area in the Museum Precinct with that language, granting the street users access to this Pretoria building typology.

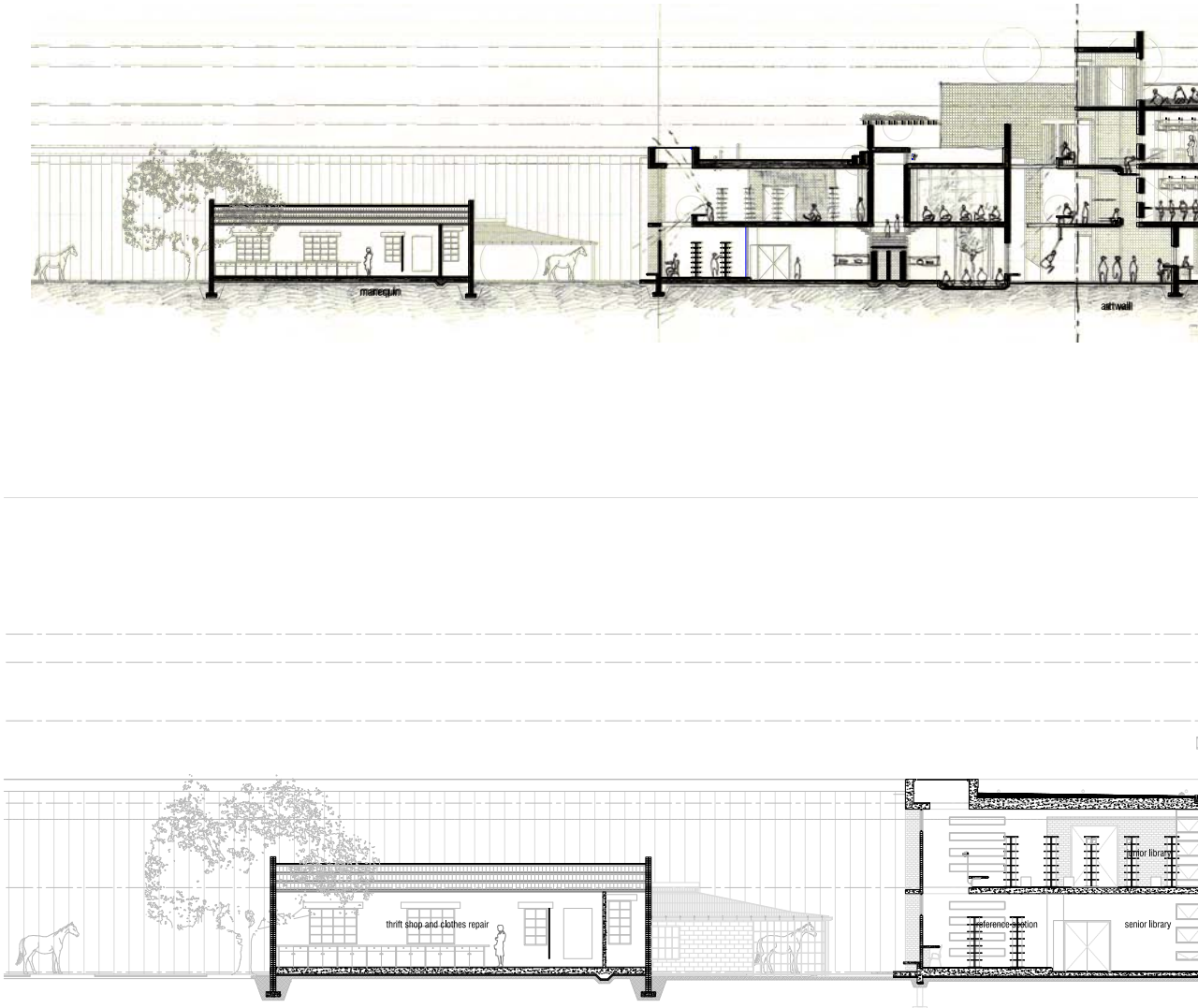
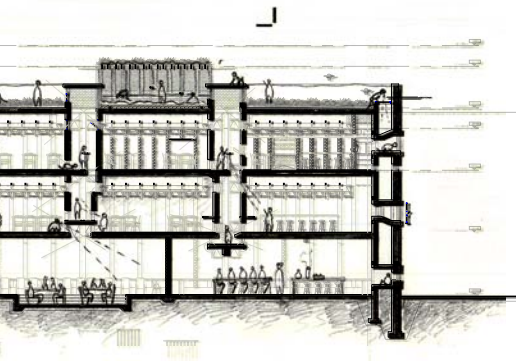
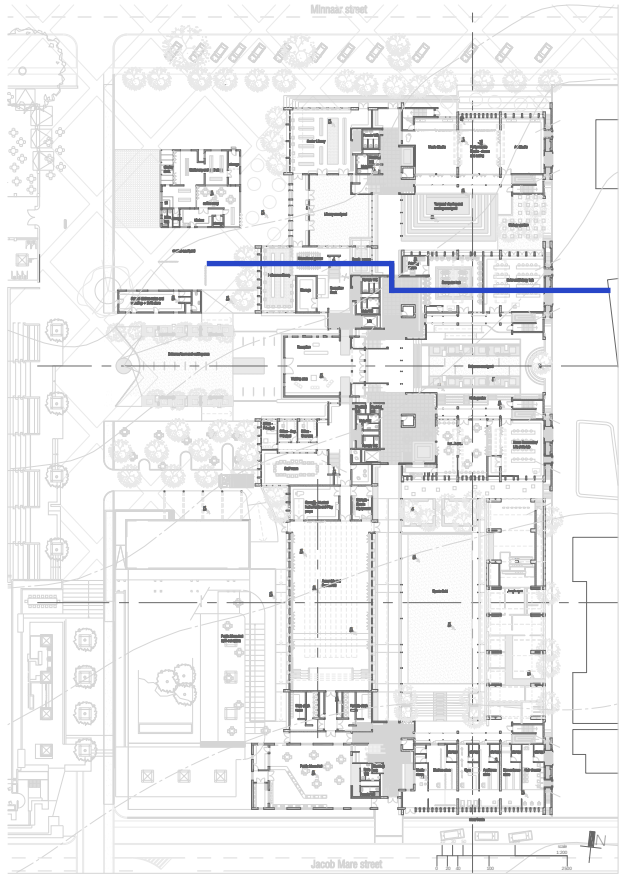
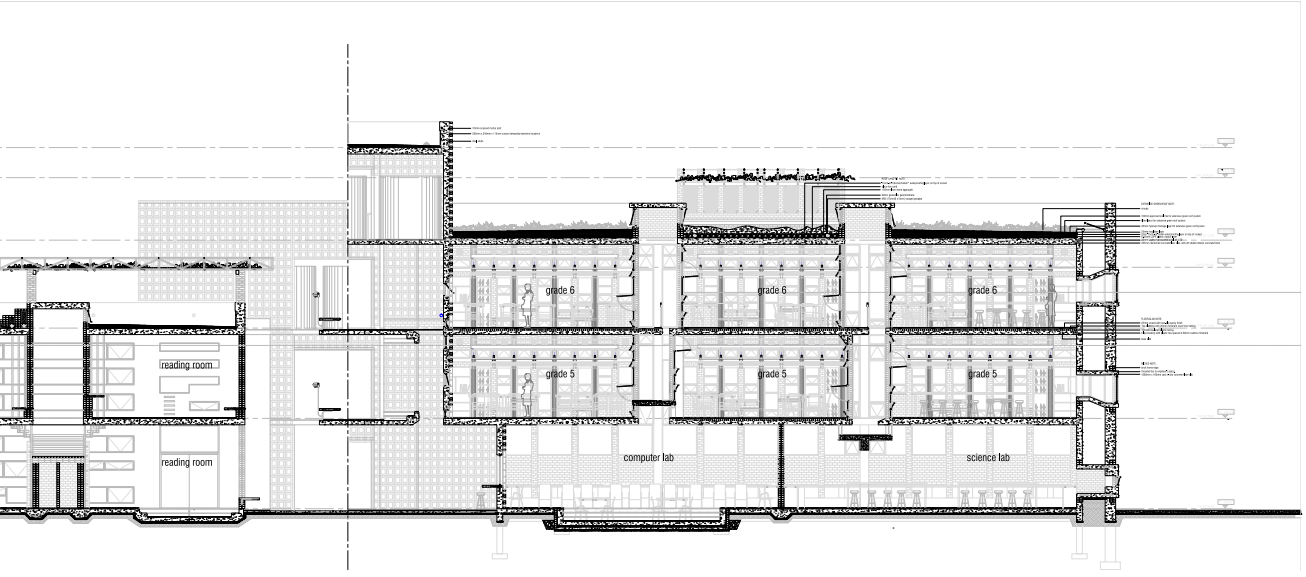


Figure 7.24: Cross sectional spatial section. (Author: October 2013)







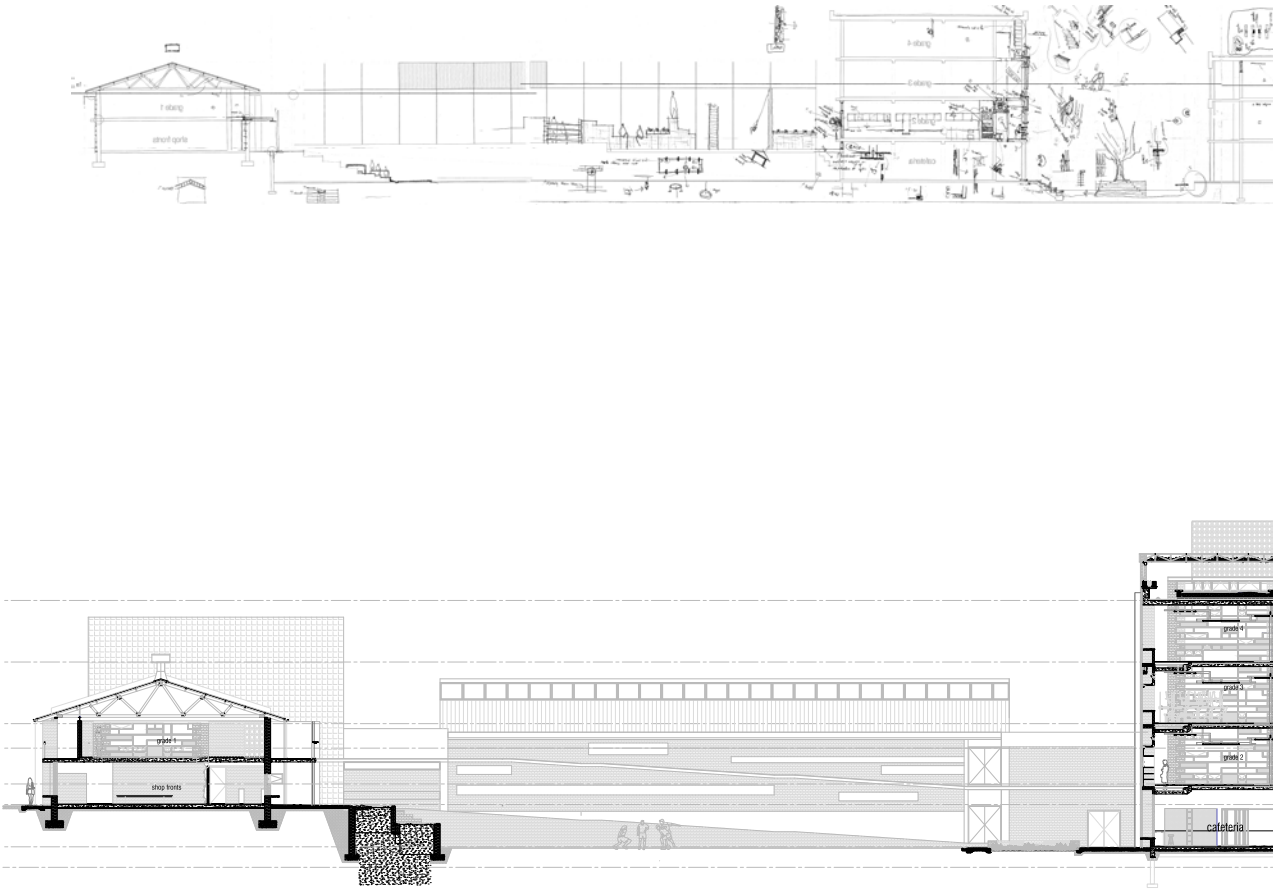
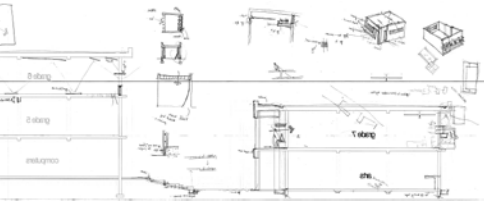
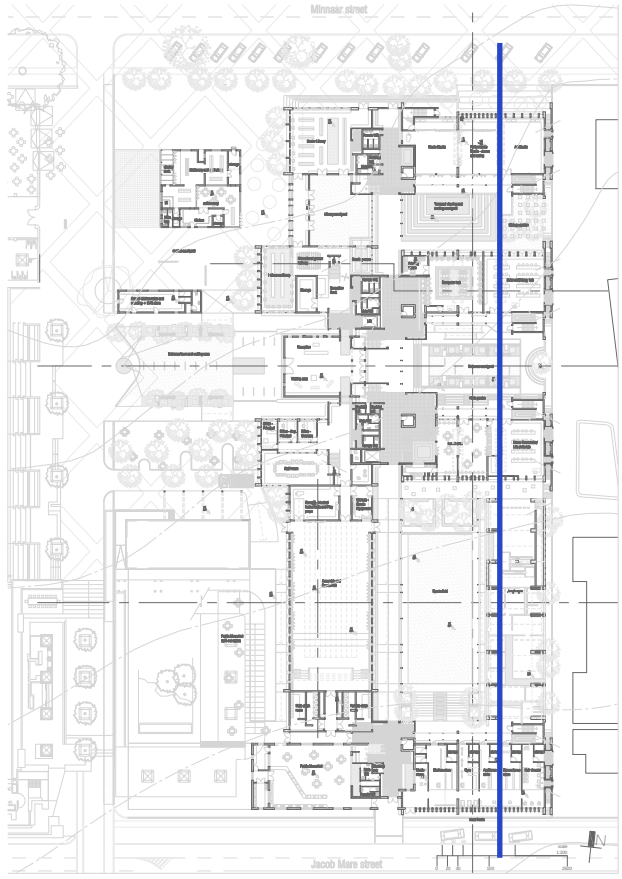
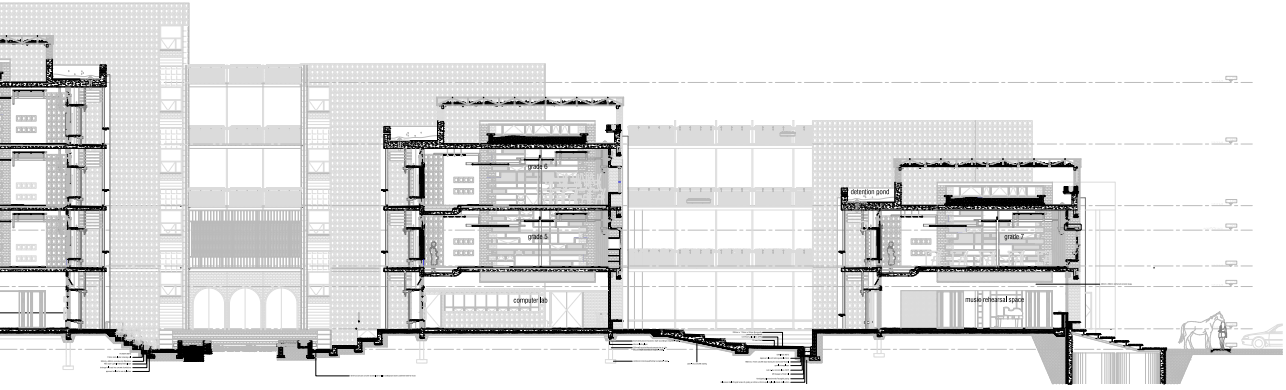


