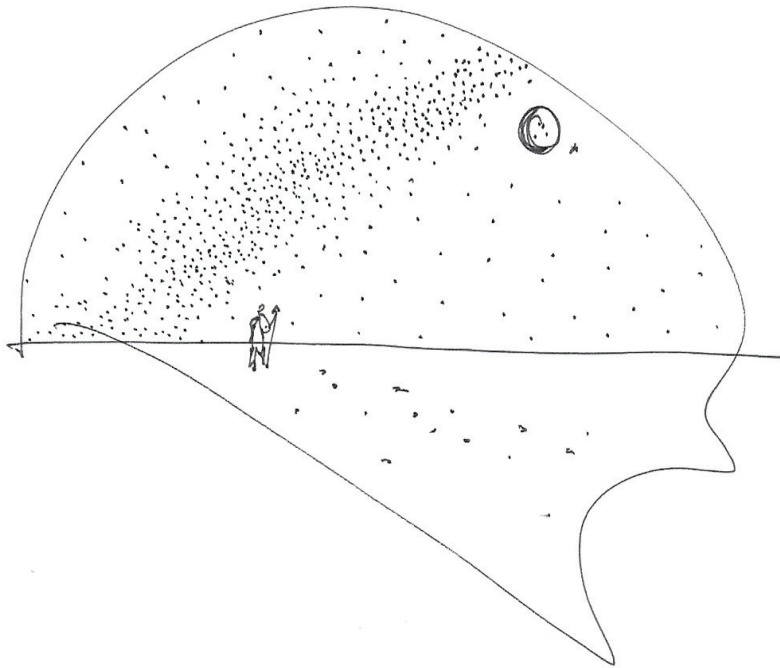


Fig.01. Mankinds relationship with the sky and sands



RESIDUAL TERRITORY

Genius of democratic public space

In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and thesis, I declare that the thesis, which I hereby submit for the degree Master of Architecture (Professional) at the University of Pretoria, is my own work and has not 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, or is currently being submitted for any such degree, diploma or other qualification.

I further declare that the thesis is substantially my own works. 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 list of references.

Ali Khalid Sadiq Sadiq

RESIDUAL TERRITORY

*Architecture in dramatic
landscapes*

Volume 3 of 3.

Number: 06
Street: Thindisa St.
Town: Atteridgeville
City: Pretoria
Province: Gauteng
Country: South Africa
Client: University of Pretoria
Program: Planetarium and Park
Research Field: HSU | HCL
Co-ordinates: 25°46'04.7"S
28°05'06.7"E

Submitted in partial fulfilment of the requirements for the degree
MArch(Prof)

Faculty of Engineering, Built Environment and Information
Technology.

Department of Architecture,
University of Pretoria (UP).

AUTHOR: Ali Khalid Sadiq | u11115107
STUDY LEADER : Mathebe Aphane
STUDIO MASTER : Dr. Arthur Barker
YEAR : 2016



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

ACKNOWLEDGEMENTS

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

A sincere thank you to everyone who helped motivate, encourage and guide me through the course of the year. It has been astonishing to see everyone's assistance to make easy the personal journey of growth that 2016 was for me.

To my parents who have continuously supported me through the journey, watching intently from a distance. Your teachings, words of encouragement and love will resonate in the field that I now Master.

To my siblings, Roua and Hendrik, thank you for always helping me back to my feet and teaching me to concentrate my efforts through moments of doubt.

To my mentor, Mathebe Aphane, your dedication to the scheme was nothing less than inspirational, you have set me off on my journey with conviction that Architecture can contribute.

Finally to Boukunde, and the staff of the Department of Architecture 2011-2016, Thank you for allowing me to discover the answers to my questions, especially Dr. Barker for challenging the way we create Architecture in the South African context.

To Mpho Petlele, Johan Swart. and Johan N. Prinsloo, Your guidance goes beyond the masters year, thank you for always welcoming a conversation.

MANIFESTO

The 'archs'

These two archs - architecture and archaeology - are Janus-headed, not identical twins but very much related. Both have to do with matter, space, time. But while architecture looks to projecting into the future, archaeology searches for the face of mankind in the past. Like Walter Benjamin's angel of history, archaeology is condemned to look into the past; architecture is the angel who builds jetties into the future. And the architect knows that the sands of time will eventually destroy the monument, whose only hope of resurrection will be through the knowledge and the tenacity of the archaeologist.

