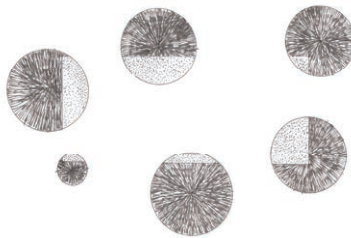


BORDERLAND

Atteridgeville



A study of Atteridgeville

Kathleen Nel
Ali Sadiq

2016

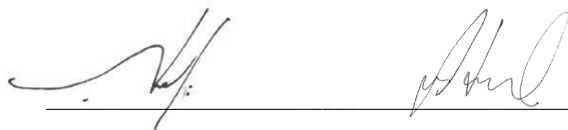
Fig. 01. Borderlands: an area of overlap between two things, a district near the line separating two areas.

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 such 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 list of references.

Kathleen Nel and Ali Sadiq





DECLARATION

Kathleen Nel & Ali Sadiq

Submitted in partial fulfilment of the requirements for
the degree Masters in Architecture (Professional).

Department of Architecture

Faculty of Engineering, Built Environment
and Information Technology.

University of Pretoria, South Africa.

Study leader

Mathebe Ramasele Aphané

Course coordinator

Dr Arthur Barker

Pretoria, South Africa

2016

PROJECT SUMMARY

Borderland

Volume 1 of 3

Site

Atteridgeville
City of Tswane
Gauteng
South Africa

Research Field

Human Settlements and Urbanism
Heritage and Cultural Landscapes

2016



ABSTRACT

The civic survey

Volume I forms the first of three volumes produced during the course for the academic year 2016. This document introduces Atteridgeville, an inconspicuous residential suburb on the western outskirts of Pretoria. Tucked away behind industrial and natural buffers, the township remains inhibited due to the planning strategies of the apartheid regime.

The intention of this volume is to structure a shared vision of the authors for the development of townships in current-day South Africa. This investigation is taken further in the case of the proceeding volumes to demonstrate the normative position of the authors on the essence of democratic civic space.

Presenting the analysis of current conditions of Atteridgeville in the form of a charticle*, this volume arises as the synthesis of the essence of peripheral townships into an urban vision. The intention is to provide an historic overview of the development of the study region, the authors' analysis thereof resulting in a contextual and theoretical approach to township architecture.

Identifying twenty one sites for urban intervention, the vision reconciles brown field sites, derelict and neglected areas, public spaces of unrealised potential and space left over after planning.

The title, *Borderland* is derived from identifying Atteridgeville as a series of complex dichotomies, resembling the nature of townships in democratic South Africa:

Rural | Urban
Township | Suburb
Mundane | Extraordinary

*Charticle: A mix between an 'article' and a 'chart'. A document which relies on a mixed medium of text and illustrations to convey a holistic overview.



ACKNOWLEDGEMENTS

A word of thanks

The authors would like to acknowledge the support and guidance of the Architecture Department at the University of Pretoria. Firstly, Dr. Arthur Barker for the freedom to explore and the encouragement to leave no rock unturned.

Mathebe Aphane for receiving our views and providing a fresh perspective on paper architecture situated in South African locations. Your constant endorsement and invite to share the passion for Atteridgeville is reflected in all three volumes.

The process of research and documentation thereof was conducted under the counsel of Marianne de Klerk. To Marianne, your mentorship goes beyond the dissertation and will always be held with the highest esteem.

Johan Swart, your constant engagement and meticulous inspiration has been imperative throughout the course of 2016. To both Johan Swart and Johan-Nel Prinsloo for constantly welcoming a meeting with open doors. Your diligence, interest and consultation have always been an inspiration.

Nico Botes, your dedication to architecture, the department, studios and students, makes you one of a kind. Your perspective on design is invaluable.

To Helga Roper and Juan Gilfillan for accommodating us during the protests. Your support and kindness is appreciated.

Finally, to Marissa Stals; her dissertation published in 1998 titled *The Search for the Design of a 'Model Township' The Case of Atteridgeville, Pretoria* provided an alluring insight into the thinking that resulted in today's Atteridgeville. Her thorough documentation prevented a magnitude of assumptions.

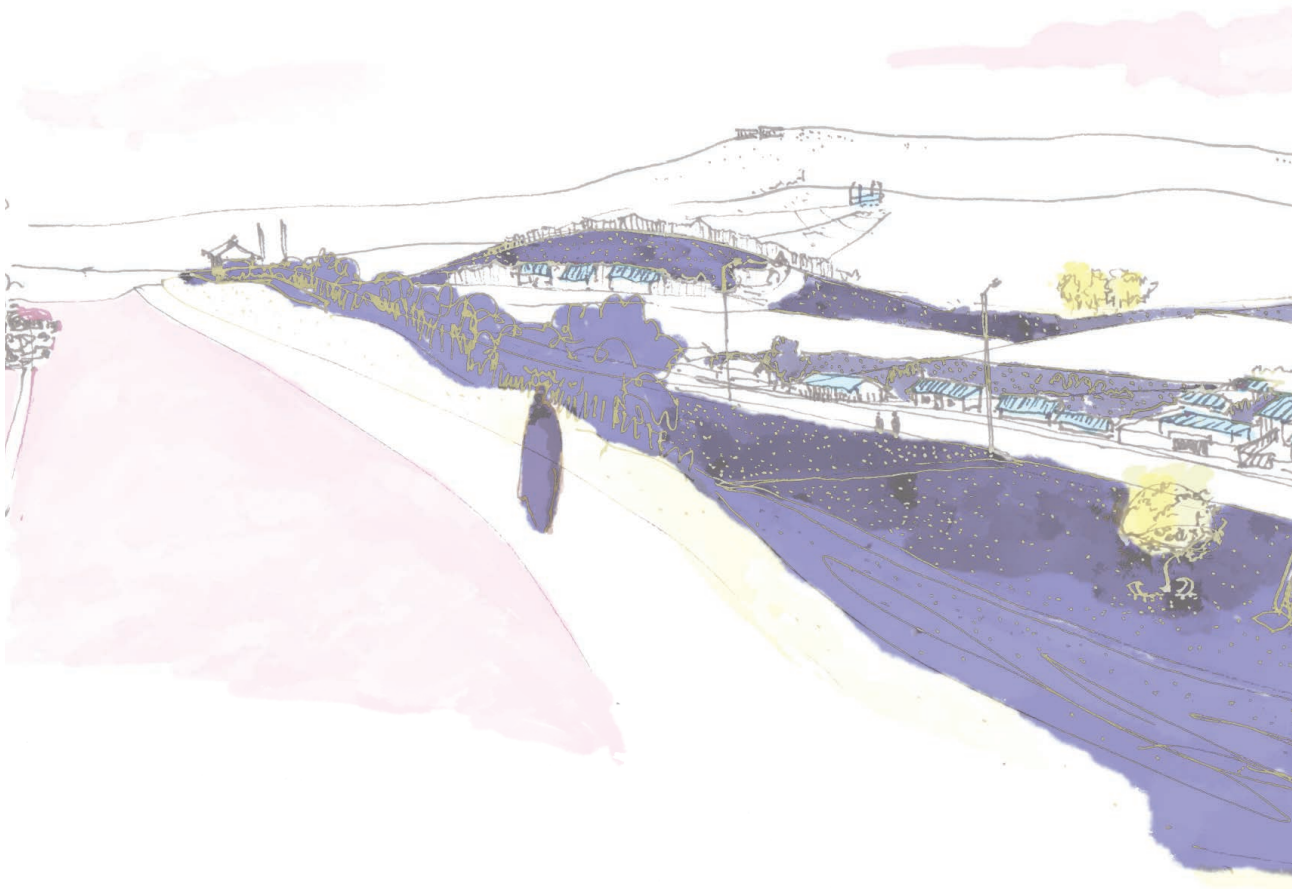


Fig. 02. View over Atteridgeville | looking south-east towards Kwaggasrant

PREFACE

Asymptotic suburbia

Atteridgeville serves as a complex laboratory for the exploration of uneven development in a democratic South Africa. Borderland, a series of dichotomies, is a representation of the questionable state of development in our townships, suburbs and cities.

The following study explores Atteridgeville through a series of changes: an experimental township taking an **asymptotic journey towards suburbia**. This investigation led to an approach which questions and contests conventional schemes for township development.

For example, the Tshwane Vision of 2055: the vision identifies the nature of dormitory townships as inefficient cities, however proposes no solutions to remedy these issues. Instead, it focusses on attracting tourists to townships and township residents to cities. Social anchors and quality of life of township residents are not paramount to the discussion (City of Tshwane 2013).

At an urban level, the interest lies within *urban greenspace* - “outdoor spaces that offer recreational social, cultural and environmental benefits to city dwellers” (Dee 2001:12). These spaces are regularly neglected in large redevelopment schemes despite their critical importance for the well-being of inhabitants.