Figure 7.25: Longitudinal spatial section. (Author: October 2013)







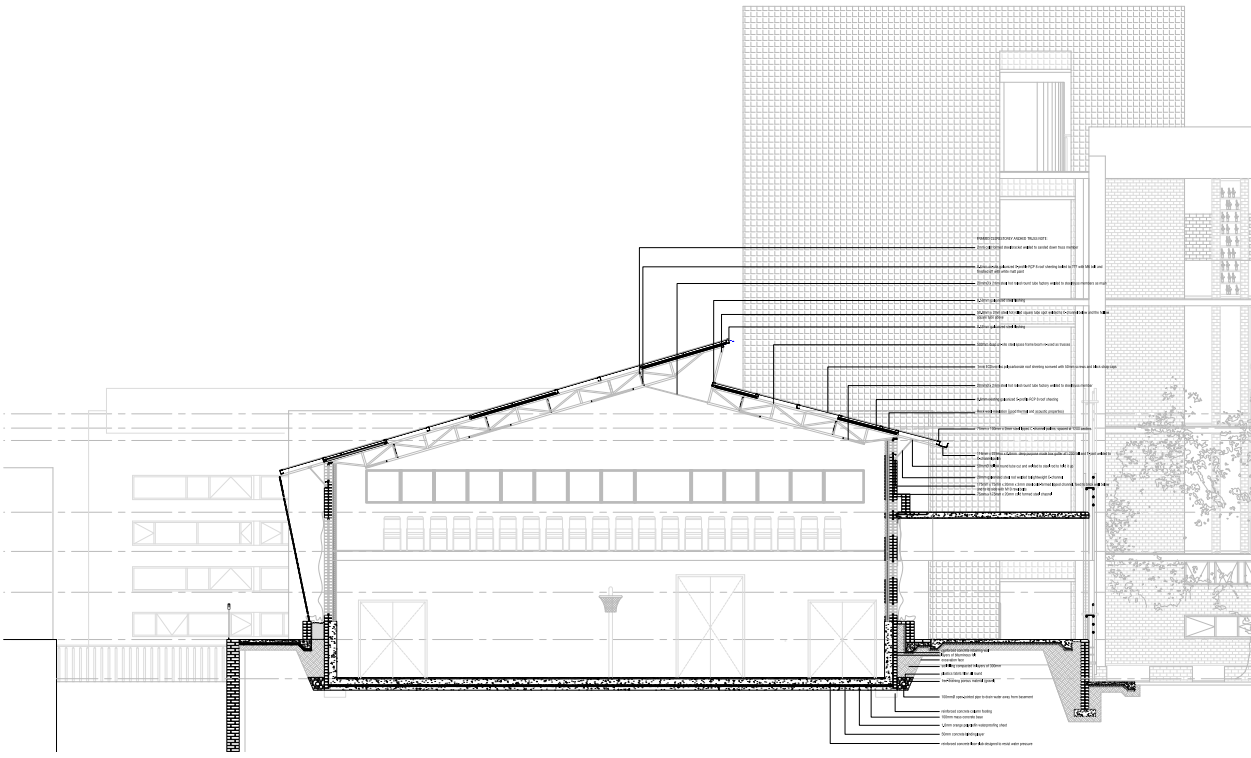
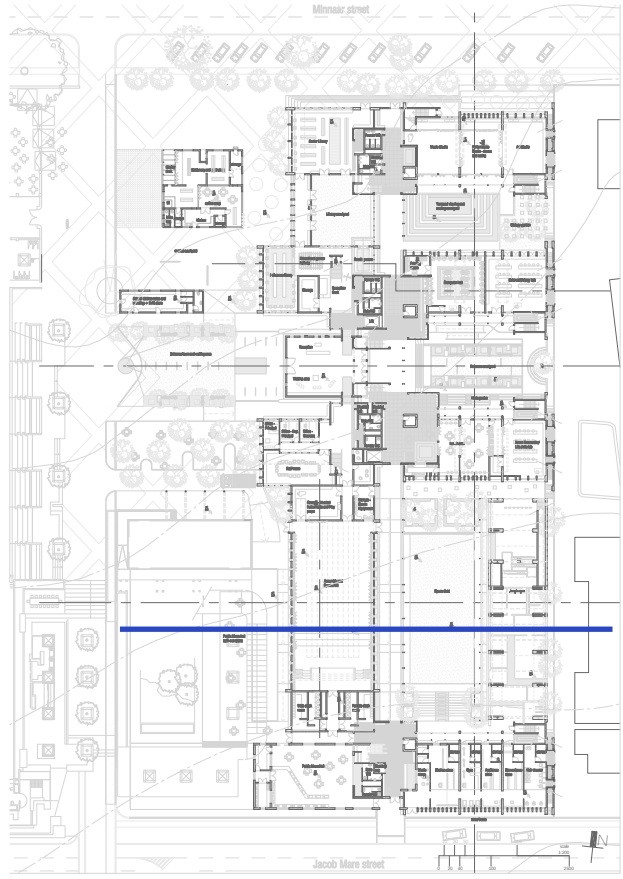
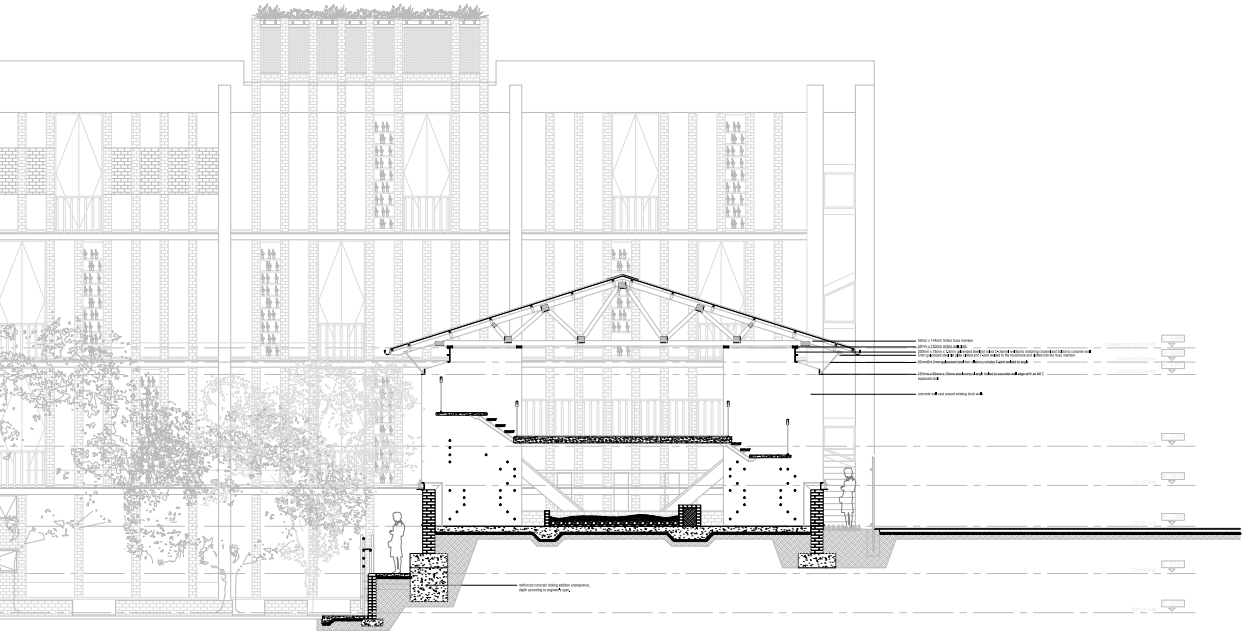


Figure 7.26: Cross sectional spatial section. (Author: October 2013)





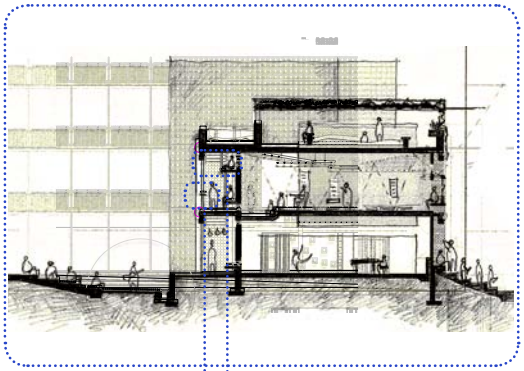


Figure 7.27: Portion of longitudinal spatial section. (Author: October 2013)

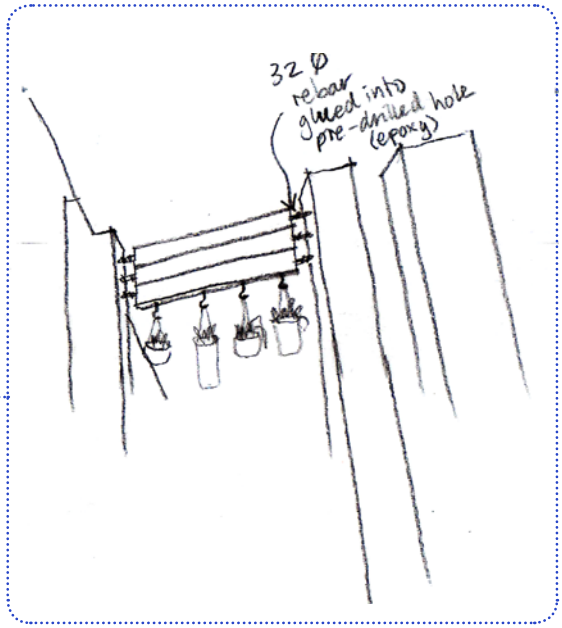


Figure 7.28: Old timber trusses used to announce threshold from above. (Author: October 2013)

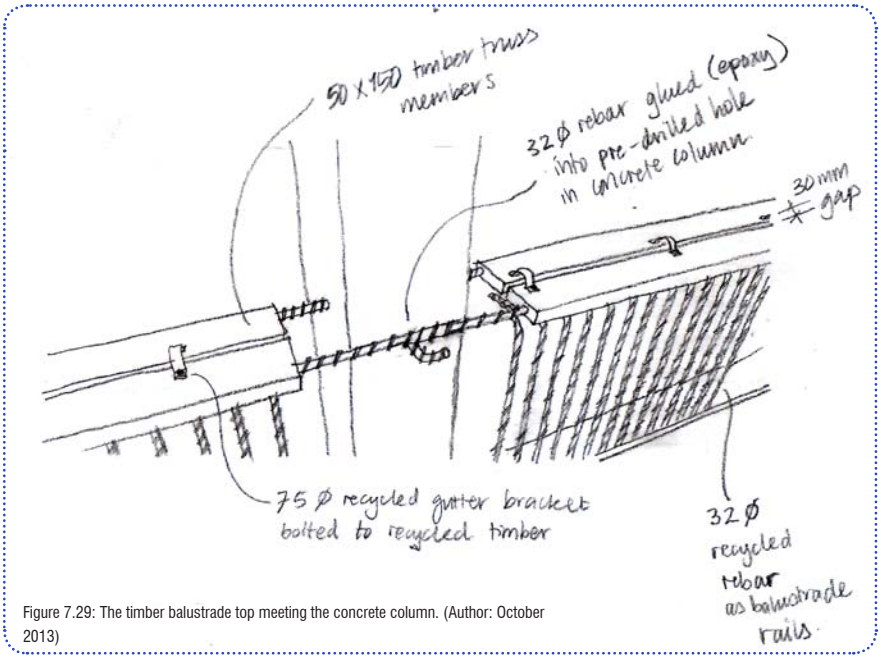


Figure 7.29: The timber balustrade top meeting the concrete column. (Author: October 2013)