(Baker, 2002:37)

PREFACE

Building and drawing

The significance of drawing -

In his book *Experiencing Architecture*, Rasmussen (1964) describes the process of drawing as the architect's collection of personal documentation - a visual diary to the insight of the architect's mind. The diagram can then be seen as the language of the architect. (Delaporte, 2016). Not constrained to any dimension or scale, the diagram originates as the core of an idea. Manipulated and refined, the diagram could become anything he chooses: an arbitrary section, a single point perspective or even a detail.

The function of the Building -

The selection of an appropriate programme as described by Barnard Tschumi (2004) in an interview with the *Architectural review*, makes the designer aware of two fundamental assets: firstly, the ability to define the margins of society and secondly identifying the events which contribute to the shaping of current times. To the Department of Architecture at the University of Pretoria, I am fortunate to have been made aware of these assets through the constant interrogation of building programmes. I am grateful to the process which has enabled me to read the landscape in which I exist - my reading of the skies and sands.

October 2016

ABSTRACT

ABSTRACT

Spirit of place

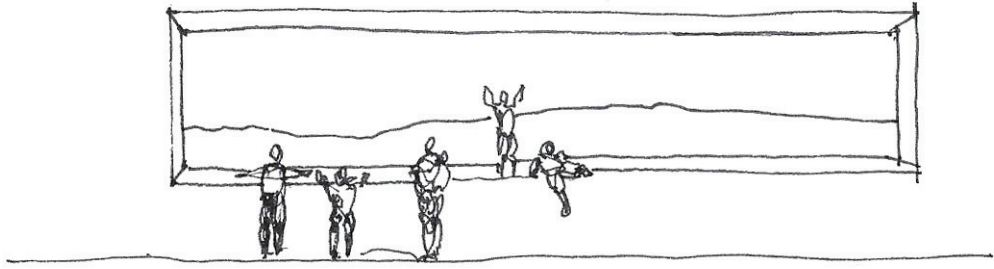
Traditionally, the essence and spirit of place dictated its use. Harmoniously intertwined, physical and mythical attributes were looked to in order to preserve the spirit of place (Genius loci). Today, such a place is the Atteridgeville fresh water reservoirs. Providing an opportune site to **reclaim the spirit of place** for the contemporary resident.

Understanding that the shack typology is not of place but of circumstances - this dissertation searches for an architecture of place in the scene of a democratic South Africa.

This study focuses on the provision of cultural, public spaces, based on an approach that recognises established townships as aspiring suburbs rather than dormitory towns.

CONTENTS

vii	Project Summary		2.6.5 Divulge · 28
ix	Acknowledgements		2.7 Framework · 30
xi	Preface		2.8 Inferences · 32
xii	Manifesto	34	3. Site analysis
xiii	Abstract		3.1 Awareness of place · 39
			3.2 Chronological profile · 40
01	1. Introduction		3.3 Site study · 42
	1.1 Problem statement · 02		3.4 Photo essay · 44
	1.2 General issue · 03		
	1.3 Urban issue · 04		Precedent programme hill 54
	1.4 Dissertation intentions · 05		Precedent programme site 56
	1.5 Research discussion · 06		
	1.6 Research methodology · 07	54	4. Programme
	1.7 Delimitations · 08		4.1 African space · 60
12	Author's notes		4.1.1 The cave game · 61
			4.2 Partitioning · 62
14	2. Context		4.3 Programme · 63
	2.1 Locality · 16		4.4 Patron · 64
	2.2 Natural features · 17		4.4.1 Client · 65
	2.3 Urban condition · 18		4.5 The planetarium · 66
	2.4 Urban vision · 19		4.6 Kgale Hill · 72
	2.5 Oudstad No. 21 · 20		4.6.1 The modern park · 74
	2.6 Oudstad No. 21 · 22		4.6.2 The neighbourhood park · 75
	2.6.1 Dealing with boundaries · 24		4.7 Myth 76
	2.6.2 Creating patterns · 25	80	5. Concept
	2.6.3 3rd nature · 26		5.1.1 Premise · 80
	2.6.4 Fortuity · 27		5.1.2 Concept · 81