The intention of this document is to evaluate the underlying structure of Atteridgeville and respond to various changes. The proposed vision considers an **incremental approach** in response to the existing network of urban greenspaces so as to strengthen them and build on their vitality.

The goal is to recognise Atteridgeville as a **self-sustaining entity** such that the community has all aspects of live, work and play in their own back yards. The individual projects to follow will serve as examples of how architecture can be utilised for this purpose.

CONTENTS

v	Project summary
vii	Abstract
ix	Acknowledgements
xi	Preface
01	1. History
	<i>Introduction 02</i>
	<i>History 03</i>
	<i>Locality 05</i>
	<i>Events of significance 07</i>
	<i>Garden City 09</i>
	<i>Planning 10</i>
	<i>Divide 11</i>
	<i>Housing 12</i>
	<i>People and place 13</i>
	<i>Growth 14</i>
	<i>Atteridgeville today 17</i>
	<i>Summary 21</i>
25	2. Civic Survey
	<i>Transport 27</i>
	<i>Ambulation 28</i>
	<i>Education 29</i>
	<i>Municipal 30</i>
	<i>Recreation 31</i>
	<i>Historical and cultural interest 32</i>
	<i>Urban green space 33</i>
	<i>Conclusion 34</i>
35	3. Photographic essay

53	4. Character
	<i>Character 55</i>
	<i>Issues 56</i>
	<i>The man and the street 57</i>
	<i>Layering the streets 58</i>
63	5. Theory
	<i>Themes 65</i>
	<i>Leon Battista Alberti 66</i>
	<i>Hannah Arendt 67</i>
	<i>Patrick Geddes 68</i>
	<i>The Suburb 69</i>
	<i>Goal 70</i>
	<i>Ray Oldenburg 71</i>
	<i>Psychological city walls 72</i>
73	6. Vision
	<i>Summary 75</i>
	<i>Connect 77</i>
	<i>Interface 79</i>
	<i>Activity 81</i>
	<i>Case studies 84</i>
106	7. Conclusion
107	List of Figures
111	List of References



1. HISTORY

Understanding borderlands

INTRODUCTION

Premise

The history of South African labour towns has been one of turmoil, and under-developed semi-urban locations created for non-white residents to orbit urban cores. In a democratic South Africa, dormitory townships continually struggle to rid themselves of the spatial legacy of apartheid. **Issues of dependency** and lack of cohesion in urban development has fuelled an organic yet unsupported growth.

Interventions in such locations, although few, are often out of scale and perpetuate the problem of dependency. **Imported models** that invite foreign investment, promise job creation and job opportunities often disable the local business owner and remove liquidity from the micro-economy. These models take more than they give and rarely focus on skills development post employment.

The **challenge** is identified as **changing the perception** people have of townships in a democratic South Africa. Townships carry a stigma of an undesirable location that cannot be 'fixed.' Currently these developing urban environments are becoming vehicle-centred suburbs with **disconnected amenities**. This notion is contested and alternative solutions are considered to capitalise on the social diversity and healthy population densities of townships. Incremental urban design strategies are utilised to encourage diversity of land use, create civic anchors, entice social cohesion and provide places of recreational retreat.

Fig. 03. Atteridgeville photomontage (opposite page).

HISTORY

Overview

“Cities are amalgams of buildings and people. They are inhabited settings from which daily rituals - the mundane and the extraordinary, the random and the staged - derive their validity. In the urban artefact and its mutations are condensed continuities of time and place. The city is the ultimate memorial of our struggles and glories: it is where the pride of the past is set on display.”

Kostoff 1991:16

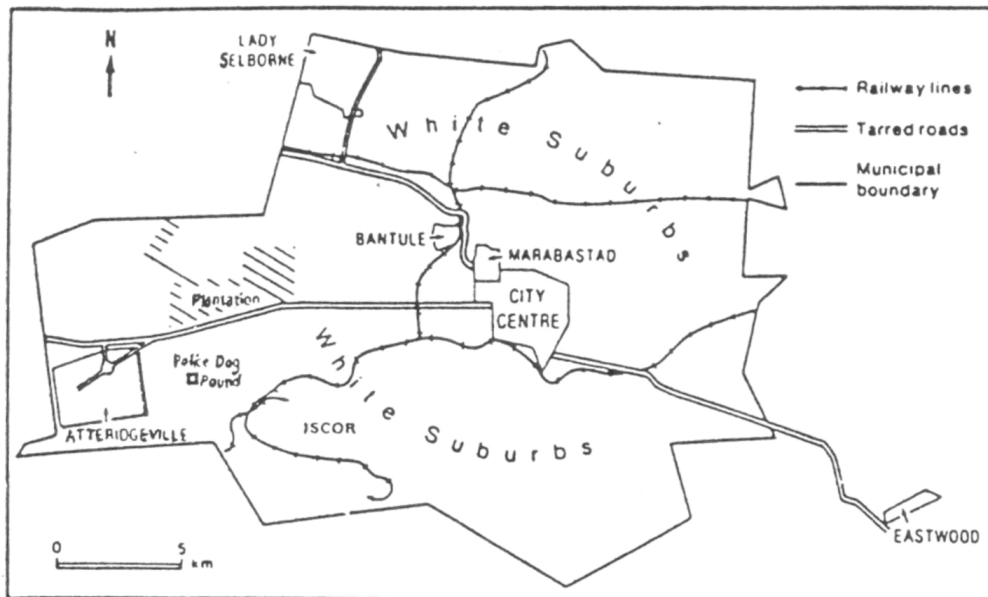


Fig. 04. Atteridgeville municipal location, the major Black freehold townships and the primary transport routes in Pretoria, 1947 (Dauskardt, 1989:111).

“The role of the townships was crucial in the formation of the Apartheid City. They were the embodiment of a complex process characterised as functional inclusion, spatial separation and political exclusion... Together they reflect in a peculiarly explicit manner the singularity of the Age of Apartheid.” (Chipkin 1998:167)

The 1930s saw a massive growth in the black population of Pretoria, increasing further in the 1940s due to the demand for industrial workers. Due to legislation, the new urbanites could only settle on peripheral land to the city as housing was provided for those ‘legitimately’ in Pretoria (Dauskardt 1989:109). Due to the growth of Black freehold townships, there was an increased urgency to create a municipal township for these ‘illegal’ residents away from the white areas (Junod 1955:79).

Atteridgeville, the first municipally constructed, controlled, and administered location for black labourers in Pretoria, was created at the cost of dislocating established communities from freehold land into rented council housing (Stals 1998:44). Established in 1939, the first residents were removed to Atteridgeville from Marabastad by the local authority in 1940 (Junod 1955:79). This was done according to the *Native Urban Areas Act* (Act No. 21 of 1923) and *The Slums Act* (Act No. 76 of 1979) to rid the White areas of ‘unwanted’ black urbanites.

Atteridgeville’s initial planning was based on imported colonial models, in the form of the Garden City (see page 22). Although Atteridgeville was established before many of the acts enforced by the apartheid Government, the various laws promulgated to enforce their ideology disrupted the positive aspects of the original Garden City planning.

Stals (1998:8) identifies that the inhabitants of Atteridgeville had “adapted to this enforced way of life in a seemingly less agitated manner than the inhabitants of several similar townships had.” Her hypothesis was that the ‘uniqueness’ that characterises Atteridgeville with regards to urban qualities may have had an influence on the “way of life” of the inhabitants.

The following study begins with an investigation into the spatial history of Atteridgeville and the *series of changes* required to understand the background of Atteridgeville and to develop a thorough understanding its the context, historically and spatially.

LOCALITY



South Africa



Gauteng



Tshwane



Pretoria



Atteridgeville

Established in 1939, Atteridgeville was the first municipal-built township in Pretoria. The five Black freehold settlements - Schoolplaats (1875), Marabastad (1888), Lady Selborne (1905), Eastwood (1905) and Bantule (1912) were consolidated and their inhabitants relocated within the Pretoria City Council (to be

referred to as PCC) jurisdiction to a location outside the *white* city. The selected site is situated behind natural, industrial and military buffers at a distance of 14km west of Church square. Today, Atteridgeville is Pretoria's closest township.