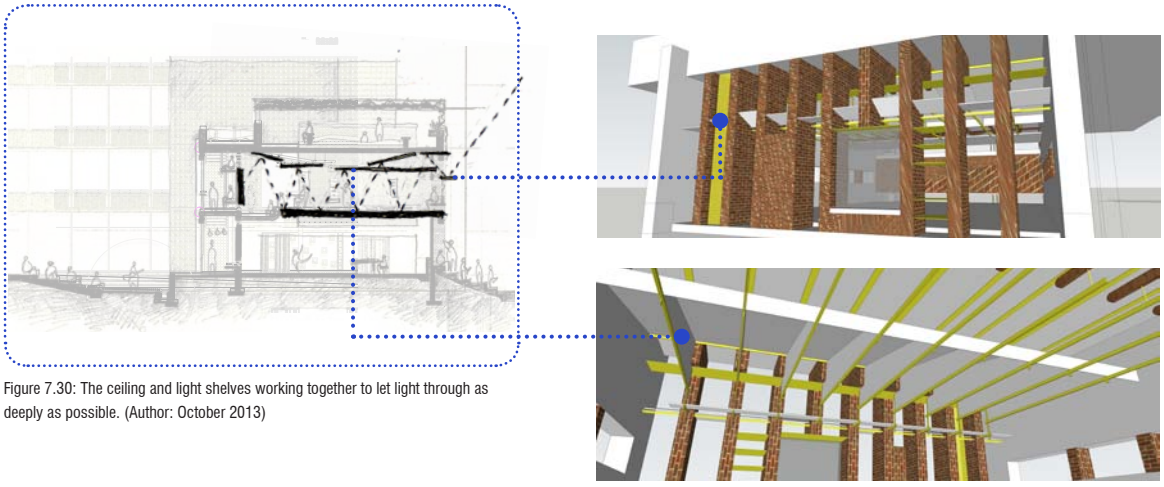


Figure 7.30: The ceiling and light shelves working together to let light through as deeply as possible. (Author: October 2013)

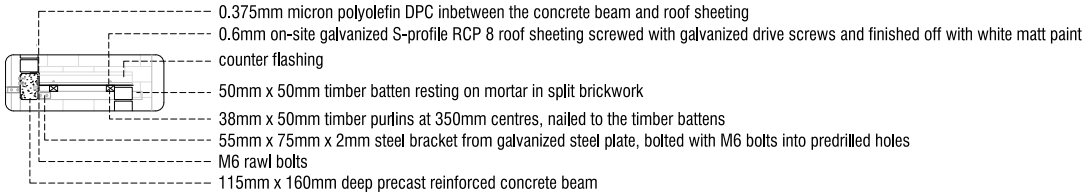


Figure 7.31: The lightshelf detail made of reused timber and corrugated roof sheeting. (Author: October 2013)

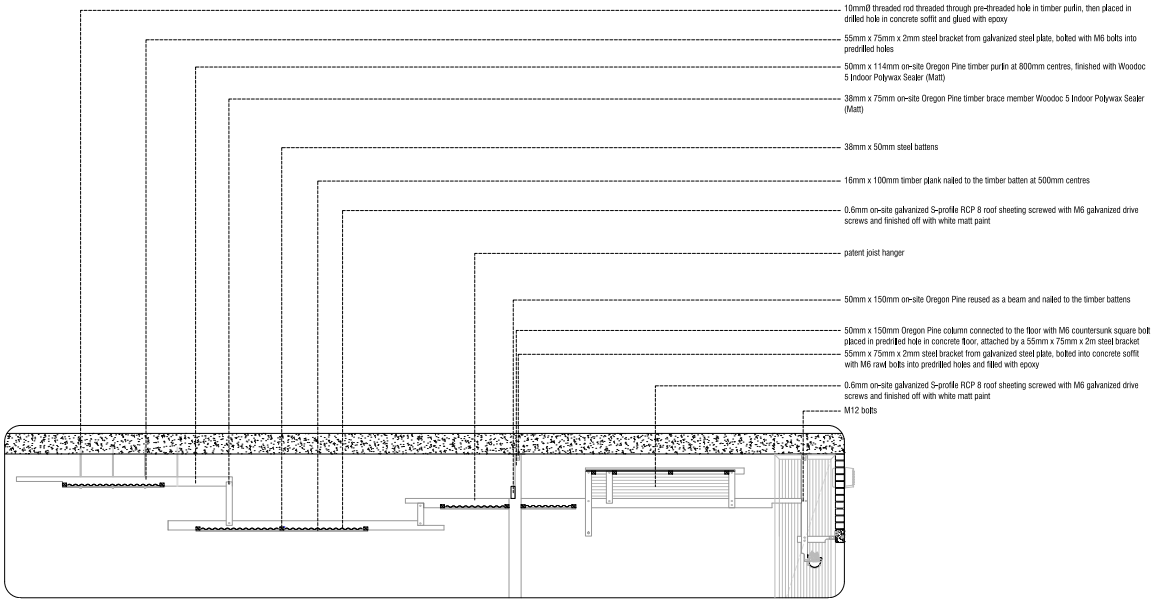


Figure 7.32: The ceiling detail made of reused timber and corrugated roof sheeting. (Author: October 2013)

Figure 7.33: Solar water heater.

SOLAR WATER HEATING CALCULATIONS						
Water in geyser (L)	**Temperature in geyser (°C)**	**Ambient shower temperature (°C)**	**hot : cold**	**Avg water consumption/ shower (L)**	**Hot (L)**	**Can supply how many showers**
250	80	37	1 : 3	20	5	50

LOW-FLOW SHOWERS	**ltr/person (2 flushes)**	**people/weekday**
1 day	25	60
Amount for 1 day		1500
Amount of water for 1 day		375
60people/50 showers per 250L tank		1.2
2 TANKS ARE REQUIRED		

Table 7.2: Solar water heater calculations.

7.5 Plant Palette

The following plant palette outlines the natural landscape needs of the school, having considered vegetation for shading purposes, as well as for learning, cooking and visual stimulation. Vegetation also provides seasonal variations which promotes an understanding of change and creates anticipation as leaves can be seen falling in winter and the flowers blooming in the spring, with the falling flowers painting the floor its various colours.

URBAN PRIMARY SCHOOL VEGETATION REQUIREMENTS: VEGETATION PALETTE

Nr	Type	Name								
1	T+ S + G	To the north of the biology/science labs for study of insects, birds and plant species								
2	T	Western façades								
3	S + G	Herbs and spices for cafeteria + Home Economics								
4	T	Sports pavilion shading								
5	T	North of Sports field near classrooms								
6	T + S	Entrance courtyard edges								
7	T + S	Medicinal for science and biology								
8	C+ S + G	Roof plants								
9	S + G	Cill plants (scented, attract birds, flowers)								

Evergreen | Deciduous | Medicinal | Edible Fruits | Attracts Birds | Attracts Insects | Attractive Flowers | Scented

T = Trees
S = Shrubs
G = Grasses
C = Climbers (Creepers)

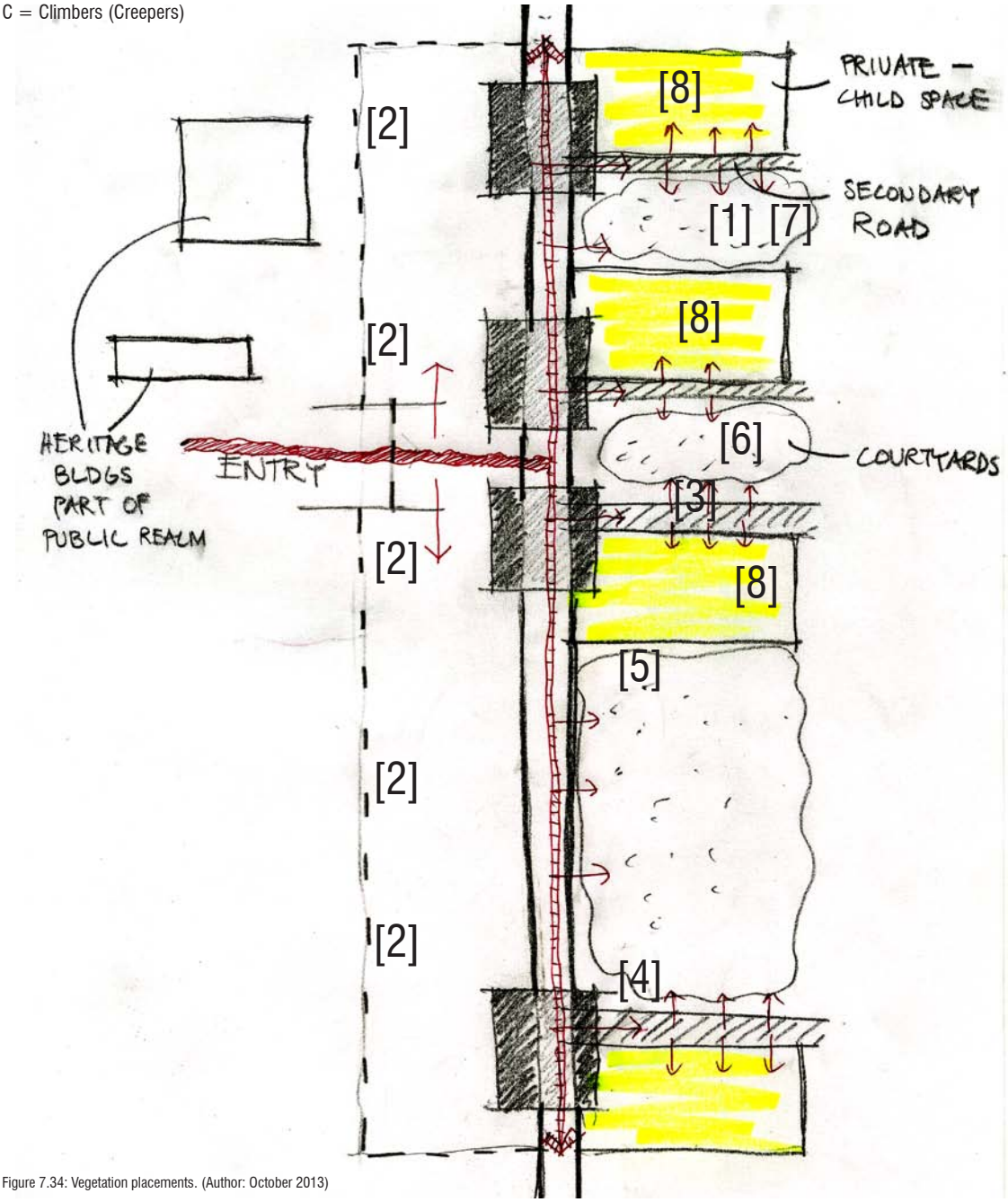


Figure 7.34: Vegetation placements. (Author: October 2013)

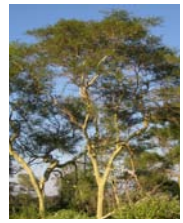
TREES											
Nr	**Type**	**Name**	**Flowering Time**								
T1	T	White stinkwood (celtis africana)									
T2	T	Velvet bushwillow (combretum molle)									
T3	T	Mountain Karee (searsia leptodictya)									
T4	T	Common Hook thorn (Acacia caffra)									
T5	T	Fever tree (Acacia xanthophloea)	Sept - Nov								
T6	T + S	Sweet thorn (acacia karoo)									


T1


T2


T3


T4


T5


T6

MEDIUM SIZED TREES AND SHRUBS

Nr	Type	Name	Flowering Time								
S1	S	Common wild pear/ bushveld bride (dombeya rotundifolia)	July - Nov		●				●	●	●
S2	S	Puzzle bush (ehretia rigida)			●			●			
S3	S	Common Spyke thorn (gymnosporia hetero-phylla)		●		●	●	●	●		
S4	S	Bell spike thorn (gymno-sporia tenuispina)		●		●		●	●	●	
S5	S	Kork bush (Mundulia sericea)		●		●		●	●	●	
S6	S	Common Wild elder (nuxia congesta)		●				●	●	●	
S7	S	Magalies plane (Ochna pretoriensis)			●	●		●	●	●	
S8	S	Peeling plane (ochna pulchra)			●	●		●	●	●	

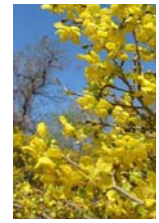

S1


S5


S2


S6


S3


S7


S4


S8

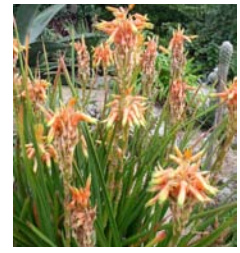
GRASSES AND GROUND COVER												
Nr	**Type**	**Name**	**Flowering Time**									
G1	G	Bermudagrass (cynodon dactylon)										
G2	G	Curry Bush (helichrysum kraussii)										
G3	G	Grass Aloe (aloe cooperi)										
G4	G	Sunrose (aptenia cordi-folia)										
G5	G	Bulbinella (bulbine spp.)										
G6	G	Ice plant (carpobrotus acinaciformis)										


G1


G4


G2


G5


G3


G6

CLIMBING AND TRAILING PLANTS

Nr	Type	Name	Flowering Time									
C1	C + S	Climbing Aloe (Aloe ciliaris)		●					●	●	●	
C2	C	climbing asparagus (asparagus spp.)		●						●		
C3	C + S	pride of De Kaap (Bauhinia galpinii)			●				●	●	●	
C4	C	climbing onion (bowiea volubilis)			●	●				●		
C5	C	traveller's joy (clematis brachiata)			●					●	●	
C6	C + S	flame creeper (combretum microphyllum)			●				●	●	●	
C7	C + S	starry wild jasmine (jasminum multipartitum)		●						●	●	
C8	C	wild calabash (lagenaria sphaerica)			●	●	●	●	●	●	●	
C9	C	canary creeper (senecio tamoides)		●						●	●	
C10	C	black-eyed Susan (thunbergia alata)			●				●	●	●	