	5.1.3 Borderlands · 82		7.1.3 Maintenance · 138
	5.2 Unlocking the site · 84		7.1.4 The planetarium · 140
	5.3 Prospect · 86		7.1.5 Dome Assembly · 142
	5.4 Development · 89		7.1.6 Design Section · 144
	5.5 The diagram · 90		7.2 Water · 146
94	6. Design		7.2.1 Water treatment · 148
	6.0 Climatographic study · 94		7.3 Light · 150
	6.1 The boundary · 96		7.4 The elevation · 152
	6.1.1 Ruin the site · 98		7.4.1 Articulating the facade · 154
	6.1.2 Above ground · 99		7.4.2 Approach · 156
	6.1.3 The tunnel · 100		7.4.3 The Plinth · 158
	6.1.4 Reception · 101		7.4.4 The Park · 160
	6.2 The terrace · 104		7.5 1:20 Exploration · 162
	6.3 The new podium · 106		7.6 Site Plan · 164
	6.4 The master plan · 108		7.6.1 The Restaurant · 166
	6.5 The roof plan · 110		7.6.2 The Light Room · 168
	6.5.1 The restaurant · 112		7.6.3 The Planetarium · 170
	6.5.2 The environment gallery · 114		7.6.4 The Environment Gallery · 171
	6.5.3 Regroup · 116		7.6.5 Floor Plans · 173
	6.5.4 Regroup · 118		7.6.6 Lower Levels · 174
	6.5.5 The urban balcony · 120	176	Outro
	6.5.6 The modern cave · 122	186	List of Figures
124	Interlude	190	List of references
130	07 Technè		
	7.1 The Thebe Medupe Planetarium · 132		
	7.1.1 The dome · 134		
	7.1.2 The shell · 136		

01

INTRODUCTION

The fade of the public sphere in township cores

Volume I identifies the typical architectural response to township conditions as the 'multi-purpose hall'. To challenge this notion and demonstrate that a new approach could inspire successful space for social cohesion, this study investigates a site identified as a borderland to test this hypothesis. The investigation begins with the greater Atteridgeville as a means to develop an appropriate response.

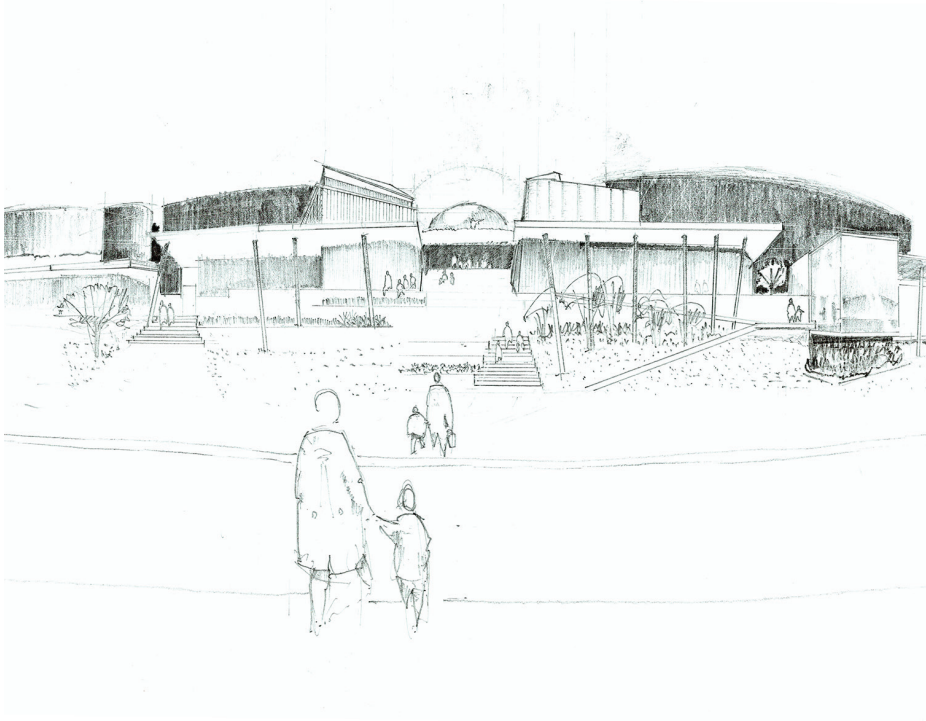


Fig.02. In search of a new typology. Untrue to the intentions of this dissertation, the June design was reconsidered to address the shortcomings of the architectural language.