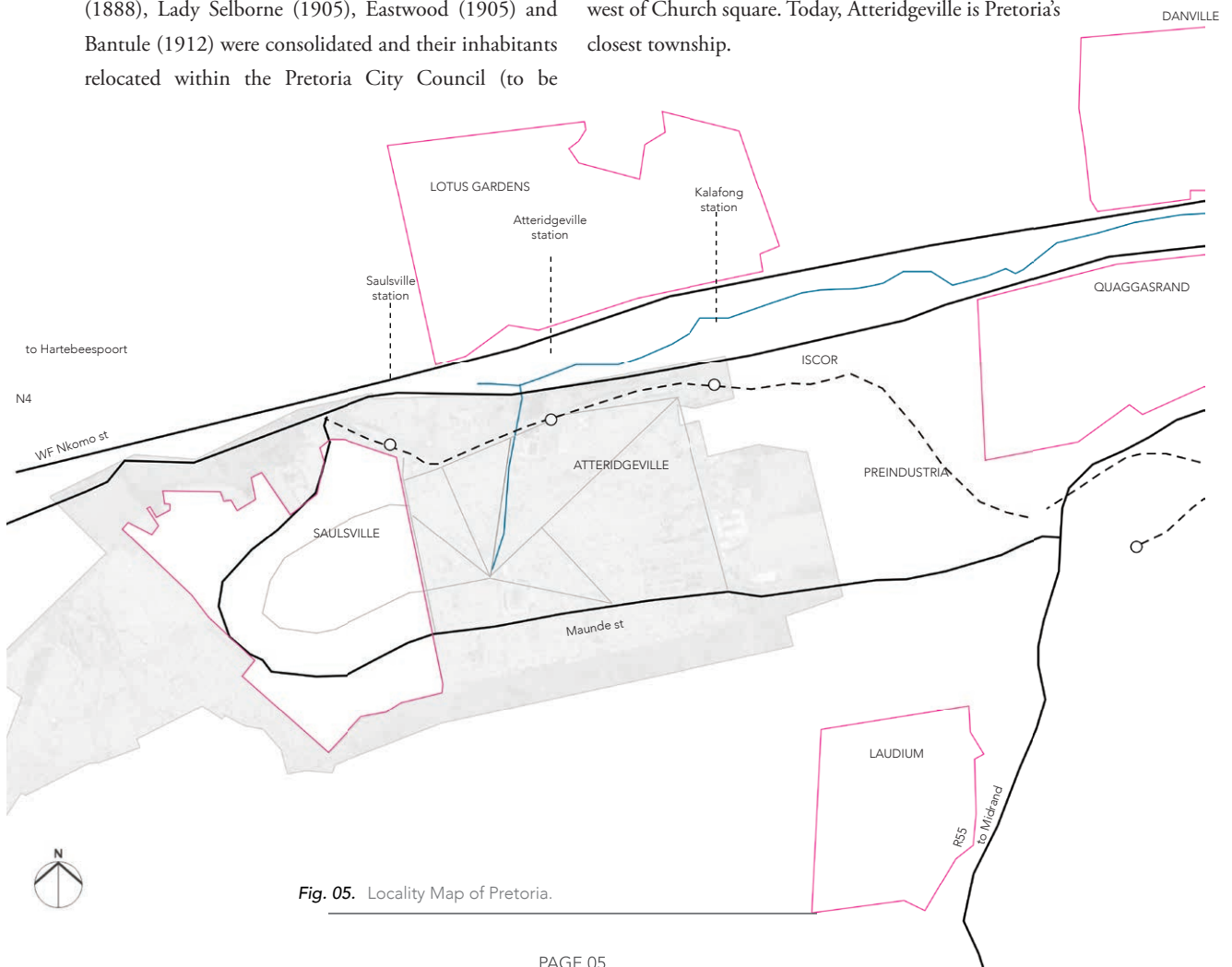
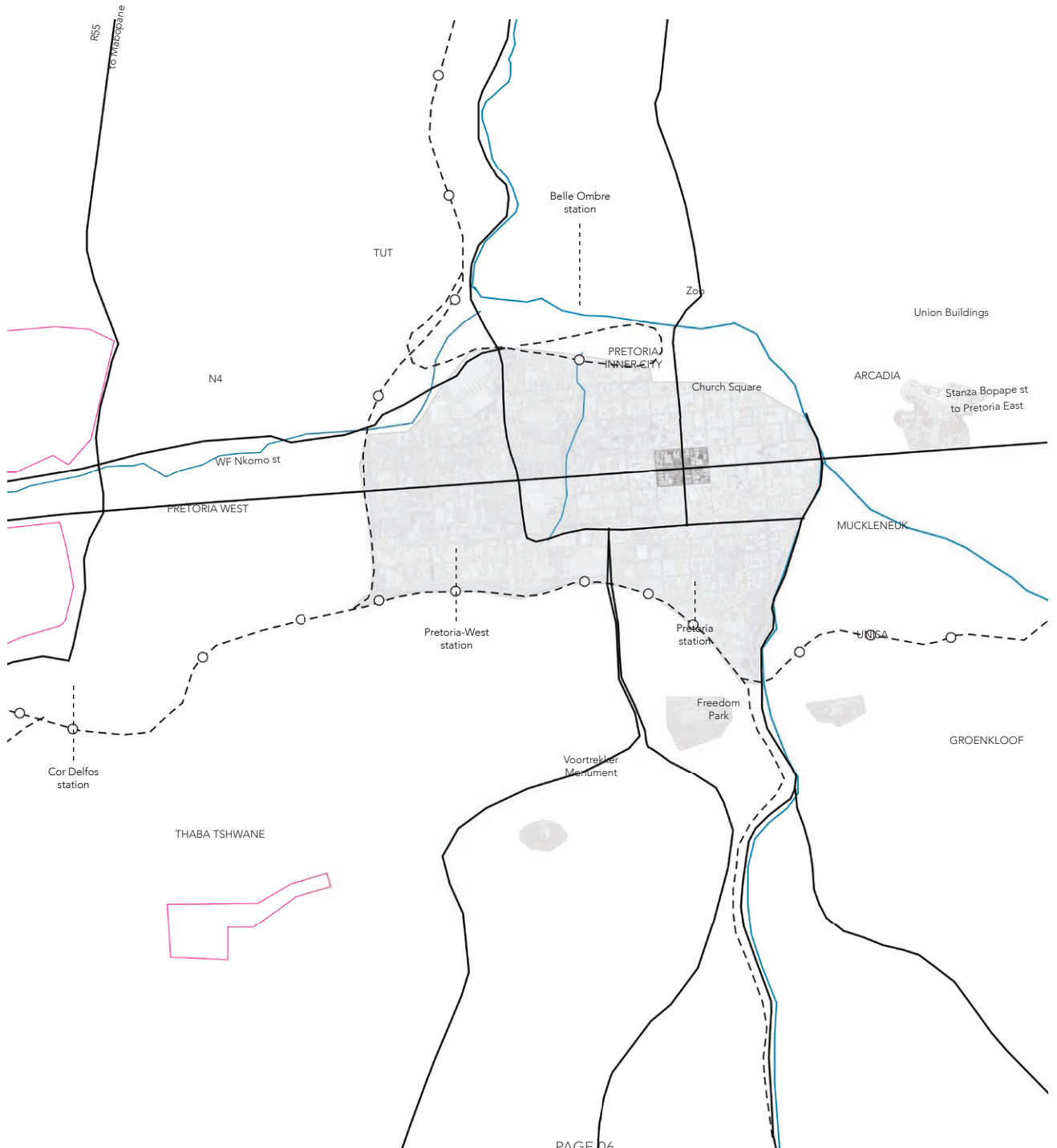
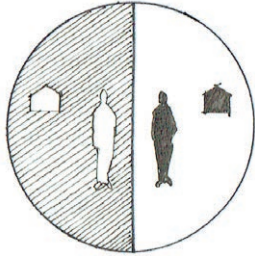


Fig. 05. Locality Map of Pretoria.





PRE 1950



1852

Pretoria established

1923

Natives Urban Act (Act No. 21 of 1923)

1928

ISCOR established

1934

Slum Act
ISCOR starts production

1939

Atteridgeville established
Waterkloof Ridge established

1940

First 50 families moved to Atteridgeville

1943

Public Library moves from Marabastad to
three-roomed house in Atteridgeville

1946

Soup Kitchen established

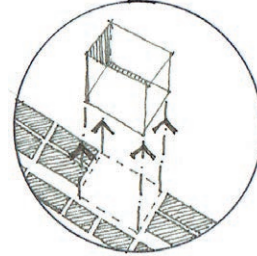
1947

PUTCO boycott 50% fare increase

1948

National Party takes seat in government

POST 1950



1950

Group Areas Act (Act No. 41 of 1950)
Population Registration Act (Act No. 30 of 1950)

1951

14 km bicycle route
Atteridgeville to Pretoria CBD

1953

Separate amenities act
391 ha. extension - Saulsville established

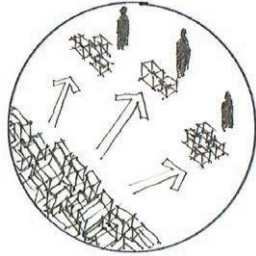
1956

338 NE51/6 three-roomed houses were for sale

1958

Lady Selbourne declared as a White area
Railway line begins to serve Atteridgeville
(previously economically unsuitable)

PRE 1994



1960

Laudium established (Indian township south of Atteridgeville).

1976

Soweto uprising

1977

Academic boycott of South Africa
Pretoria township school uprising

1979

30 year leasehold becomes 99 year leasehold
(signs of permanence)

1983

Atteridgeville receives municipal status

1986

Ga-Rankuwa established (Tswana homeland)
Civil unrest present until 1988

POST 1994



1994

ANC takes seat in government

1996

Approx. 200 000 residents in Atteridgeville

2008

Xenophobic attacks in South Africa

2011

Population = 169 633
(Atteridgeville + Saulsville)

2016 -

The future of Atteridgeville?