C1


C2


C3


C4


C5


C6


C7

C8


C9


C10

7.6 Sustainable Systems Strategy

7.6.1 Rainwater Capture and Attenuation

Runoff Coefficients	
Lawned Areas	0.25
Planting Beds	0.17
Permeable Paved Areas	0.30
Permeable Paved Areas (Less Pervious)	0.35
Permeable Paved Areas (More Pervious)	0.28
Impermeable Paved Areas	0.70
Roofs	0.90
Water	1.00

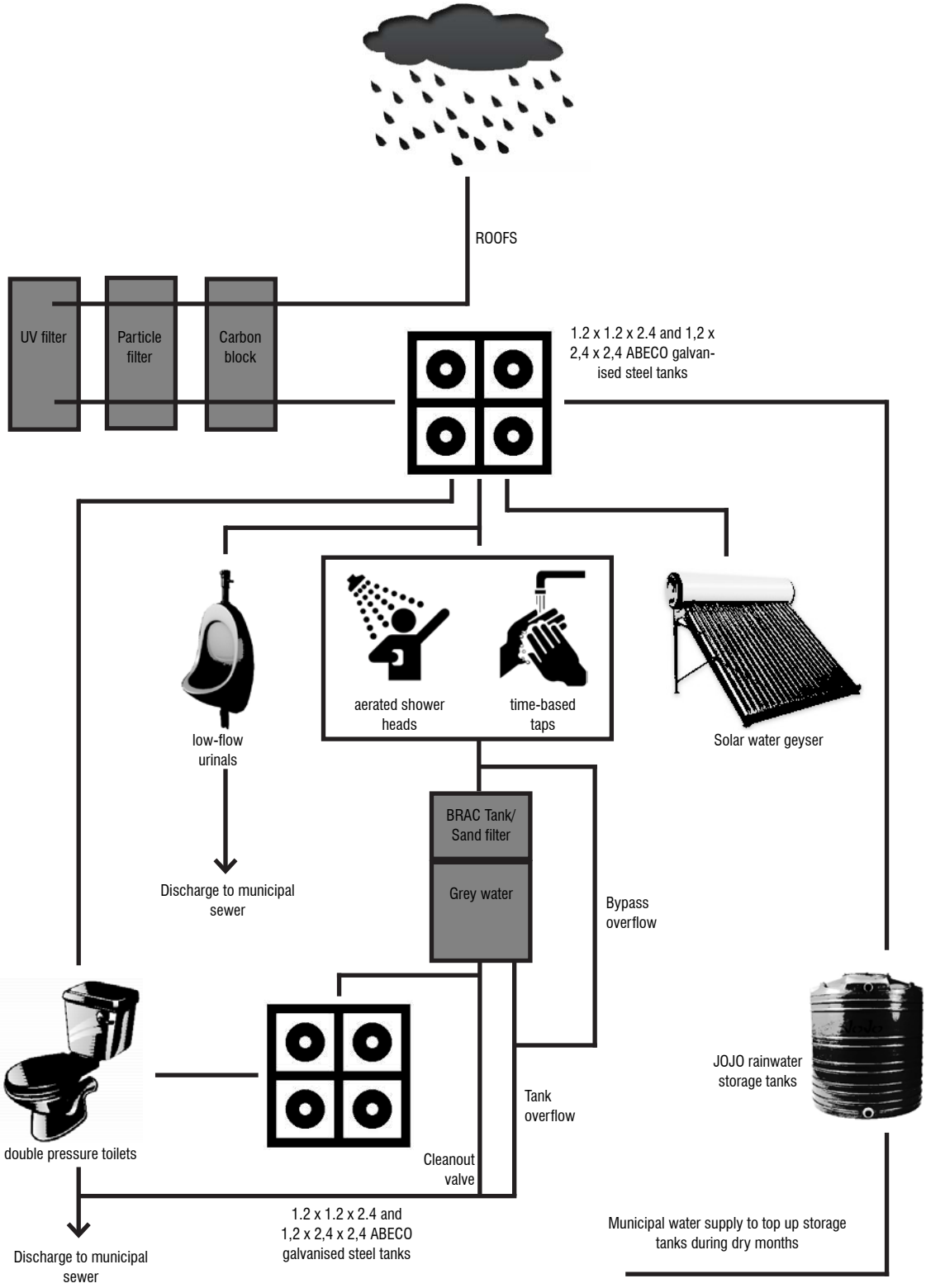


Figure 7.35: Proposed rainwater catchment storage, reuse and filter. (Author: October 2013)

LAWNS	Average Rainfall (m)	Runoff Coefficient	Area (m^2)	Runoff (m^3)
January	0.102	0.25	405.7	10.35
February	0.111	0.25	405.7	11.26
March	0.081	0.25	405.7	8.22
April	0.042	0.25	405.7	4.26
May	0.016	0.25	405.7	1.62
June	0.007	0.25	405.7	0.71
July	0.004	0.25	405.7	0.41
August	0.003	0.25	405.7	0.30
September	0.020	0.25	405.7	2.03
October	0.069	0.25	405.7	7.00
November	0.106	0.25	405.7	10.75
December	0.106	0.25	405.7	10.75
TOTAL				**67.65**

PLANTED BEDS	Average Rainfall (m)	Runoff Coefficient	Area (m^2)	Runoff (m^3)
January	0.102	0.17	963	16.70
February	0.111	0.17	963	18.17
March	0.081	0.17	963	13.26
April	0.042	0.17	963	6.88
May	0.016	0.17	963	2.62
June	0.007	0.17	963	1.15
July	0.004	0.17	963	0.65
August	0.003	0.17	963	0.49
September	0.020	0.17	963	3.27
October	0.069	0.17	963	11.30
November	0.106	0.17	963	17.35
December	0.106	0.17	963	17.35
TOTAL				**109.19**

IMPERMEABLE PAVED	Average Rainfall (m)	Runoff Coefficient	Area (m ²)	Runoff (m³)
January	0.102	0.70	988.65	70.59
February	0.111	0.70	988.65	76.82
March	0.081	0.70	988.65	56.06
April	0.042	0.70	988.65	29.07
May	0.016	0.70	988.65	11.07
June	0.007	0.70	988.65	4.84
July	0.004	0.70	988.65	2.77
August	0.003	0.70	988.65	2.08
September	0.020	0.70	988.65	13.84
October	0.069	0.70	988.65	47.75
November	0.106	0.70	988.65	73.36
December	0.106	0.70	988.65	73.36
TOTAL				**461.60**

FLAT CONCRETE ROOFS	Average Rainfall (m)	Runoff Coefficient	Area (m ²)	Runoff (m³)
January	0.102	0.90		
February	0.111	0.90		
March	0.081	0.90		
April	0.042	0.90		
May	0.016	0.90		
June	0.007	0.90		
July	0.004	0.90		
August	0.003	0.90		
September	0.020	0.90		
October	0.069	0.90		
November	0.106	0.90		
December	0.106	0.90		
TOTAL				

PLANTED ROOFS	Average Rainfall (m)	Runoff Coefficient	Area (m^2)	Runoff (m^3)
January	0.102	0.17		
February	0.111	0.17		
March	0.081	0.17		
April	0.042	0.17		
May	0.016	0.17		
June	0.007	0.17		
July	0.004	0.17		
August	0.003	0.17		
September	0.020	0.17		
October	0.069	0.17		
November	0.106	0.25		
December	0.106	0.25		
TOTAL				

7.6.2 Irrigation Demand

LAWNS	Planting Area (m^2)	Monthly Depth (m)	Irrigation Demand (m^3)
January	405.7	0.16	64.91
February	405.7	0.16	64.91
March	405.7	0.16	64.91
April	405.7	0.125	50.71
May	405.7	0.125	50.71
June	405.7	0.125	50.71
July	405.7	0.125	50.71
August	405.7	0.125	50.71
September	405.7	0.125	50.71
October	405.7	0.16	64.91
November	405.7	0.16	64.91
December	405.7	0.16	64.91
TOTAL			**693.75**

PLANTED BEDS + PLANTED ROOFS	Planting Area (m^2)	Monthly Depth (m)	Irrigation Demand (m^3)
January		0.16	
February		0.16	
March		0.16	
April		0.125	
May		0.125	
June		0.125	
July		0.125	
August		0.125	
September		0.125	
October		0.16	
November		0.16	
December		0.16	
TOTAL			

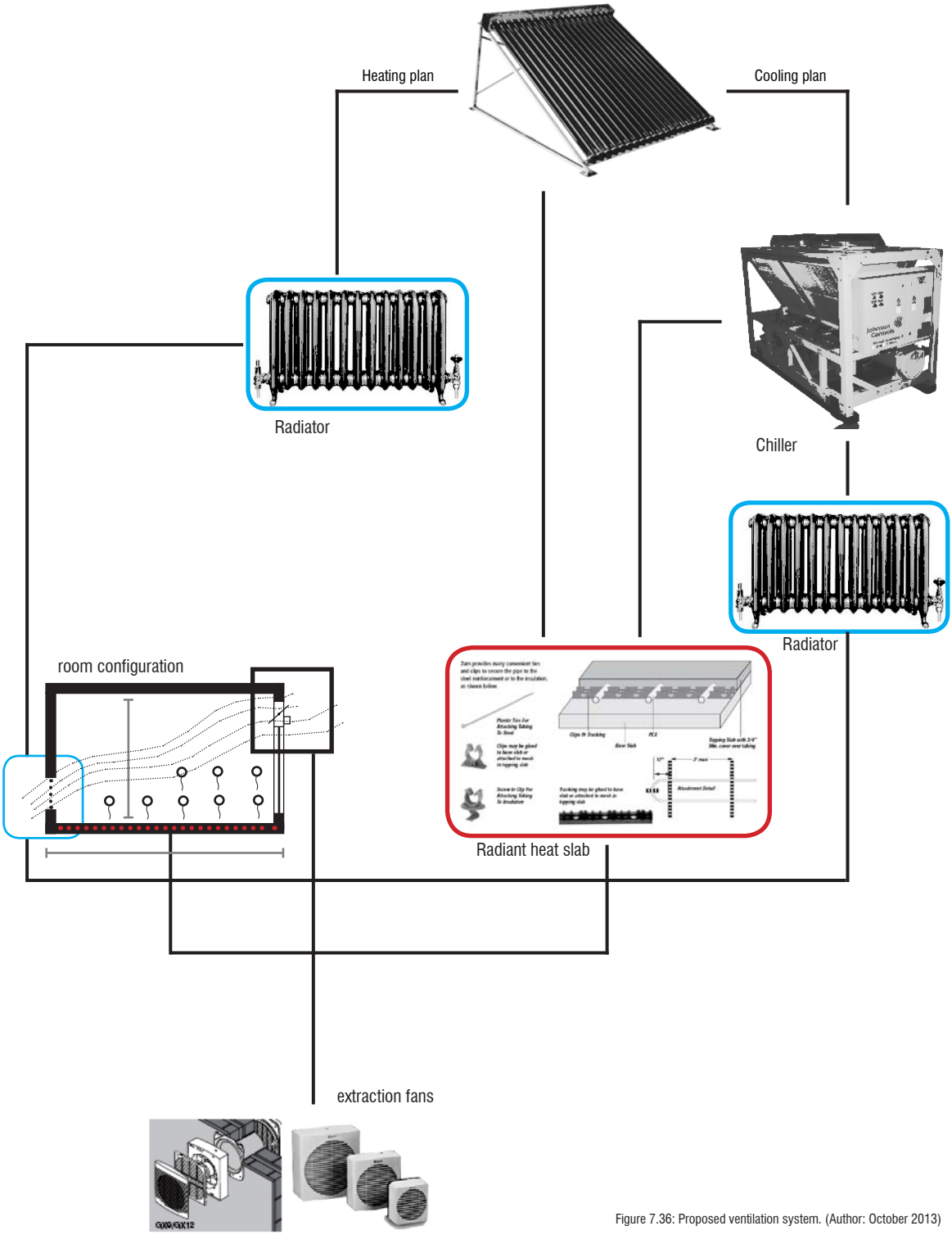


Figure 7.36: Proposed ventilation system. (Author: October 2013)

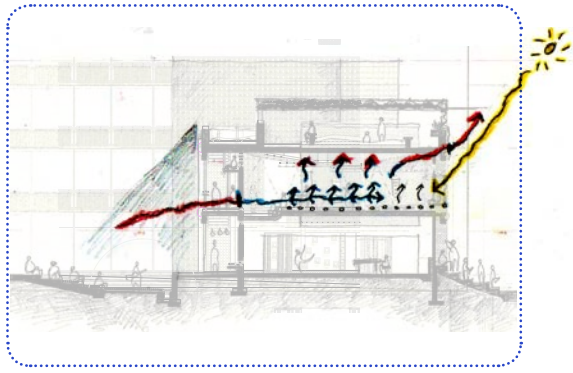


Figure 7.37(a): Summer ventilation. (Author: October 2013)

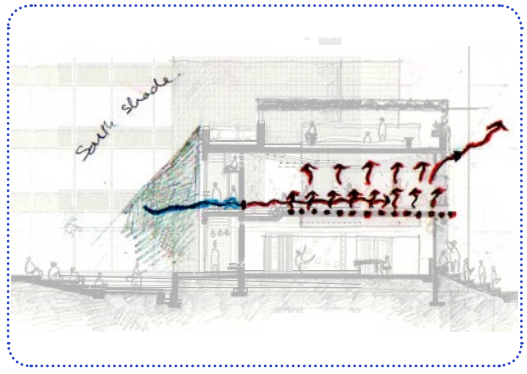


Figure 7.37(b): Winter ventilation. (Author: October 2013)

7.7 Meet the Users

The urban school aims to be sustainable and useable for the most part of a day, generating income for the school whilst providing amenities to city users.