AGAINST ROMANTICISED POVERTY

Understanding that the shack typology is not of place but of circumstances - the dissertation searches for an Architecture of place in the scene of a democratic South Africa.

1.1 PROBLEM STATEMENT

Negotiating the RDP

The Tshwane Vision 2055 highlights that as a part of the *2012 National Development Plan*, action will be taken to reverse the spatial effects of apartheid (City of Tshwane, 2013:26). However, with the predominant efforts of the *Reconstruction and Development Program* (RDP) aimed at low density housing located on the periphery of the city, the spatial legacy of apartheid is still felt within the monotonous

townships. Post-apartheid South African town planning strategies undermine the importance of diversity of typology and land use. As these mono-functional dormitory towns develop economically, they transform into suburbs, refer to volume I. With no civic amenities or public destinations to cater to the needs of the contemporary citizen, residents are forced to retreat within their private abodes.

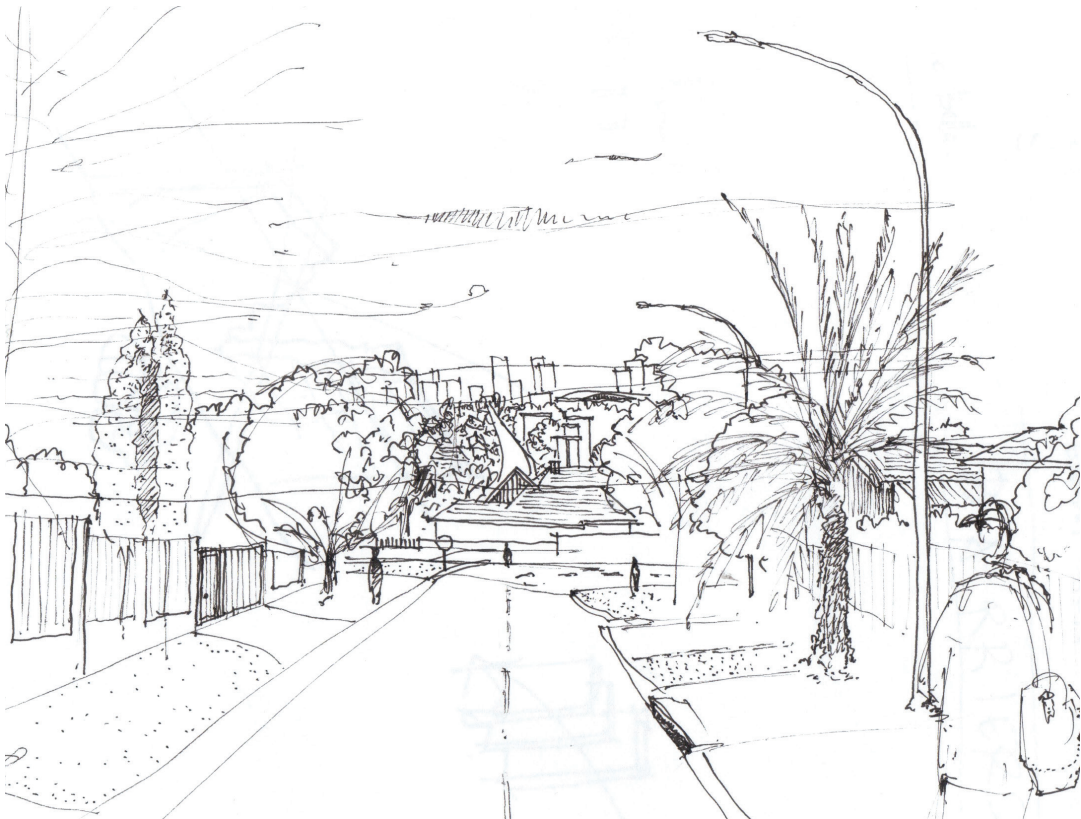


Fig.03. View eastward on Thindisa Street towards Pretoria CBD. The suburban condition.