Fig. 06. Events that shaped South African townships from 1852 to 2016.

GARDEN CITY

Wait, but why?

The British Garden City theories developed in Europe had an enormous influence on the city planners of South Africa. These theories were seen as comprehensive redevelopment strategies for neighbourhoods in post-war periods. Suburbs were laid out to create neighbourhood units with supporting civic and green spaces, industry and agriculture. Due to the rising demand for housing, this seemed to be an appropriate model for township development.

Ebenzer Howard (1898) recognised the negativity of overcrowding in cities and developed a scheme to accommodate the working class on a concept that combined town and country. This idealist approach was based on a very rigid plan which allowed for

criticism and easy esconcement. The Garden City movement influenced Patrick Geddes and his planning for Tel Aviv, Israel in the 1920s. Geddes' approach recognised a need to acknowledge the individuality of inhabitants and social life, developing a sensitive approach of intervention known as '**conservative surgery**' (See page 68).

Finally, the Garden City model was first implemented in South Africa in Pinelands, Cape Town in order to combat the Spanish flu epidemic of 1918. This model was repeated due to the rising demand for housing. The problem however, was that the model could be manipulated easily to enforce control over the inhabitants, as was seen in Atteridgeville.

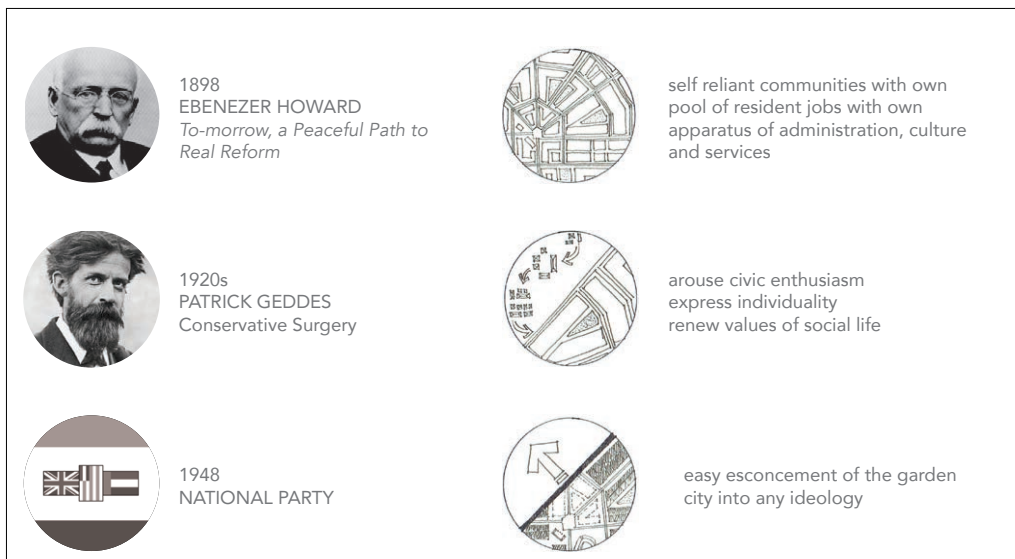


Fig. 07. Summary of town-planning principles.

PLANNING

Zone and remove

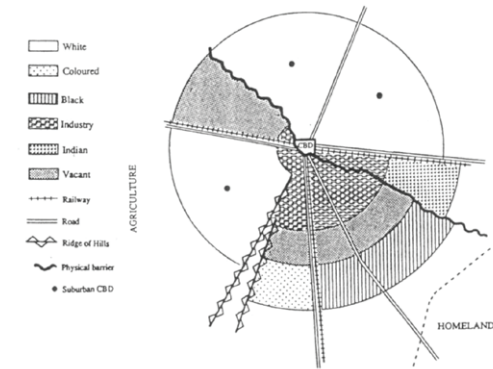


Fig. 08. Crude Urban Zoning, the Apartheid City way (Turok, 1993:4)

In her chapter *The Politics of Spatial Apartheid*, Stals (1998:12-20) describes the planning strategies that governed the development of Atteridgeville. Separated by natural and industrial buffer zones, townships were placed beyond the last White frontier. The Black settlement was to be placed beyond the police canine training facility and ISCOR, which were situated at the western most point of Pretoria.

The figure-ground (left) study indicates the original layout of a neighbourhood along Seeiso street. The development shows the adaptation of the original fabric. In order to accommodate new densities post 1994 the Reconstruction and Development Plan (South Africa 1994) proposed that neighbourhood green spaces were sacrificed to erect new homes. It is also noteworthy that a high density housing model does not exist in Atteridgeville. The placement of houses on plots is uneconomical and can still be seen in new developments in 2016.



Fig. 09. Comparison of Marabastad and Atteridgeville Noli maps.

Compared to Marabastad, Atteridgeville's densities were less than half per house hold. Notice the deterioration of the residential fabric in Marabastad post 1939, as can be seen in Fig. 09.

DIVIDE

A dormitory town

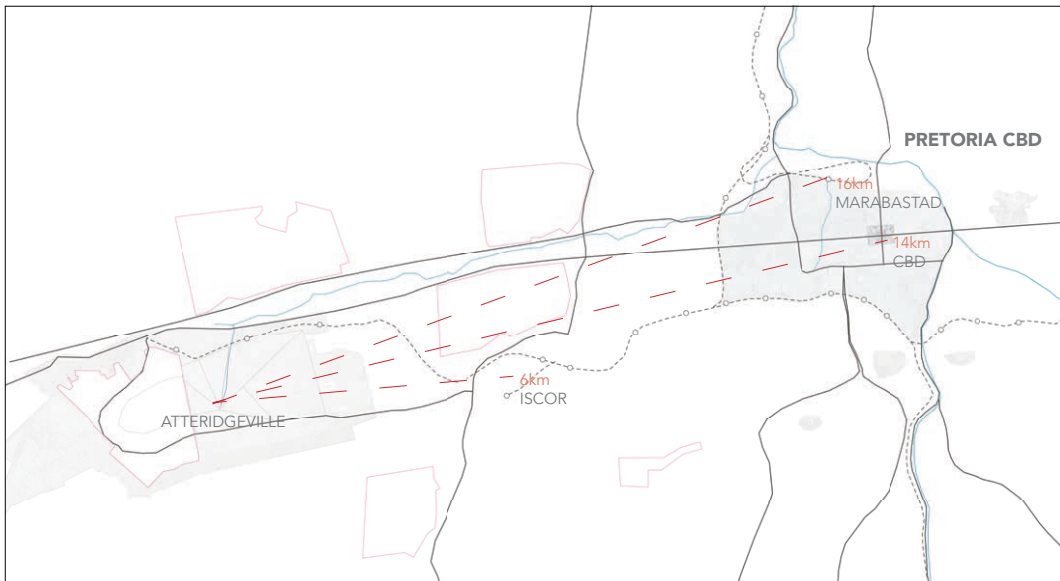


Fig. 10. Location plan indicating traveling distances from Atteridgeville to work and commercial opportunities.

Atteridgeville suffers an unfortunate duality—the identity and qualities of a township and suburb. Despite the holistic approach of the Garden City model, the removal of amenities, recreation and commercial facilities created a purely residential precinct—typical of townships in South Africa. Today, Atteridgeville’s positive growth and structure exacerbate this condition, hence the identification

of Atteridgeville as a suburb. The dependence on the Pretoria’s CBD creates a massive energy efflux aggravating the dormitory nature of this town. The existing urban structure which had made provision for amenities, provides an ideal opportunity to take a Geddes approach of *conservative surgery* to reclaim and revive what has been lost (see page 68).



Fig. 11. What the Garden City model intends vs. the implementation by the apartheid city planning model.