Illustrated below is a chart of the building's day- and night-time use. It has the potential to realistically run a 14,5 hour day.

market_ Thrift shop, craft store, baked goods from Home Economics

entertainment_ movies, plays and musicals

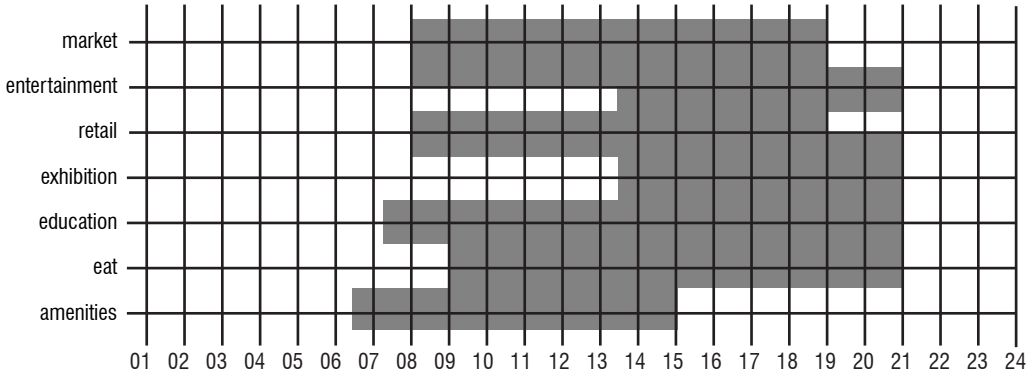
retail_ hairdresser, clothes store, appliance shop, music shop

exhibition_ library exhibitions, artwork exhibitions

education_ primary school, adult night school, administration

eat_ restaurant, mess hall, cafeteria, coffee shop

amenities_ gymnasium, convenience store



Public

Private

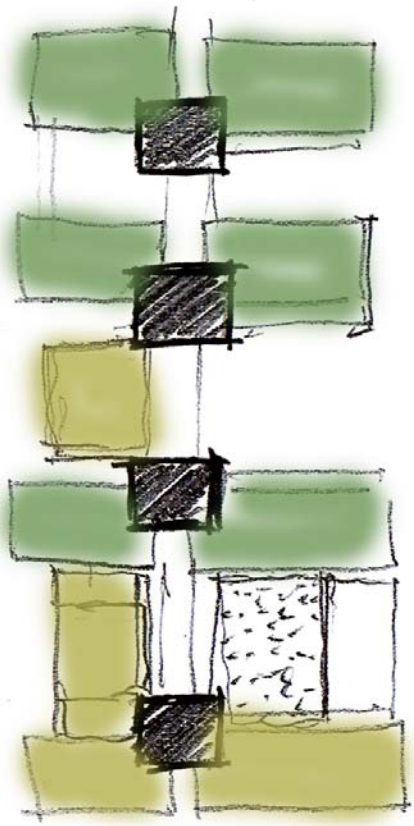


Figure 7.38(a): Morning use. (Author: October 2013)

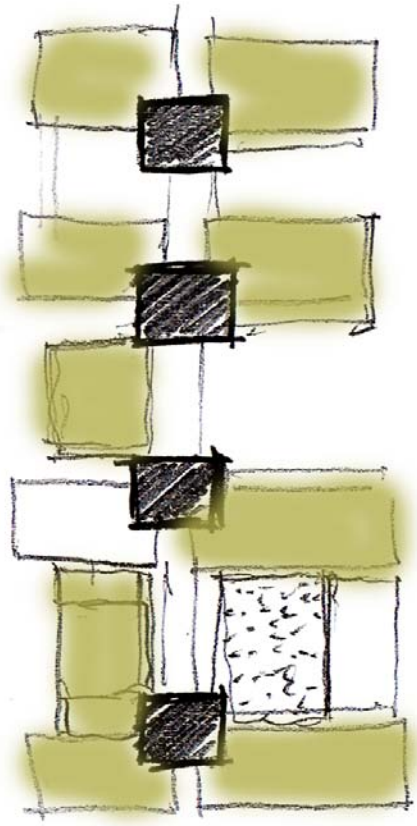


Figure 7.38(b): Afternoon use. (Author: October 2013)

Hypothetical User Profile 1:

MATHS TEACHER AND GRADE 7 REGISTER TEACHER

Name: Mr Kameel

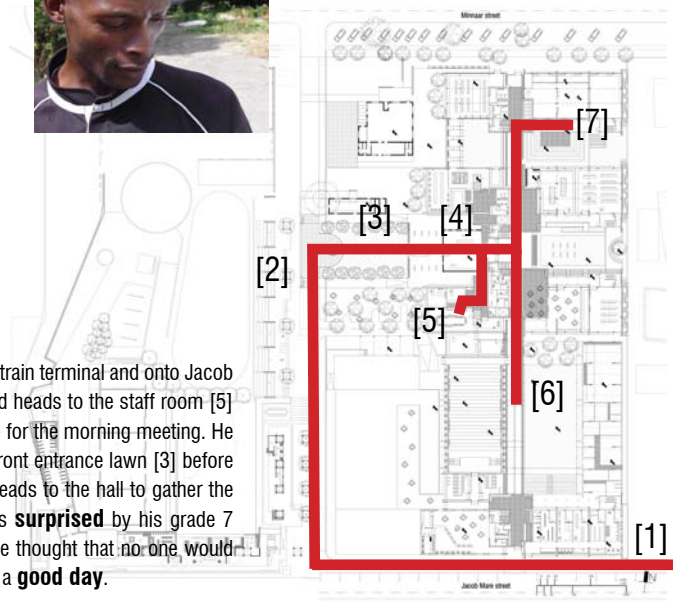
Gender: Male

Age: 27 years old

Travelled from: Mabopane

Mode of transport: train

Accompanied by: no one



A **punctual** Mr Kameel walks down Bosman street from the train terminal and onto Jacob Mare street [1]. He enters the main entrance building [4] and heads to the staff room [5] to have **tea** as he waits for the other staff members to arrive for the morning meeting. He **watches** (from the staff room) the children playing on the front entrance lawn [3] before the bell rings for the beginning of the school day. He then heads to the hall to gather the students for the general morning announcements [6]. He is **surprised** by his grade 7 students as they all stand to sing happy birthday to him. He thought that no one would remember. As he heads to class [7], he knows that it will be a **good day**.

Hypothetical User Profile 2:

INEPENDENT STUDENT

Name: Thembile

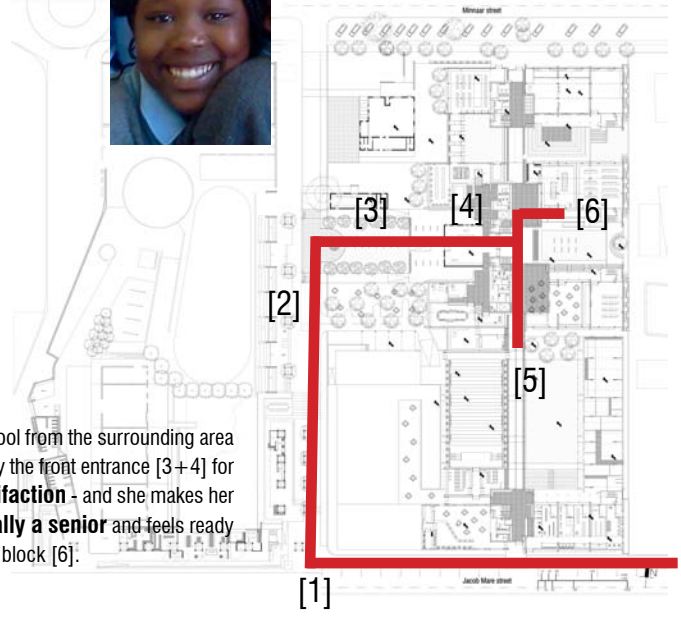
Gender: Female

Age: 12 years old

Travelled from: apartment blocks in surrounding area

Mode of transport: pedestrian

Accompanied by: no one



A **confident** young Thembile walks her **usual route** to school from the surrounding area [1]. She always gets **excited** to meet the other senior girls by the front entrance [3+4] for a bit of **morning gossip**. The bell rings - **never to her satifaction** - and she makes her way to the morning assembly with her friends [5]. She's **finally a senior** and feels ready to take on that role. She's going to a **new** part of the school block [6].

Hypothetical User Profile 3:

DEPENDENT STUDENT

Name: Mpho

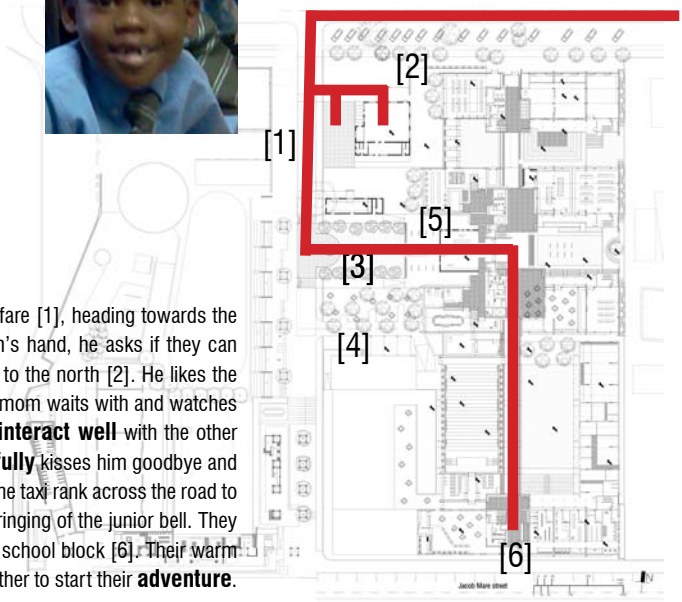
Gender: Male

Age: 6 years old

Travelled from: apartment blocks in surrounding area

Mode of transport: taxi

Accompanied by: mother



A **shy but eager** Mpho walks along the pedestrian thoroughfare [1], heading towards the entrance of what he calls **'big school'**. **Clutching** his mom's hand, he asks if they can go and see the arts and crafts works in the entrance building to the north [2]. He likes the colours and it makes him **less nervous** for 'big school'. His mom waits with and watches over him at the main entrance lawn [3] to see whether he'll **interact well** with the other children and that he won't get bullied. Late for work, she **tearfully** kisses him goodbye and grabs a coffee at the restaurant [4], before making her way to the taxi rank across the road to the south. The grade 1 teachers come to greet them after the ringing of the junior bell. They ask the children to all **hold hands** and to follow them to their school block [6]. Their warm smiles **comfort** their nervous hearts as they grab onto each other to start their **adventure**.

Hypothetical User Profile 4:

CLEANER

Name: Beauty

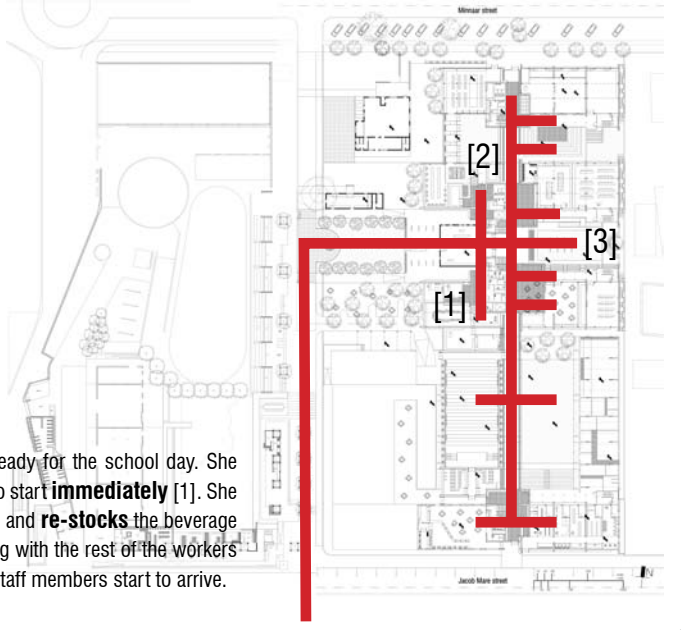
Gender: Female

Age: 36 years old

Travelled from: Mamelodi

Mode of transport: taxi

Accompanied by: no - one



Mother of two Beauty arrives at **05h30** to get everything ready for the school day. She meets up with her co-workers and they get changed in order to start **immediately** [1]. She usually starts with cleaning the staff room [1] and offices [1] and **re-stocks** the beverage counter while her friend starts with the library [2]. They, along with the rest of the workers must finish with the entire school [3] by **07h00**, before the staff members start to arrive.

Hypothetical User Profile 5:

RESIDENT SPECIALISTS, EG. RESIDENT DOCTOR AND LIBRARIAN

Name: Dr. Raman; Librarian Mrs Gantsho

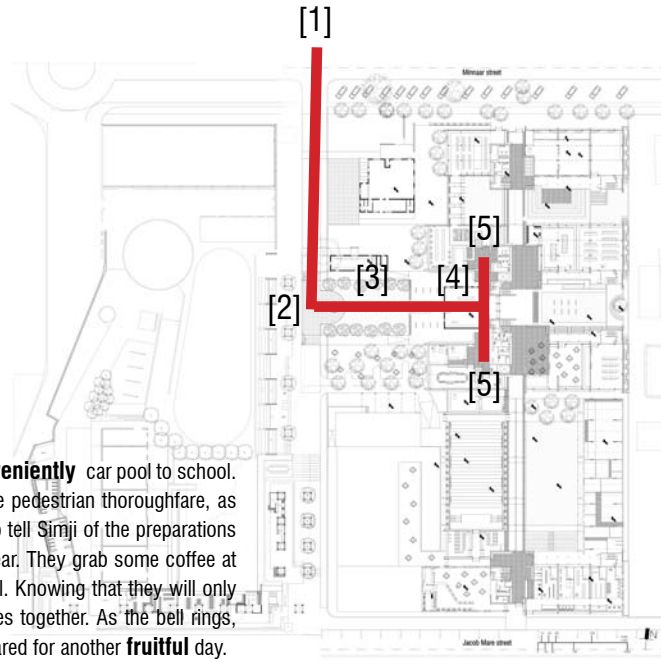
Gender: Female; Female

Age: 32; 29 years old respectively

Travelled from: Pretoria CBD

Mode of transport: car pool (commute together)

Accompanied by: each other



Best friends Simji (Dr. Raman) and Busi (Mrs Gantsho) **conveniently** car pool to school. They park on Minnaar street and **stroll casually** along the pedestrian thoroughfare, as if to prolong the time before school starts. Busi is excited to tell Simji of the preparations she's making for her **daughter** to start school here next year. They grab some coffee at the restaurant as they watch the children play before school. Knowing that they will only see each other in a few hours time, they **enjoy** their coffees together. As the bell rings, they proceed to their posts to ensure that everything is prepared for another **fruitful** day.