1.2 GENERAL ISSUE

Incoherent environments

Cities rely on a complex interaction between a series of parts to function coherently. Urban environments provide a diversity of scales and layers to accommodate the activities of the user.

Despite displaying higher densities than their white counterpart suburbs, South African townships remain crippled by the spatial legacy of apartheid. The exclusion of amenities and focus on NE51/9 housing has created a monotonous typology which defines the sleeping town identity of townships surrounding Pretoria and throughout South Africa. As a consequence of the said planning, public space has lost its value within South African townships (Jordaan, 1989: 26).

As shown in Figure 04, a block study in Atteridgeville reveals how the (green) public space is absorbed by the need to develop new homes closer to Pretoria.

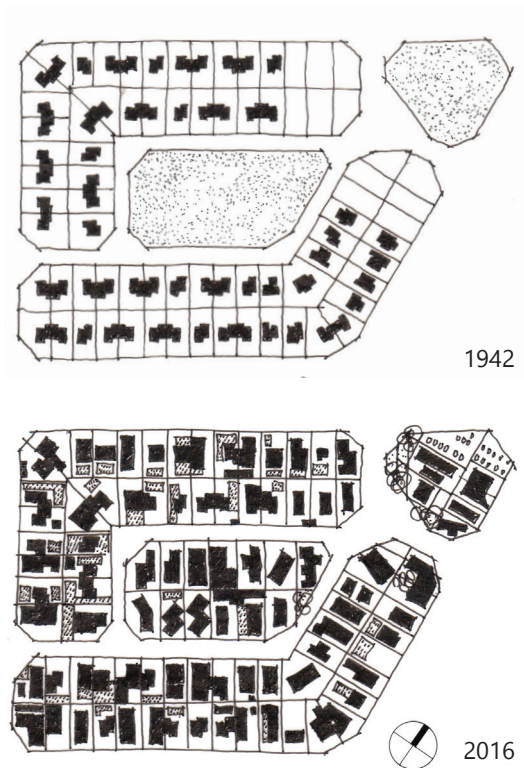


Fig.04. Block Study Nel & Sadiq 2016. Densification and disappearance of open space adapted from Stals (1998;80.)

1.3 URBAN ISSUE

The need for a civic destination

The proposed investigation is derived from the identified lack of civic spaces in townships surrounding Pretoria. With extreme pressure placed on government to meet the housing demand, town planning strategies have placed civic spaces secondary to housing. Originally conceived as an experimental black-labour township, Atteridgeville's current urban fabric resembles that of a suburb, however, the combination of the topography and the adopted Garden City model have resulted in a tranquil setting for the sleeping town. Public space is constantly lost, as neighbourhood parks are being sacrificed to accommodate new housing (see Figure 04).

In a post-colonial era, municipalities have invited the private sector to develop housing. These developments are saturated with small units inspired by the NE51/9 house and provide no supporting open space. This perpetuates the lack of complexity and diversity of architectural typology within the fabric resulting in a region of low density, stand-alone-units with no amenities situated on the periphery of the city. As the need for a civic destination is not met by current RDPs, the apartheid legacy resonates in current day township development. These locations can no longer be treated as disconnected suburbs but rather as developing urban environments with city-like qualities (Dewar & Utyenbogaardt, 1991:18).