HOUSING

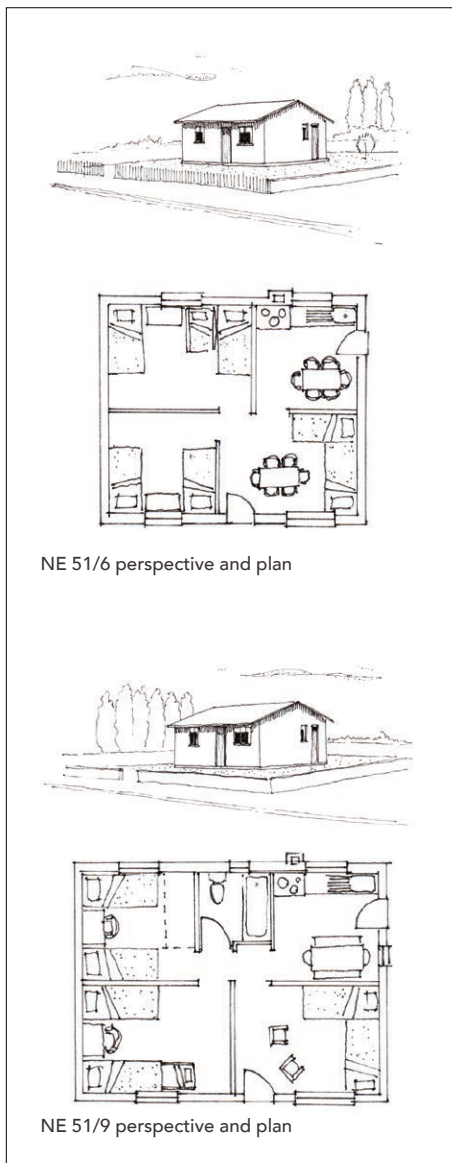
Phases

1939-1952

The National Building Research (NBR) under Paul Connell, was responsible for the provision of housing for the different needs and conditions of the newly urbanised Black population. A total of nine housing typologies were explored in order to support the requirements of the relocated families. These ranged from free standing homes to duets. They were however devoid of interior doors, ceilings and services. Until democracy in 1994, government ownership was retained of all homes in Atteridgeville (Stals 1996.17).

1950-1960

Due to the Great Depression post WWII, funding cutbacks by the PCC forced NBRI to find a sub-economical solution to the housing crisis. The outcome was Douglas Calderwood's NE51/6. The brief called for a cheaper house to construct but a large enough house for the rent to be higher. This house featured extensively in the later developmental phases of Atteridgeville and can still be found today in its original form. These free standing units could sleep eight persons, which corresponded to population density of 7.04 in Atteridgeville in 1949. The NE51/9, became the successor to the NE51/6 and featured an internal water closet and broom cupboard (Stals,1996.18).



For a thorough analysis of the housing typologies and implementation scheme, refer to Stals (1998:51-59).

Figure 09 illustrates this information graphically.

Fig. 12. Comparison of NE51/6 and 51/9

PEOPLE AND PLACE

Surge and loss

Atteridgeville's radial street planning and urban layout are intrinsic to the context. Situated in a valley on the western portions of the Magaliesburg mountain range, the radial layout meanders through the Daspoort and Timeball hilltops creating a series of serene neighbourhoods. The original planning concentrated commercial and administrative cores around traffic circles with high streets connecting these cores diagonally to the edges. From these high streets a series of neighbourhood parks ordered the layout of the surrounding houses and churches. Legibility and hierarchy are achieved with engineering emphasis placed on road networks. High streets measure a width of 25 meters while the neighbourhood streets do not exceed 7 meters (see sectional studies from page 58).

Prior to 1939, non-White South Africans were permitted to own land on freehold locations. After establishing Atteridgeville, the government deemed it illegal for residents to purchase land. Instead, property could be leased for a period of 30 years from the local council. There was an amendment to this law in 1979 which extended the period to 99 years, in Atteridgeville. This immediately gave Atteridgeville a sense of permanence, enticing the younger generations to obtain work in order to preserve their family homes. In 1994, a final amendment was made to permit residents to obtain full-title of their homes. Today, property ownership is seen as an investment in the original Atteridgeville.

Forced removals in surrounding freehold townships and backyard-living quickly increased densities in the model township beyond that which was planned for. Unfortunately, there was no experimentation with medium/high density living units in Atteridgeville, instead, green spaces which were used to anchor neighbourhoods were sacrificed to cater for the desperately needed living units.

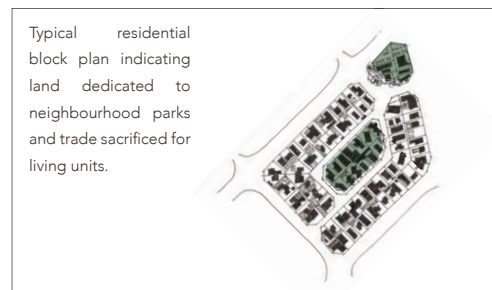


Fig. 13. Typical residential block in Atteridgeville.

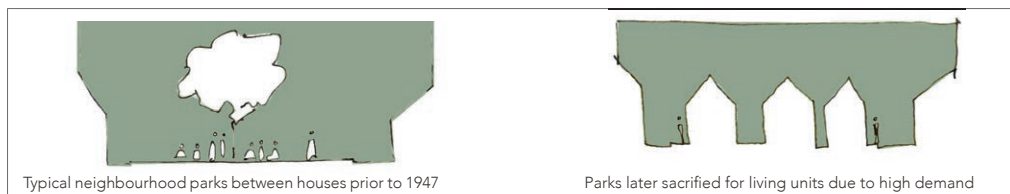


Fig. 14. Typical section through neighbourhood in Atteridgeville pre and post 1947.

GROWTH

Density and phasing

Due to the pre-war establishment of Atteridgeville, provision had not been made for future financial difficulties and the initial scheme was more optimistic than feasible. This chapter offers an overview of the development stages in Atteridgeville from its founding in 1939 to the 1980s, and again in 1998.

406ha was allocated for Atteridgeville and 5800 plots were laid out. This scheme included space for public amenities including schools, churches, recreational amenities and neighbourhood parks. In 1953 this same area underwent a re-layout which provided 6278 plots. The council had foreseen further development of an additional economic housing scheme in the north-western area of the township.

The rectangular residential plots were 12.195 x 24.39m - a total area of 297m². The intention was that owners should build sub-economic houses themselves which were to be similar to the ones provided by council. If a bigger stand was required, two of these plots could be consolidated. Due to financial problems, this scheme was only realised in 1952. The National Building Research Institution (NBRI) had only started official research regarding the planning of black townships after 1947. Standards and formulas for 'white' town-planning had been adapted for Atteridgeville. Every 2.4ha was allocated for 1000 inhabitants which included the allocation of public recreational facilities and parks (Stals 1998:50).

1532 houses had been constructed by 1950. This had happened in two phases: between 1940 and 1943, 980 houses had been built and between 1945 and 1959, 552 houses had been built (Stals 1998:51) (refer to page 28 for phasing diagram).



Fig. 15. Historical aerial photographs of Atteridgeville (1954).

GROWTH

Density and phasing

Between 1940 and 1942, the first three primary schools were constructed. After the second phase of houses, two more schools were constructed, including a high school. In 1946 a soup kitchen had been established providing pre-school and school children a midday meal (Stals 1998:58). Trading facilities had only been erected by 1955 due to the Council's limited financial resources. Permission was thus granted to convert 12 houses for commercial purposes in 1943, and by 1945, 15 had been approved. The polyclinic was completed in 1951, followed by the post office. Recreational facilities were also provided such as the sports stadium and four parks, two of which provided recreational facilities for young children (Stals 1998:58-69).

In 1953, another 391ha to the west of Atteridgeville, known as Saulsville. This scheme was approved in 1959 and would include hostel dwellings for single men. By 1960 the Atteridgeville/ Saulsville area housed 8,156 families and 6,400 single men - a total population of 45 196 inhabitants in 7553 dwellings (Coertze 1969:49).

In 1954, 372 plots were allocated for self-built houses, but by 1956 only 34 houses had been built. Council then decided to construct 338 NE51/6 three-roomed houses and make them available for rent (Stals 1998:58-69).

1952 South African Industrial Research Annual Congress, Calderwood's address stated that Atteridgeville would be the site of the NBRI experimental prototype housing project. By 1962 there were a total of 9,830 housing units (Stals 1998:58-69).

Between 1968 and 1978 housing provision had been frozen, and Soshanguve (Sotho-Shangaan-Nguni-Venda) was the focus of township development. However, hostels were provided in Atteridgeville during that time. Since 1969, only 1,154 new houses were built, with the majority after the 1980s (Stals 1998:58-69).

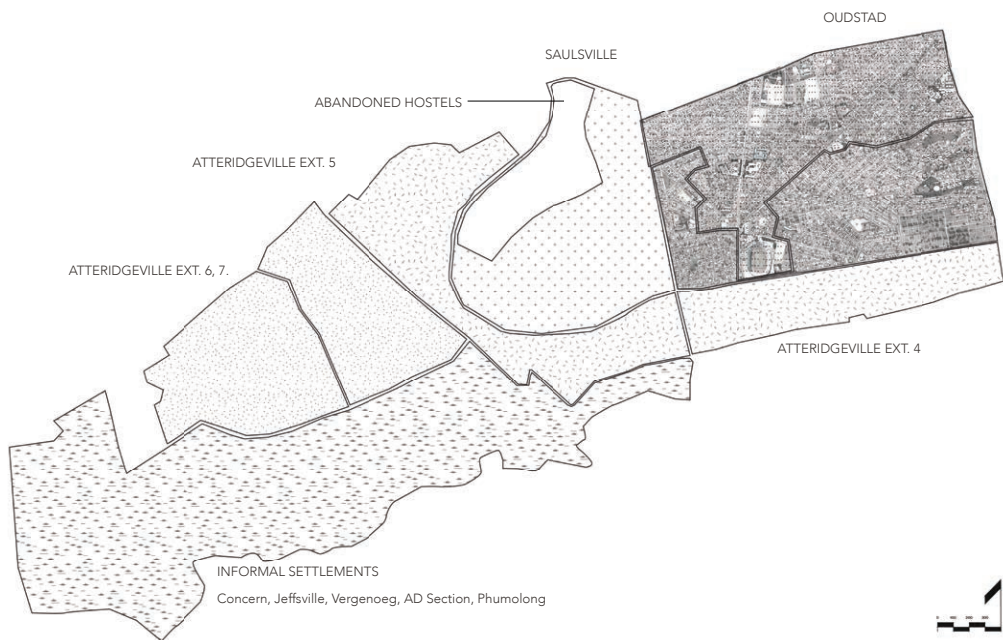


Fig. 16. Phasing developments of Atteridgeville.