Hypothetical User Profile 6:

FREQUENT PUBLIC USER

Name: Thabo

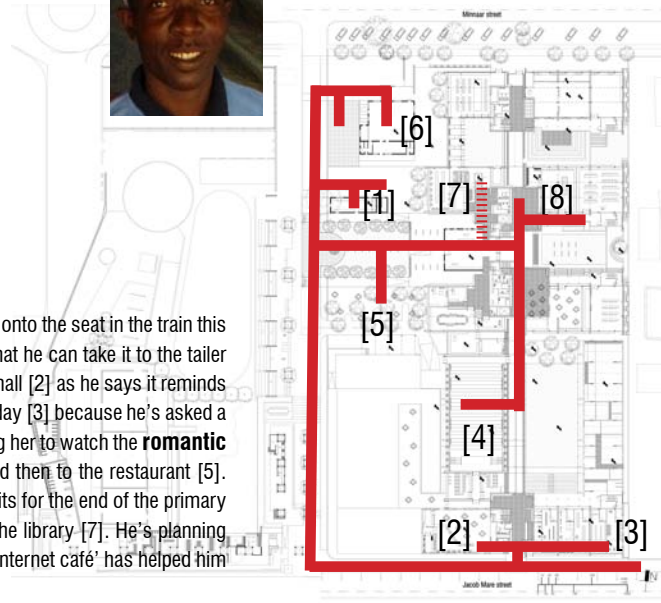
Gender: Male

Age: 24 years old

Travelled from: Pretoria North

Mode of transport: train

Accompanied by: no one



Thabo works at the Post Office. Today, his pants got **hooked** onto the seat in the train this morning and tore just a bit. He's stressed but also relieved that he can take it to the tailer at the school [1]. He enjoys grabbing his **lunch** at the mess hall [2] as he says it reminds him of his **mother's cooking**. He's going to get a haircut today [3] because he's asked a girl out on a **date** and wants to look his best. He plans to bring her to watch the **romantic movie** that will be showing this afternoon in the hall [4] and then to the restaurant [5]. He buys her a small present from the **craft shop** [6]. He waits for the end of the primary school day so that he can get some **reading material** at the library [7]. He's planning to join the **adult school** that runs here in the evenings. The internet café' has helped him to get **registered** and to choose his courses [8].

Hypothetical User Profile 7:

INFREQUENT PUBLIC USER

Name: Marvin

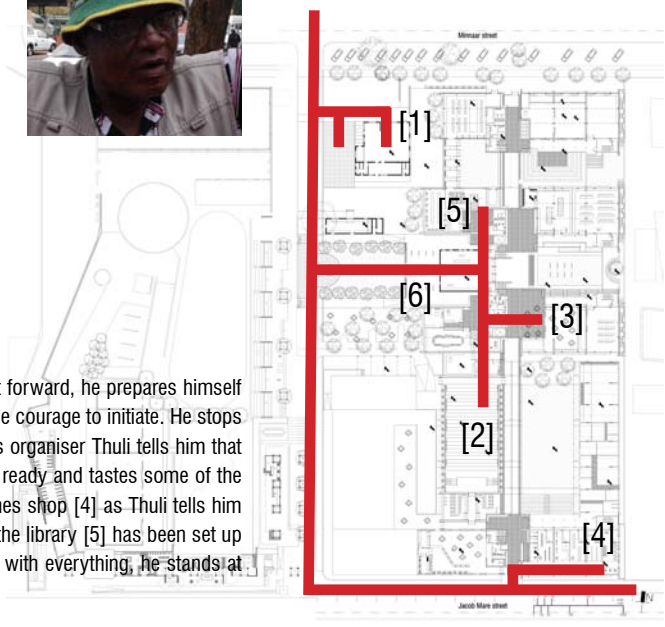
Gender: Male

Age: 48 years old

Travelled from: Mamelodi

Mode of transport: private car

Accompanied by: no one



Marvin is feeling anxious. With his best suit on and best foot forward, he prepares himself for an exposition that has taken him three years to build up the courage to initiate. He stops at the craft store [1] to buy some notepads and pens, as his organiser Thuli tells him that they do not have enough. He goes to check if the hall [2] is ready and tastes some of the food [3] to make sure that it's fine. He buys a tie at the clothes shop [4] as Thuli tells him that he's wearing the wrong coloured tie. She goes to see if the library [5] has been set up for the workshop that will happen in the afternoon. Satisfied with everything, he stands at the entrance foyer [6] and prepares to welcome his guests.

Hypothetical User Profile 8:

PARENT

Name: Thabiso

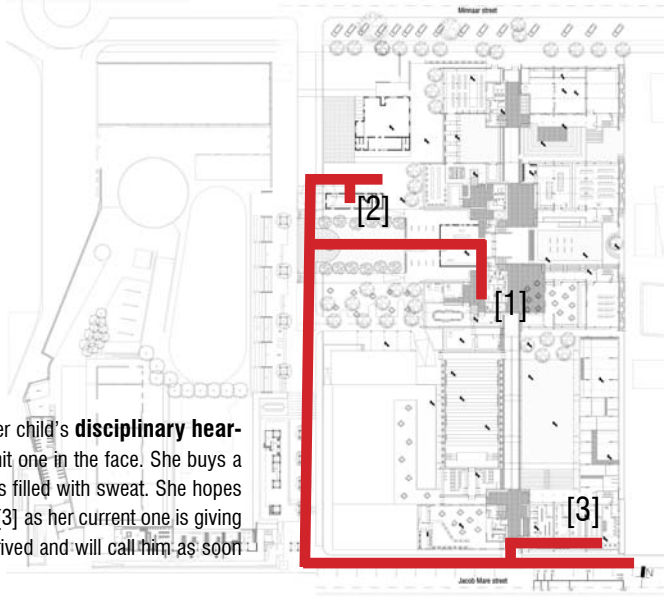
Gender: Female

Age: 31 years old

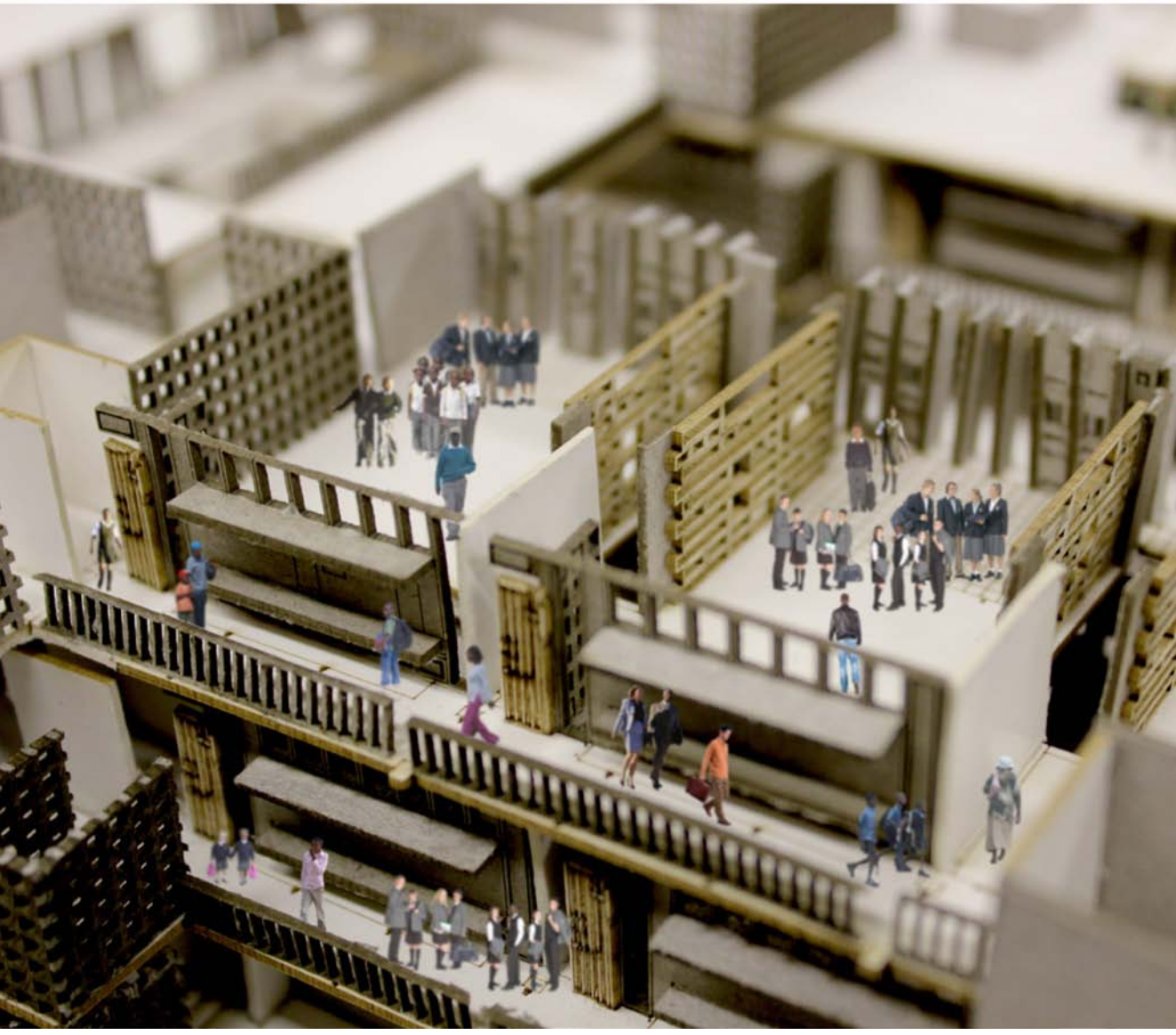
Travelled from: apartment blocks in surrounding area