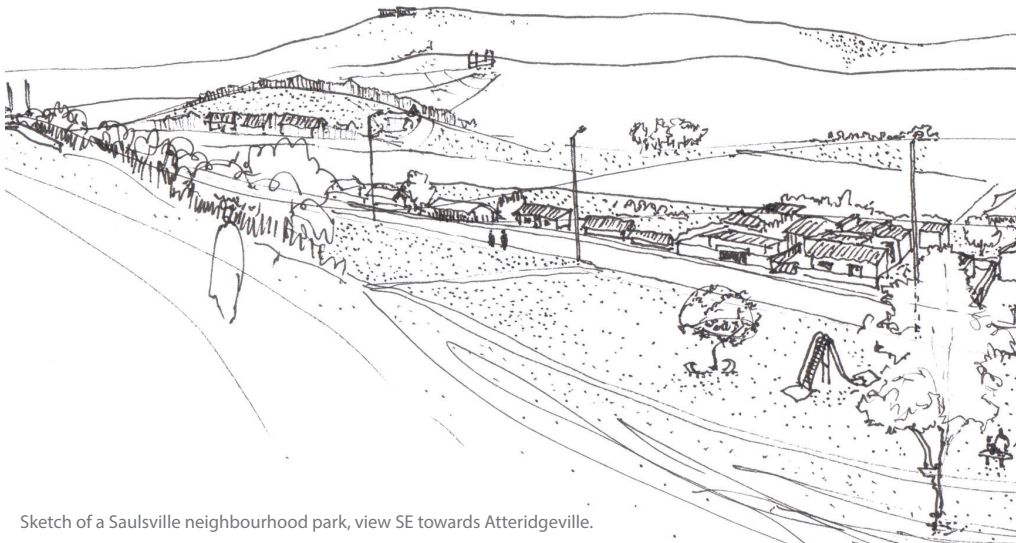


Fig.05. Sketch of a Saulsville neighbourhood park, view SE towards Atteridgeville.

1.4 DISSERTATION INTENTIONS

Against romanticised poverty



Fig.06. An inspiring institute for the contemporary citizen

The aim of this proposal is to address the conditions described and highlight the possibilities of developing townships to become self-sustaining towns. This exploration attempts to create a space of civic pride and dignity manifested through the innate properties of architecture and to promote safety and diversity in the public sphere. Doshi in Ramachandran's documentary (2009) suggests that an architecture that is celebrated by the activities of the everyday develops into

an inspiring institute, one which has the ability to emancipate the contemporary dweller.

This approach comes as a response to the current way of thinking about public buildings in South African townships. Implementing a school of thought where the product of space making is derived from the spirit of place and enhance the social condition rather than exasperate it.

1.5 RESEARCH DISCUSSION

Architecture and the working class

Historically, architecture has played a significant civic role in the urban fabric. Public buildings were commissioned by affluent and prominent figures, yet these buildings accommodated the working class citizen. Public spaces were celebrated while the conditions of the user were considered without being patronising.

A more recent example of this notion is the Madrid Atocha Station. This structure shows great consideration for the everyday activity despite being a transport interchange. In the last few decades, the museum has provided the necessary leisure and escape from the mundane for the working class.

In the new millennium however, the idea of public space has morphed into a conglomerate of commerce - the shopping mall. Today, South African town planners indiscriminately allow the erection of these occidental examples of privately owned public space.

The problem however, is that these private centres attract consortium which compete with the local small-business owner. In addition to the disruption of micro-economies, these occidental models have a profound impact on the value of the true public sphere and the ability of architecture to contribute to the everyday.