ATTERIDGEVILLE TODAY



Fig. 17. Aerial photograph of Atteridgeville 2016



FIGURE-GROUND STUDY

Circumstance

The images below represent figure-ground studies of four settlements in the Tshwane region. This analysis demonstrates the development patterns based on the flexibility of the urban fabric.



Fig. 18. Muckleneuk - Block study 2016



Fig. 19. Atteridgeville - Block study 2016

Muckleneuk:

The difference of density of wealthier suburbs surrounding the Pretoria city bowl is immediately evident. In addition to the larger homes (compare to Mamelodi lot size) the amount of available green public space per residence is incomparable to any township development. Green spaces and public buildings that offer residents a break from the day-to-day are more abundant in these suburbs.

Atteridgeville:

Permanent additions/extensions to dwellings is commonplace in Atteridgeville. Backyard-living is prevalent as some households lease these units to earn an income. Multiple double-storey residences are found. Corner homes were initially laid out to accommodate a small retail or home run business—these homes are usually larger and can be seen in their figure ground study. In this example, the neighbourhood park was lost due to the necessity for building more homes, however, other public spaces can be located around Atteridgeville.

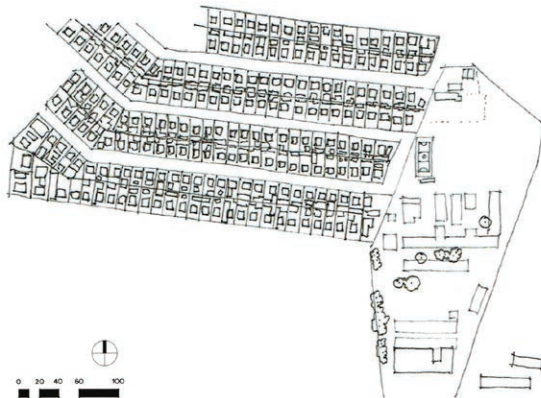


Fig. 20. Mamelodi - Block study 2016

Mamelodi:

The figure-ground study reveals a high concentration of backyard units. The economic distribution of the RDP houses has resulted in ‘matchbox houses’ centred on small lots. This provides little opportunity for expansion or growth of family, preventing any sense of permanence, as units do not support family life. Corner homes do not show opportunity for commerce as seen in Atteridgeville’s planning. With exception of the school grounds, there are no public spaces.



Fig. 21. Jeffsville - Block study 2016

Jeffsville:

The informal settlement of Jeffsville is located within the boundaries of Atteridgeville. Road networks are primarily single-lane dirt roads, limiting major vehicular access, however street lights are provided. Units are typically single rooms constructed from salvaged material, furnished with the bare essentials. This gives an indication of the transient nature of informal settlements, impacting security issues. There is no legibility or hierarchy in the built fabric, as any open land is occupied by living units. The units shown above share a boundary with the Saulsville Cemetery, completely disconnecting it from the south. With the exception of the cemetery, there is no public space.

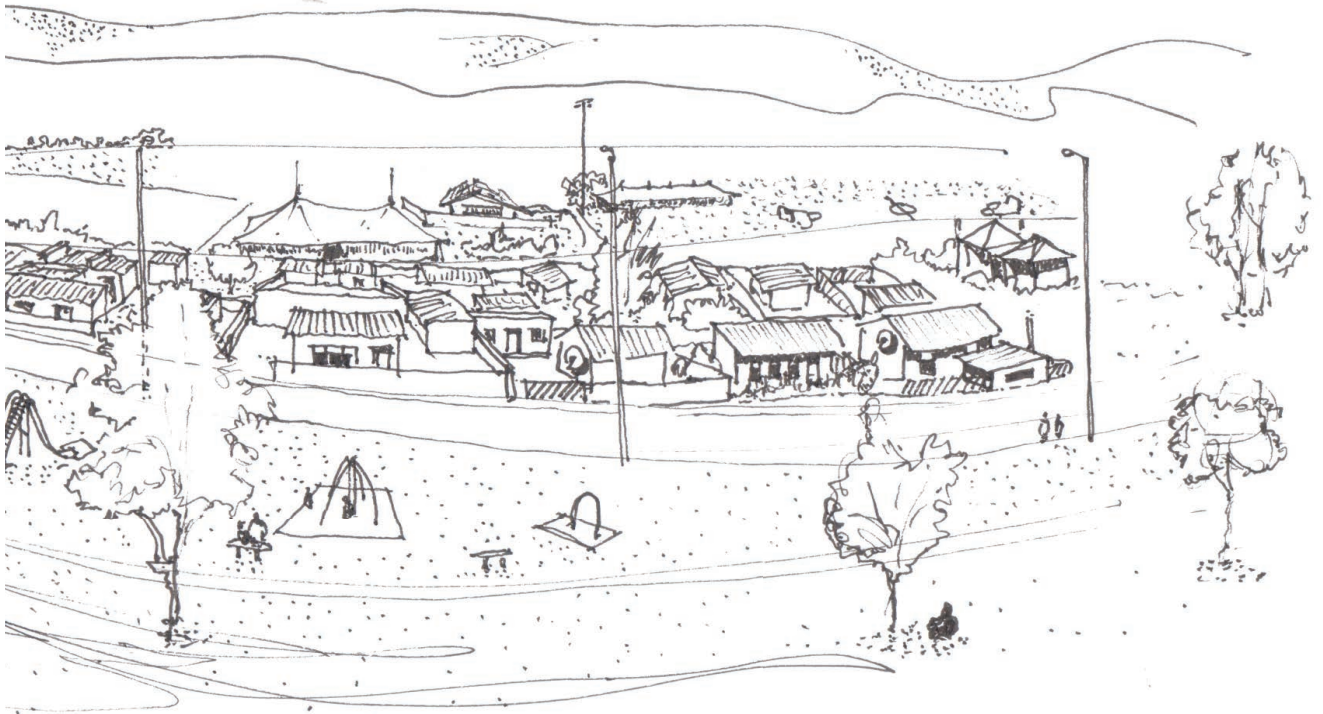
SUMMARY

Important aspects identified from historical study



Fig. 22. Looking over Atteridgeville.

1. model township
2. little civil unrest
3. strong collective identity
4. dormitory town | apartheid intervention
5. retains clear identity



- | 6. no ethnic segregation
- | 7. no military conflict
- | 8. topography - genius loci
- | 9. amenities + public space provided

OULDSTAD

In-between spaces detached from a collective vision

LEGEND

- 1 Saulsville Hostels
- 2 Saulsville Cemetery
- 3 Atteridgeville Cemetery
- 4 Maunde Street Gateway
- 5 SS Mendi Memorial
- 6 Atlyn Mall
- 7 Tshwane South College
- 8 Empty Plot (Khoza st)
- 9 Moroe St Park
- 10 WF Nkomo - Green Strip
- 11 Mbolekwa Sports Complex
- 12 Municipal Offices
- 13 Service Delivery Dept.
- 14 Taxi Rank
- 15 Atlyn Mall
- 16 Engen Service Centre
- 17 Ramohoebo Square
- 18 Empty Plot (Matshiga st)
- 19 Swimming Pool
- 20 Empty Plot (Maunde st)
- 21 Reservoirs
- A School Grounds
- B Natural Buffer
- C Dolomitic Land



Fig. 23. A new collective vision. Sites which form part of the vision developed for Atteridgeville. Proposals are described in depth v in Volume I (Nel & Sadiq 2016).



2. CIVIC SURVEY

Quantitative analysis

*The spatial manifestation that
structures daily life*

This chapter provides a quantitative study and mapping exercise. This is in recognition of Geddes' *Civic Survey* methodology, which is based on the premise of “diagnosis before treatment”. The survey covers aspects of geology, geography, climate, economy and social amenities of the region as a means of understanding the “place as it stands, seeking out how it has grown to be what it is, and recognising alike its advantages, its difficulties and its defects” (Geddes 1947:24).

The study focuses on Atteridgeville Proper, or Oudstad, the original phase of development (see aerial photograph on previous page).

Fig. 24. Atteridgeville photomontage (opposite page).