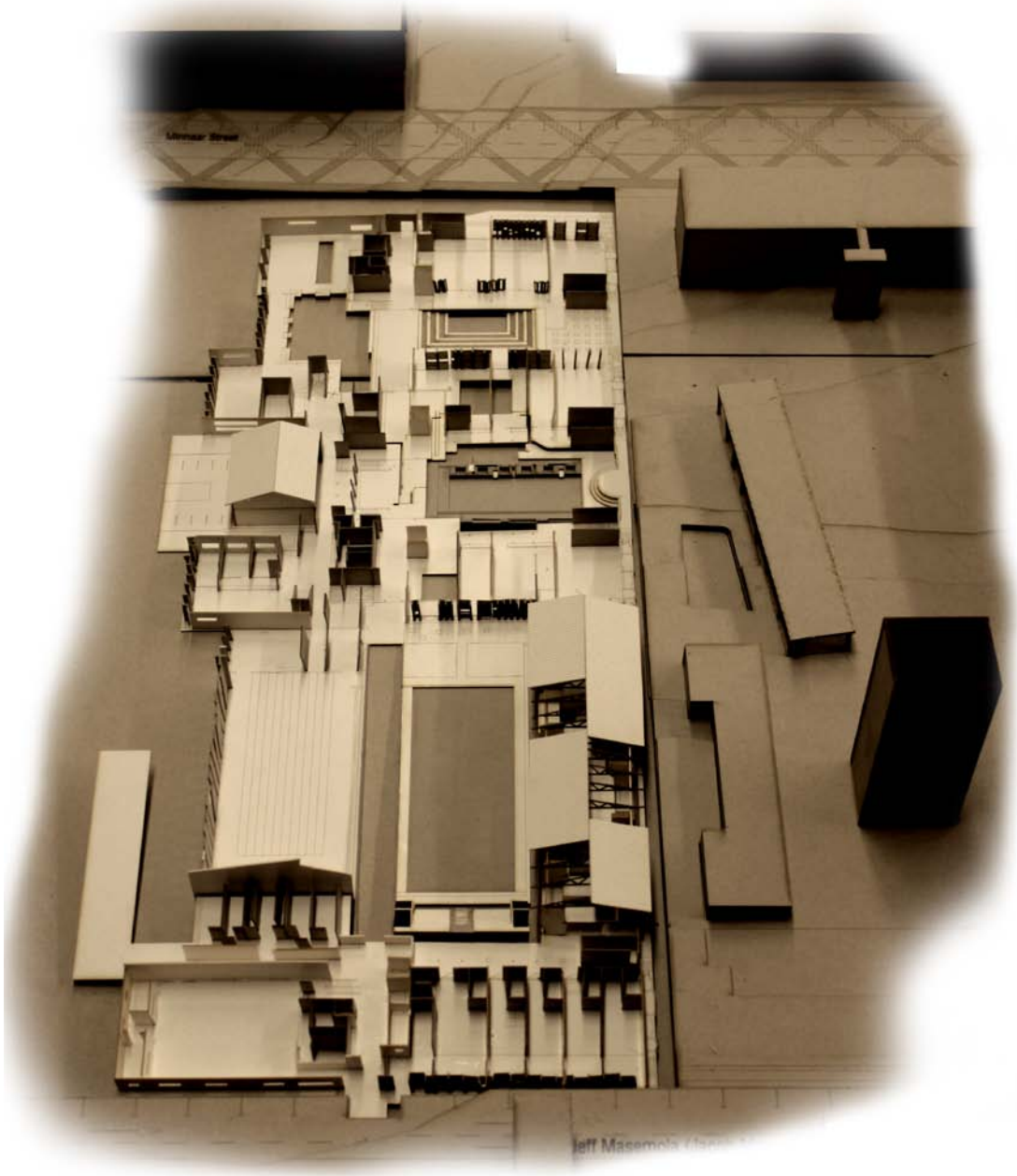
Mode of transport: pedestrian

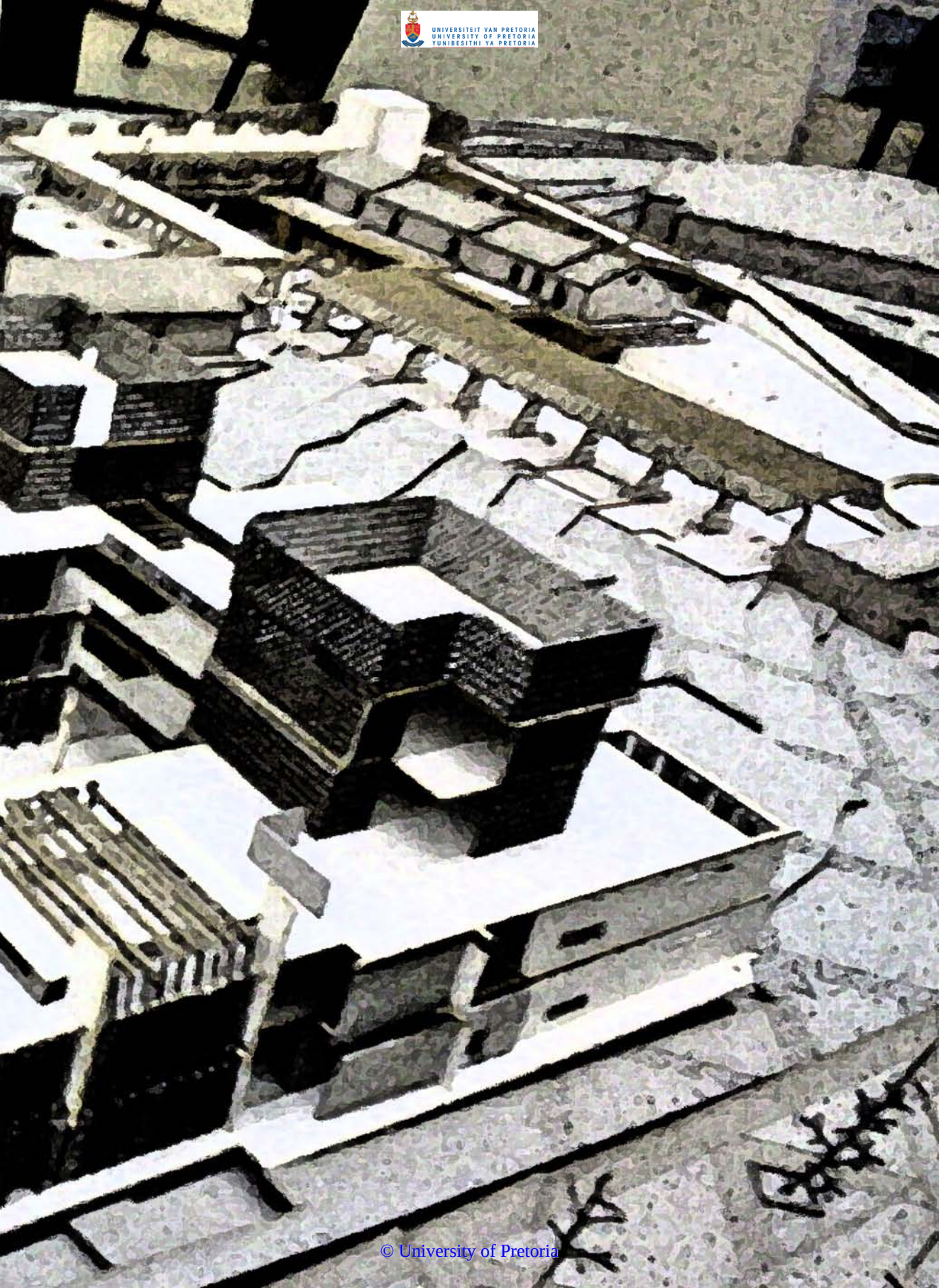
Accompanied by: no - one



Thabiso anxiously makes her way to the staff room [1] for her child's **disciplinary hearing**. She was told that he was **bullying** three children and hit one in the face. She buys a new blouse at the thrift shop [2] as the one she is wearing is filled with sweat. She hopes that they won't **expel** him. She buys a new **phone battery** [3] as her current one is giving her problems. She calls her husband to tell her that she's arrived and will call him as soon as the meeting is over. They call her in [1].







*"And the day came, when the **risk** it took to remain tight and closed in a bud*

was more painful than the risk it took to

bloom.

This is **my** element of freedom."

CHAPTER 08
Conclusion

8.1 In the end

In Brief

Chapter 08 concludes the process undergone throughout the year by reflecting on accidental discoveries and overall lessons learnt.

8.1 In the end

It was the first time I felt brave enough to stand before myself, stripped, vulnerable; unable to hide. All of life's components convened to give me no choice but to finally live. No more fear, they said, no more forgetting; no more regrets. They showed me the weight of wasted opportunities and misguided self-doubt. I was forced to stare at everything I spent my life running away from, not knowing that that was what I did all along. Hiding had become no less strange than breathing. It offered convenience and that loud kind of silence, only to be the thing that would take my breath and my understanding of breathing away.

I lived for the end of things, as if this life was given only to avoid it. I finally started to wait for time, rather than to run from it. It allowed me to live in it, something I never thought it would let me to do.

I no longer run or hide; I'm alive!

In the end they said...

LESSONS LEARNT - MAY RETROSPECT NOT BE OUR ONLY TEACHER

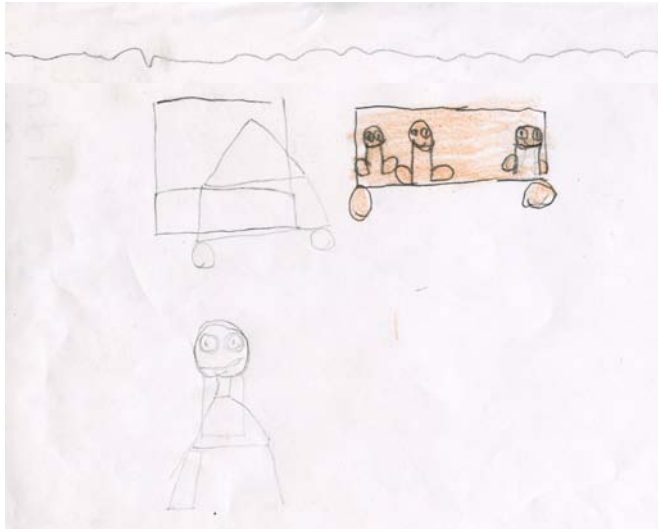
- Put things on layers from the beginning and plan a work strategy.
- Strategise from the beginning.
- There is enough time, take control of its availability.
- Make a lot of mistakes.
- Convince yourself first.
- Finish things that can be finished now; do not hold off for later.
- Grant yourself patience.
- Love what you do.
- You know more than you believe you know.
- Prioritize, show only what you want to show: you are in control.

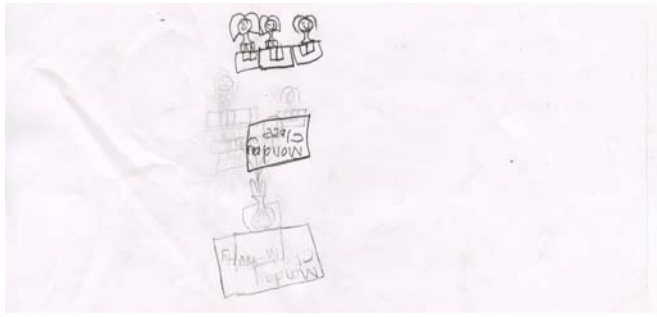
Fin.

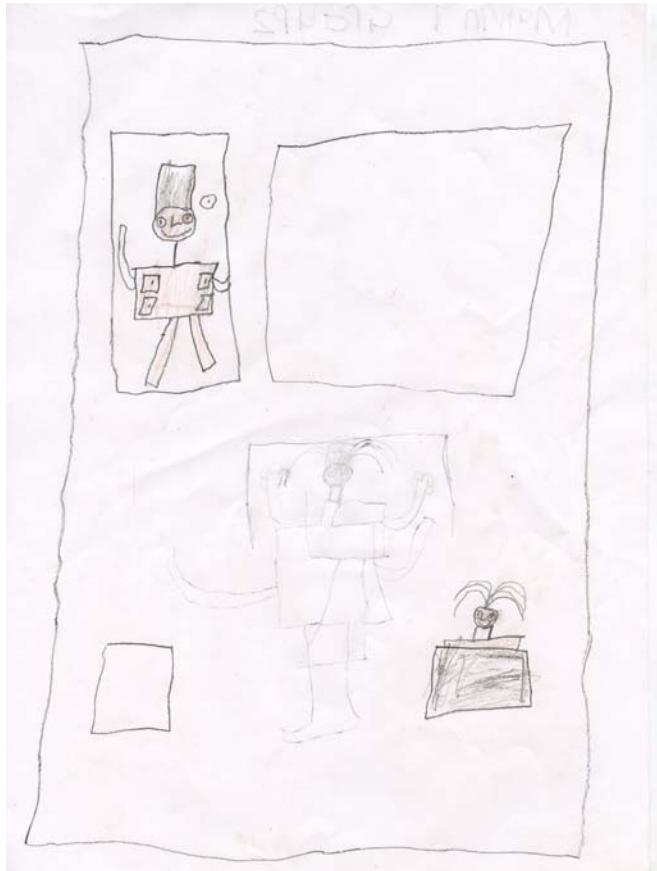
CHAPTER 09
Appendix

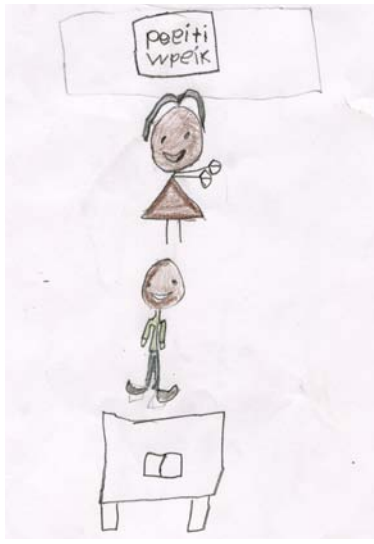
In Brief

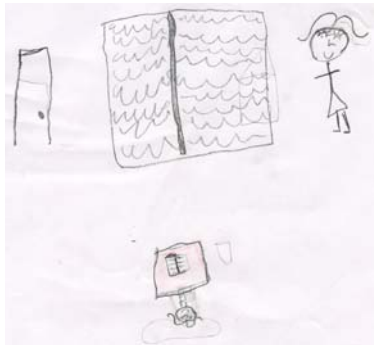
Chapter 09 is a show of all of the drawings that were done for the drawing exercise addressed to the children of Founder's Community School concerning their perception of themselves in the city.