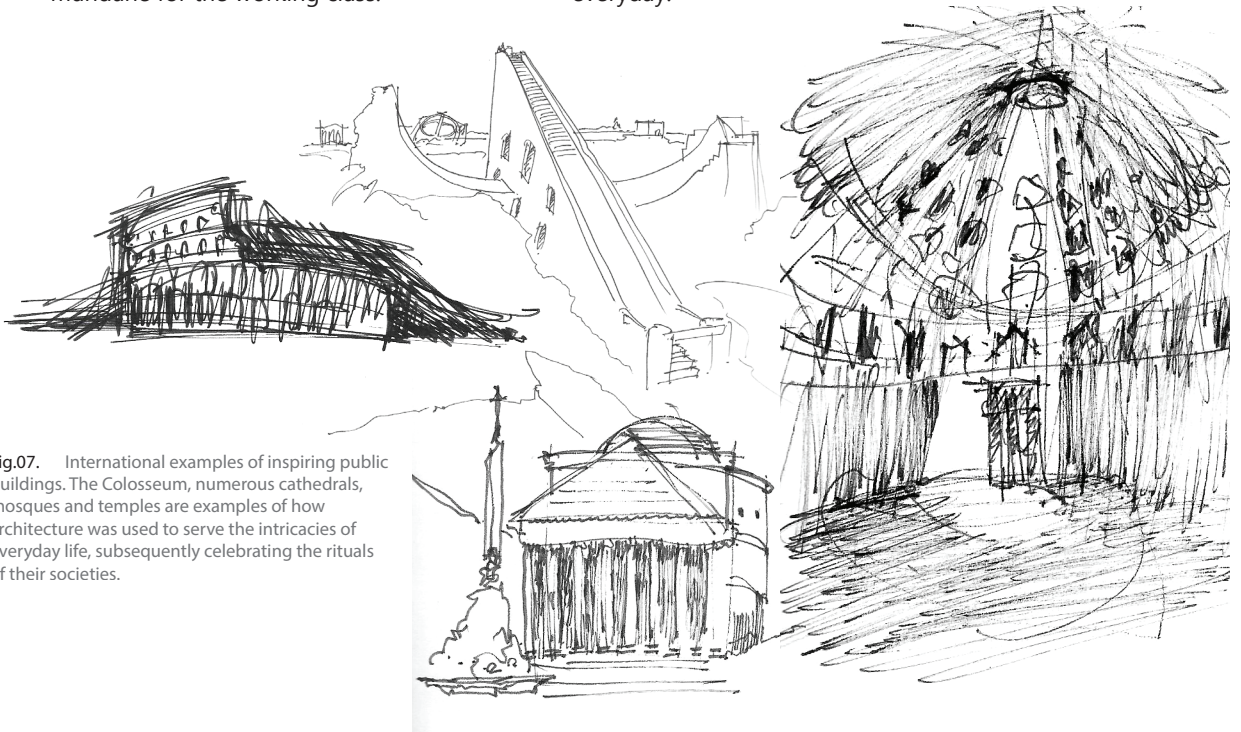


Fig.07. International examples of inspiring public buildings. The Colosseum, numerous cathedrals, mosques and temples are examples of how architecture was used to serve the intricacies of everyday life, subsequently celebrating the rituals of their societies.

1.6 RESEARCH METHODOLOGY

First, second, third place. [Ray Oldenburg]



Fig.08. View towards Pretoria CBD, eastwards on Mabothe Street. Tranquil residential neighbourhoods make up the fabric of Atteridgeville.

The study begins with Part I, investigating the spatial legacy of Atteridgeville. The events prior to democracy are examined to identify the ideological remnants of the spatial legacy of apartheid.

A transect walk through the town aids in confirming or denouncing the prejudices of the studies, providing a thorough investigation leading to the first objective, *the mapping exercise*.

The second objective deduces an urban strategy for approaching Atteridgeville as a totality. This strategy will manifest as an *Urban Vision*, in which the programme and architecture can be situated, and tested against.

The third objective is the development and iteration of the conceptual explorations into contextual form. This process is highlighted in order to make the designer cognisant of the implications of an imported model, asking the question

*“What is a **mall** in Atteridgeville?”.*

This final objective aims to produce an architecture of the *“third place”* - a place on the corner (Oldenburg, 1989). This programme will manifest as a derivative of the needs of a post-colonial South African township.

1.7 DELIMITATIONS

Asymptotic suburbia



Like an island emerging out of suburbia, the site of Atteridgeville's water reservoir dominates the ridge as if placed on a podium. The process of reclaiming this leftover green-space attempts to integrate this peripheral site back into the urban fabric.

This dissertation focuses on the provision of cultural public spaces, based on an approach that recognises established townships as aspiring suburbs rather than dormitory towns.

Supported by the Urban Vision, which identifies twenty-one sites of possible intervention (refer to Volume I), the selected site aims to create an anchor for the social character and living heritage of Atteridgeville.



Fig.09. Oudstad no. 21: The site of the Atteridgeville Water Reservoir is identified as a *Green Island*