TRANSPORT

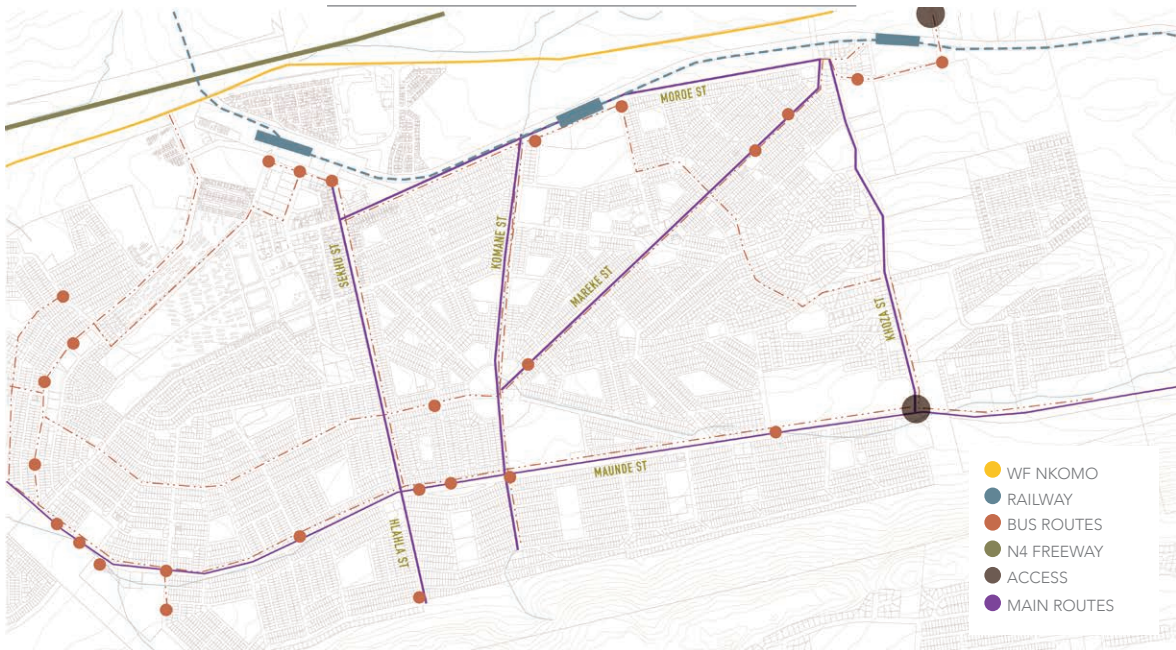


Fig. 25. Road and rail analysis indicating public transport facilities.

Atteridgeville is connected to Pretoria to the east by road on WF Nkomo and the N4 freeway, and Maunde street which joins the R55 and the Mabopane-Centurion Development corridor (MCDC). By rail there are the Saulsville, Atteridgeville and Kalafong stations on the northern edge of

Atteridgeville. The main routes indicated are characterised by 25m wide roads lined with trees. The existing bus stops and routes ensure that without having access to a personal vehicle the residents of Atteridgeville are mobile.

AMBULATION

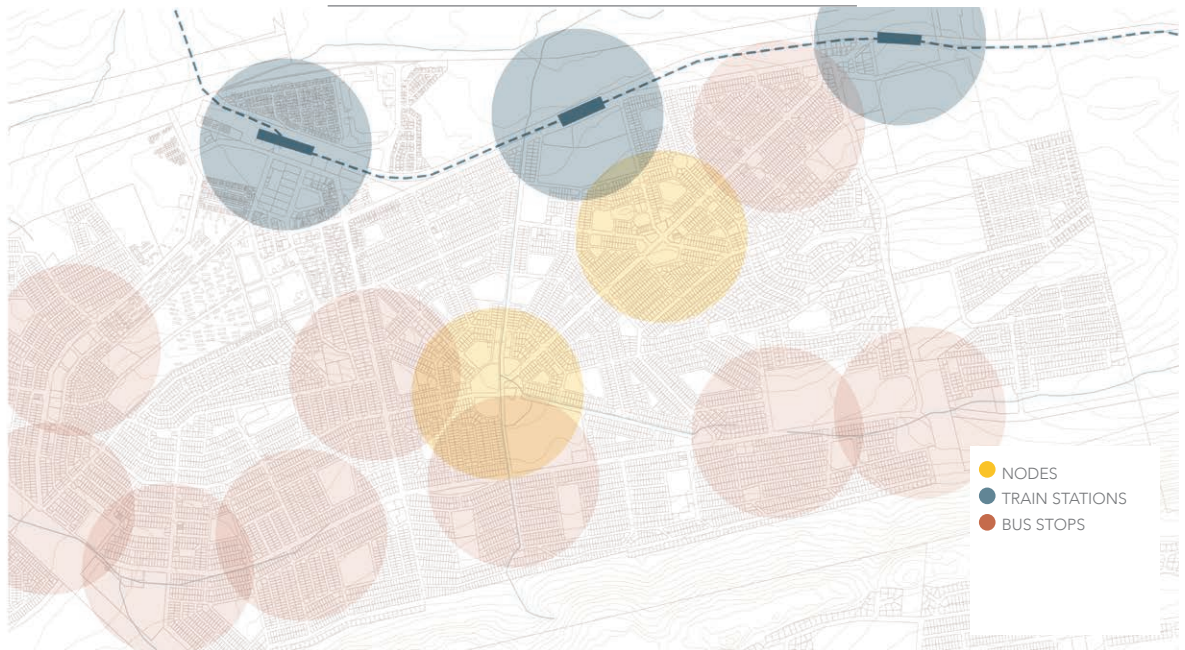


Fig. 26. Ambulation, nodes and public transport analysis. Circles indicate five minute walking radius.

The radial plan of Atteridgeville, with the hierarchy of roads, allows for a clear understanding of the urban structure. It also provides an ideal framework for public transport systems. The diagram above compliments the transport routes. As can be seen, the five minute walking radii around

each bus stop allows for the majority of residents to walk no more than five minutes to reach a bus stop or train-station. Currently, the public transport routes are sufficient, but there is an opportunity to integrate them further as part of an urban green-space system.

EDUCATION

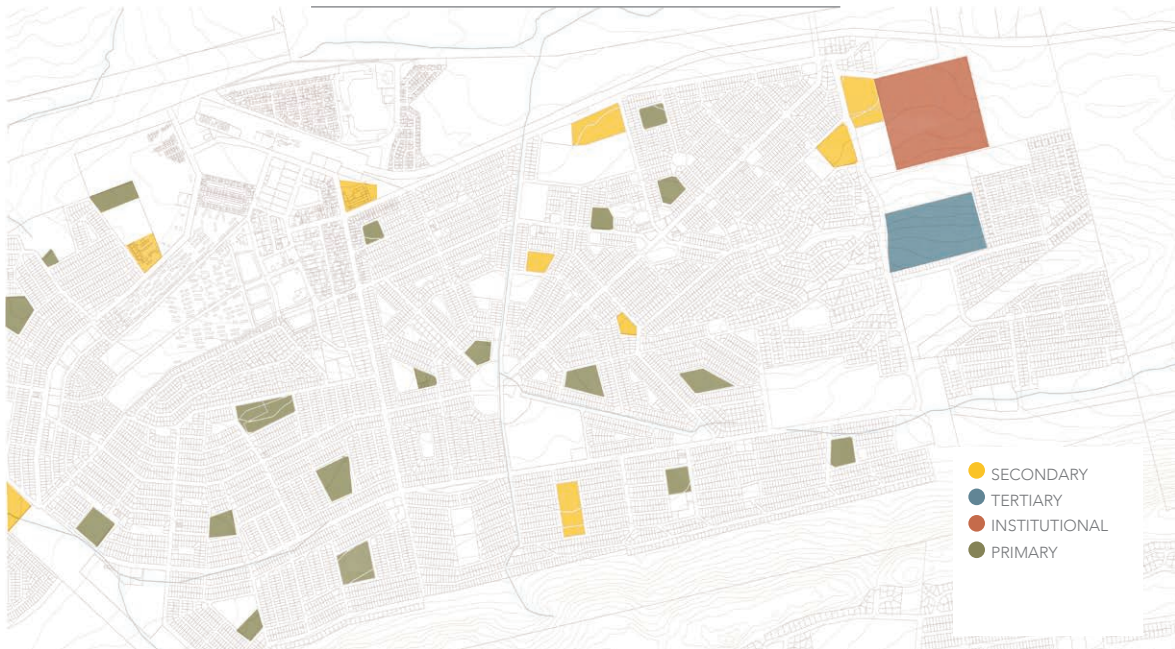


Fig. 27. Map indicating primary, secondary and tertiary education facilities.