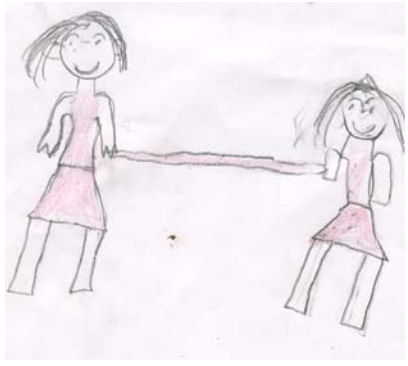


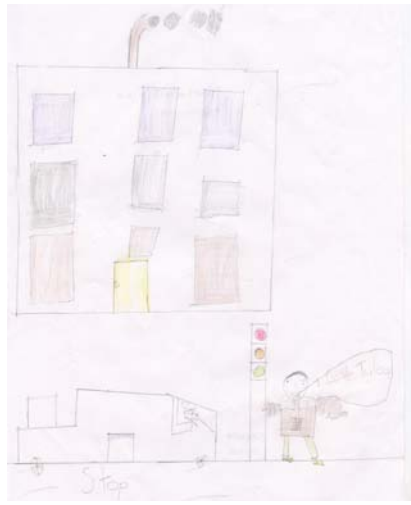


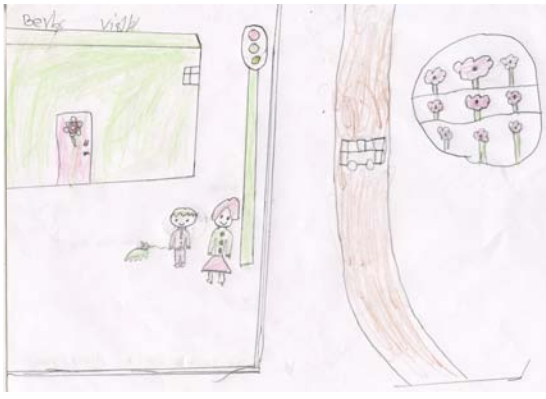


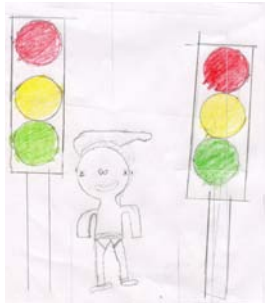


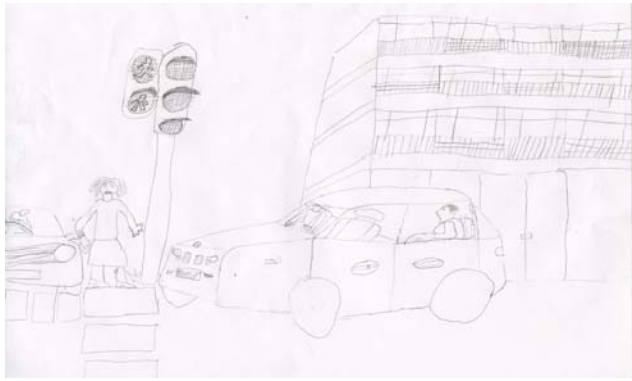


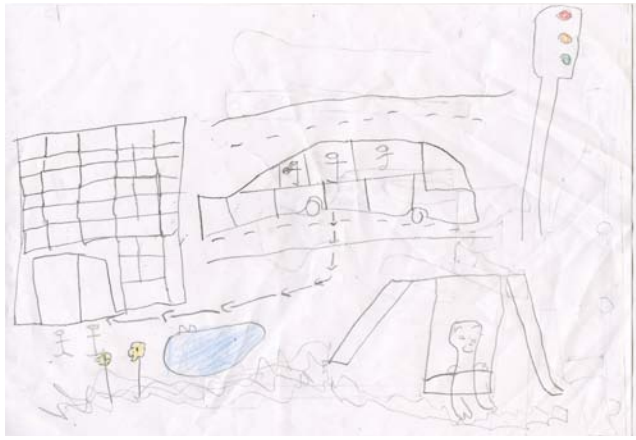


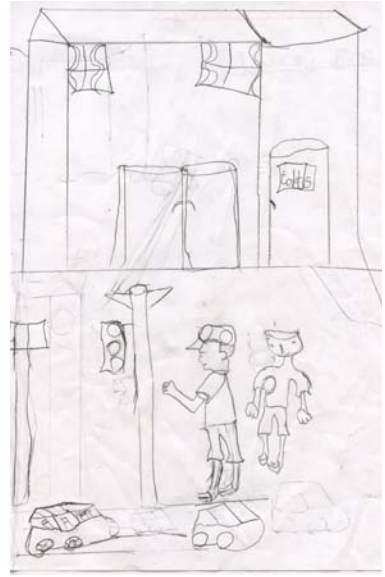


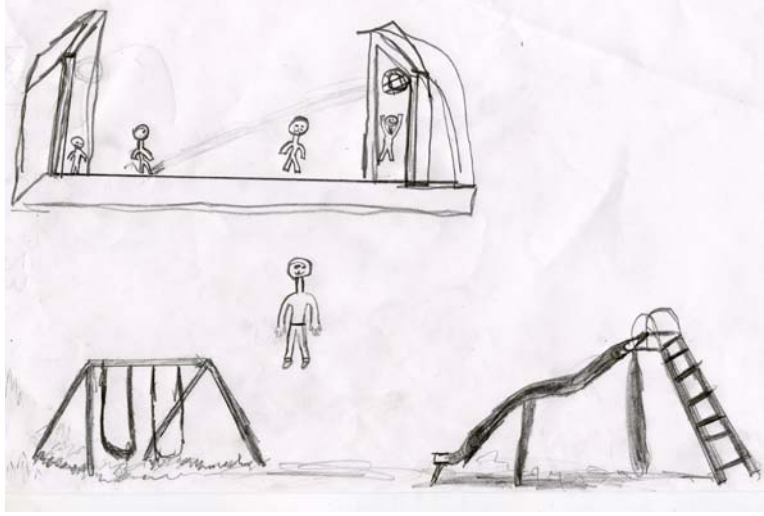


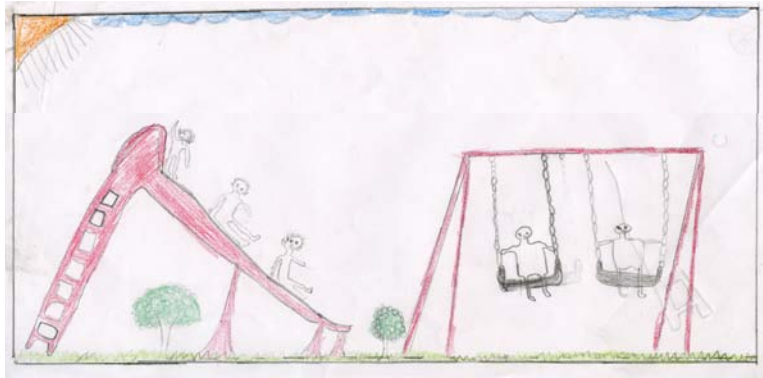


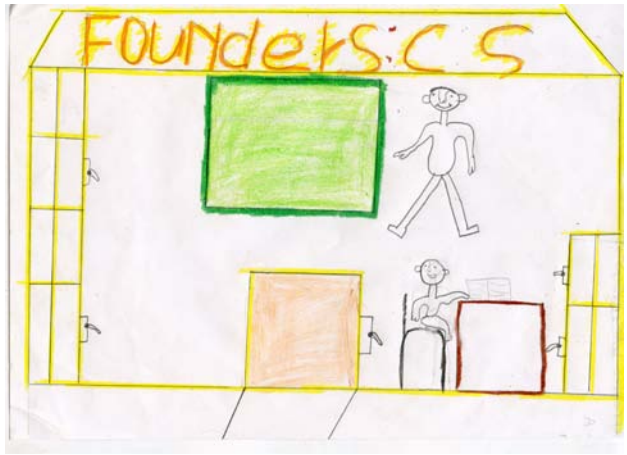


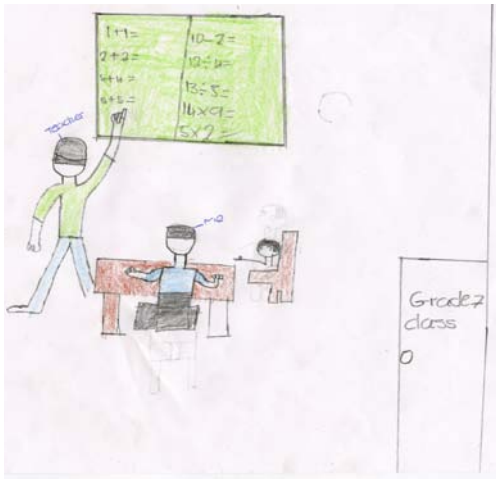


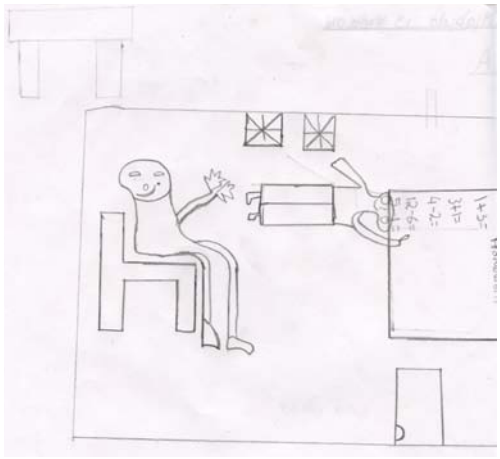


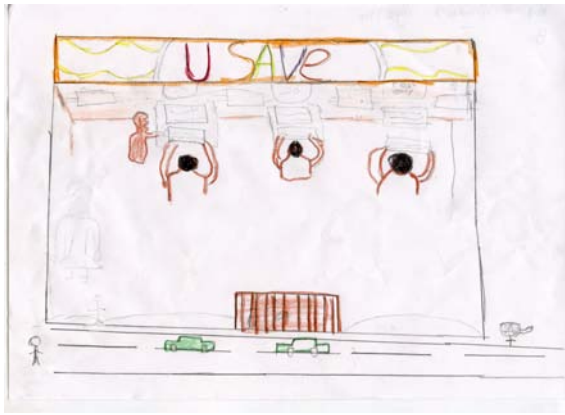


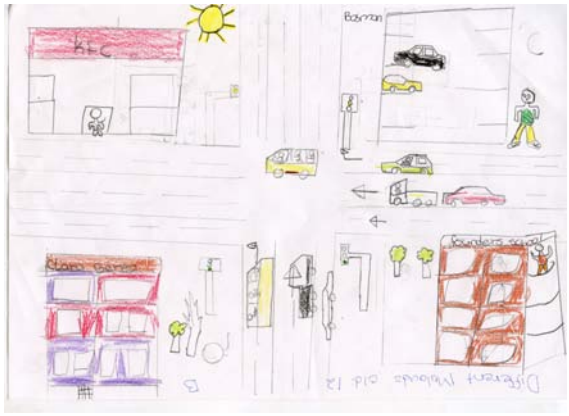


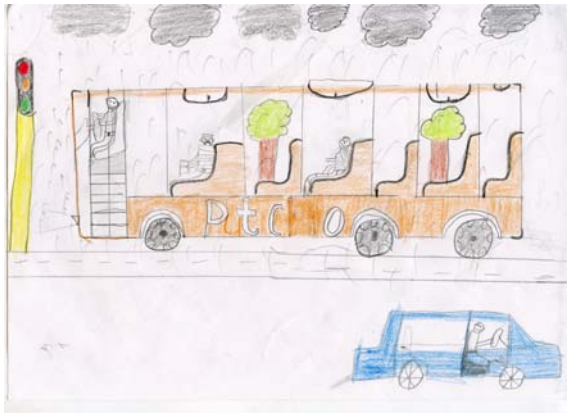


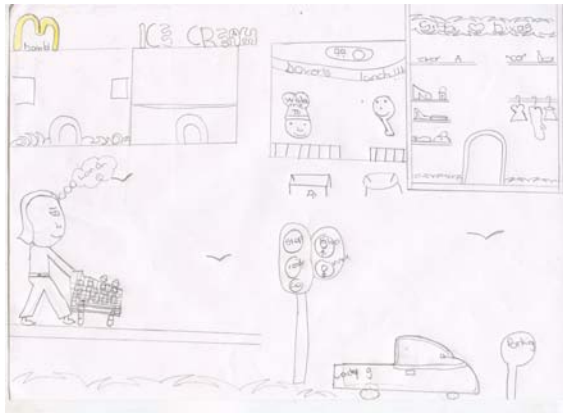


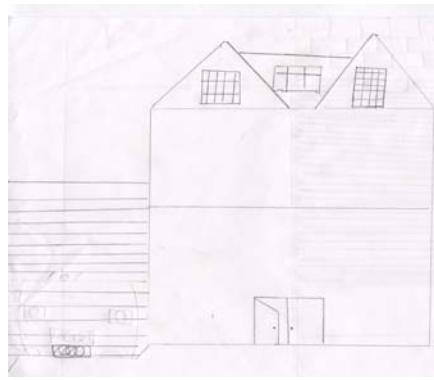


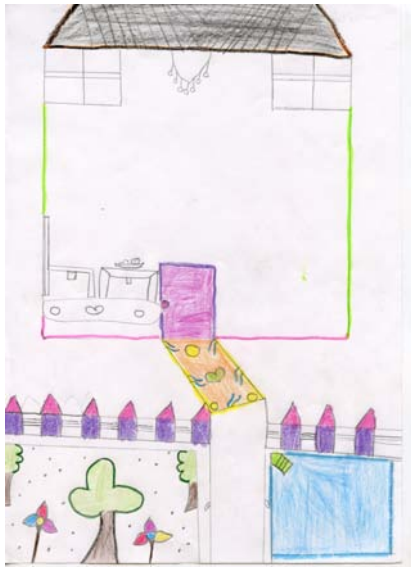


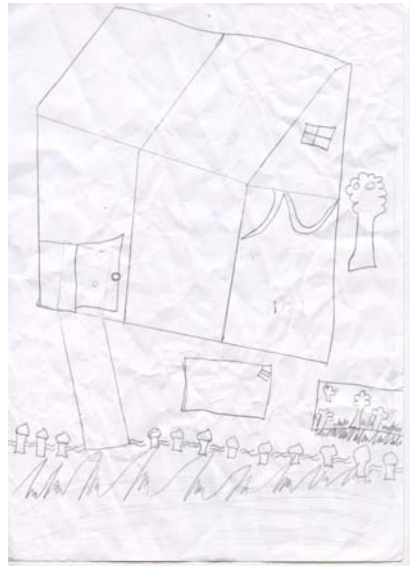


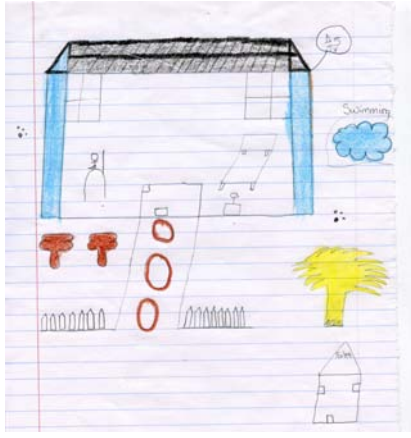


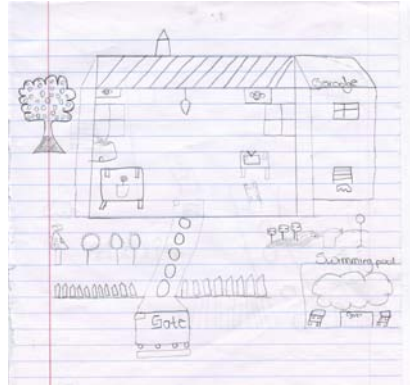


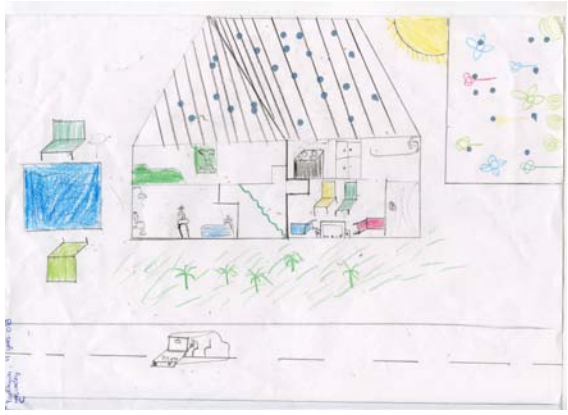












CHAPTER 10
References + Figures

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