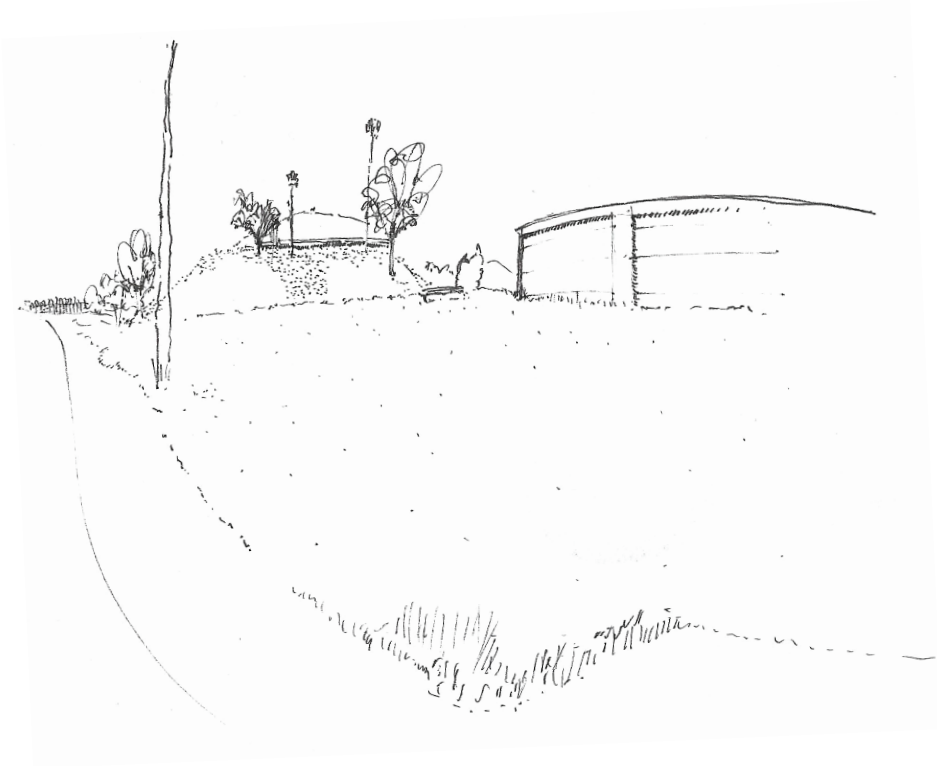


Fig.10. Discovery. First engagement with the water reservoirs. Author, site visit 2016.

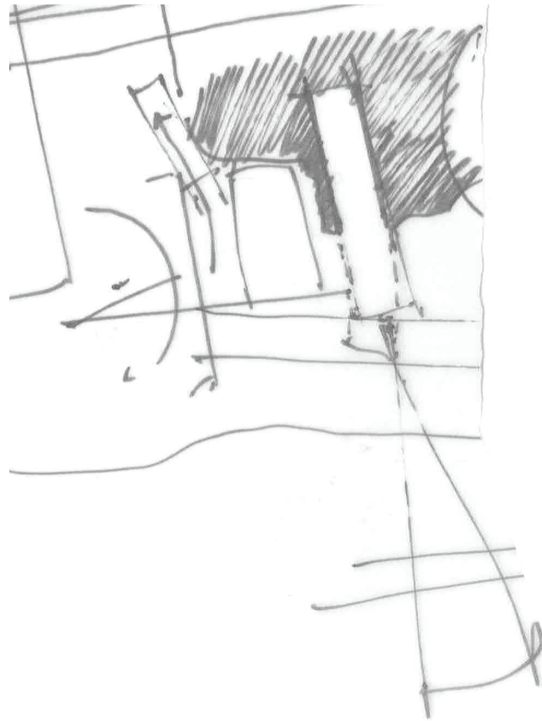


Fig.11. Levels. Attempting to understand the three dimensional in-between space. Author, 2016.

PERMEABILITY OF THE FENCE

Author's notes

Expression in building still holds value in Atteridgeville. Building materials are used to exemplify status and highlight identity, and where possible, they permit connection to the street. Boundary walls are not used as defence mechanisms, but rather function as an ornament. Gates too are decorative, as they remain open throughout the day allowing the garage to form a semi-public living room, while the car is parked on the sidewalk.

These thresholds and the progression through space are demarcated architecturally, and universally understood in Atteridgeville. A natural flow is carved from the public realm to the intimate private space.

INVERSION OF THE SECURITY SUBURB

Author's notes

By responding to these conditions, the intention is to challenge the status quo of modern township developments, the dissertation aims to explore the possibility of reinvigorating the public/social realm.

Creating an enticing public anchor that draws people against the current, i.e. out from the isolation of suburbia and back into the public sphere. This is done to prevent the development of the security suburb model discussed in Volume I.

The provision of civic space of leisure aims to highlight the extraordinary in the mundane and invite daily activity.

Like the security suburb, recent large scale developments have provided exclusive public space centred around commerce. With the exception of window shopping, Atlyn Mall provides no other free of charge service.