A number of government educational facilities are adequately distributed in Atteridgeville proper. These range from primary to tertiary. Training and technical colleges can also be found on the south along Maunde street. These include a Special Education Training Centre and the Association for people with disabilities. Along Khoza street, Kalafong Teaching Hospital provides practical posting to medical students and collaborates with the University of Pretoria's Faculty of Health Science. A total of ten primary

schools and seven secondary schools serve the immediate neighbourhoods and provide children with exposure to sport and permaculture as a part of extramural education.

A number of specialised educational facilities can be found in Atteridgeville proper. Zodwa Special School for Mentally Handicapped and Holy Trinity Primary School provide an alternative to the National Curriculum, furthermore there are a number of adult education facilities.

MUNICIPAL

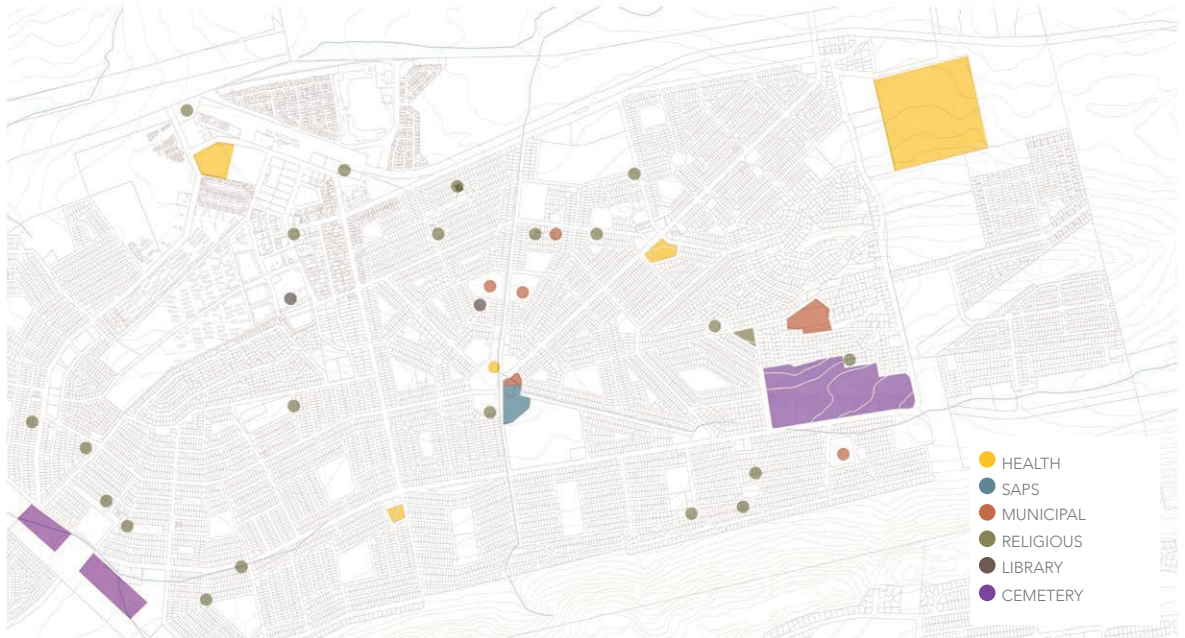


Fig. 28. Municipal mapping.

As previously discussed, Atteridgeville's initial planning made provision for public services and amenities but due to financial implications after WWII the development was frozen.

Currently there are two hospitals, namely Kalafong Academic Hospital and Tshepong TB hospital, three permanent clinics and two temporary clinics in the informal settlements. There are 54 operational churches, which is not sufficient for the needs of residents. Many gatherings are held in alternative facilities, including homes. There are only three community halls and they are over-utilised and require upgrading. There

is only one library in Saulsville. Both are small and require upgrading. The schools are in need of library services.

The main node hosts the police station and a Magistrates' Court which leads to the Municipal Administrative Offices and Engineering Services along Komane street. There is however, no fire station. There are two cemeteries, the first established in 1939 (south-east), and the second in Saulsville. The cemeteries are too small, and lack maintenance and parking.

RECREATION



Fig. 29. Recreation facilities.

Few green spaces, such as parks, remain, and those that do are generally undeveloped or neglected. Moroe street park to the north is fenced off and lacks integration with the larger urban environment. A few smaller parks have been developed with playing equipment for children. Previously, the small parks served each neighbourhood as playgrounds that the houses opened up onto.

Due to the neglect of these open spaces some dumping does occur. Municipal facilities include the Lucas Moripe stadium used for professional sports training (including the Mamelodi Sundowns), and a variety of school athletics events, and Atteridgeville swimming pool adjacent to the stadium. Mbolekwa sport complex to the north makes provision for soccer, soft-ball, tennis, basketball, netball, etc. The Saulsville Arena hosts the majority of large scale

events, for instance the annual awards ceremony for teachers from the community. In the case of Saulsville Arena, weatherproofing, acoustic consideration and static scale limit the types of activities that such buildings promise. Ga Mothakga Resort lies to the north and includes large public pools and slides for children. Finally, Atlyn Mall on Khoza street provides the majority of commercial trade, east of Atteridgeville.

The open green-spaces have unfortunately deteriorated due to neglect but provide ample opportunity to form part of a larger defined network. Secondly, sport and recreation facilities are ample, but there is also a lack of integration with everyday living and should become part of a network of 'urban greenspaces' (Dee 2001:12).

HISTORICAL+CULTURAL INTEREST

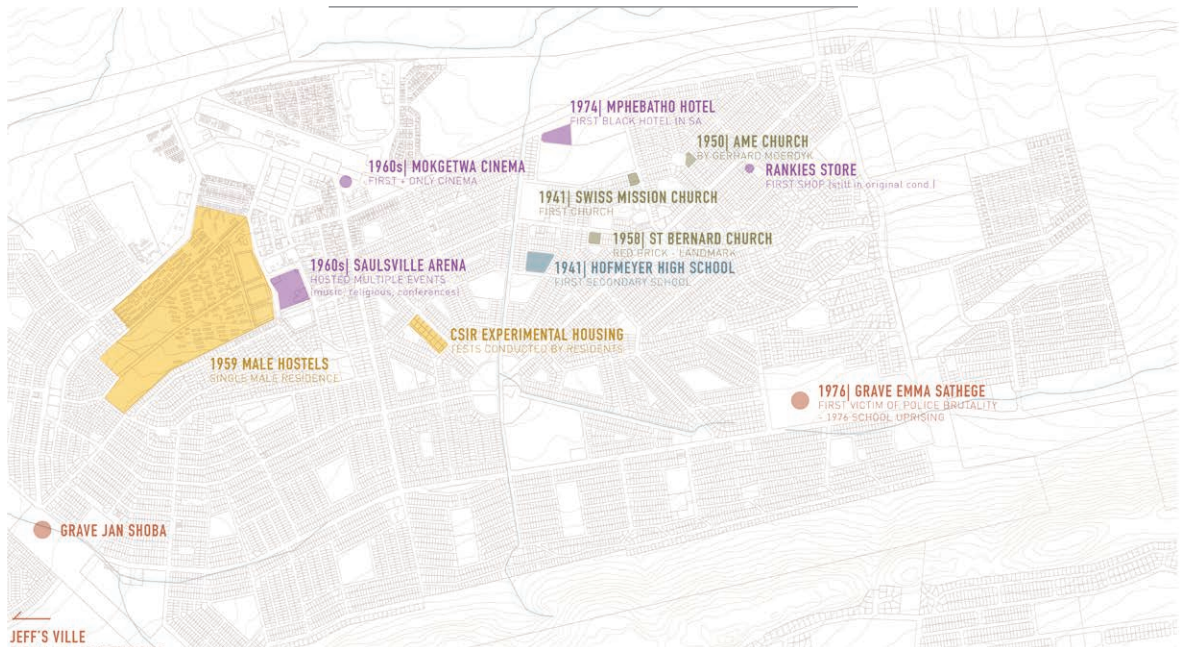


Fig. 30. Cultural and historical points of interest.

Atteridgeville hosts a diverse set of tales, and many influential and successful figures. The intention of this map is to highlight some significant aspects of Atteridgeville's heritage in order to recognise its contribution to The Struggle for democracy.

Atteridgeville has recently celebrated its 75th anniversary. In his book *Pheli - The Narrative History*, Magashe Titus Mafolo (2015) Mafolo introduces the history of the township and the conditions that sculpted the figures he mentions.

He continues to highlight the significance of the schools, theatre and run-down library which migrated from Marabastad into a three-bedroom unit in 1948. He also mentions the churches' involvement with music, supporting the youths' interest in participating in the spectacle as the

church bands marched down the high streets.

When democracy was ushered in, there was hope for the South African township, however after reading *Pheli - The Narrative History*, it becomes clear that the conditions of townships have not improved in over two decades. Civic spaces do not exist in the make-up of the urban fabric, provision for mixed zoning has not been implemented, commercial activity is scarce and the citizen is still expected to work elsewhere if they wish to remain in urban locales.

This unsustainable model is questioned and a proposal will be considered accordingly.

URBAN GREEN SPACE

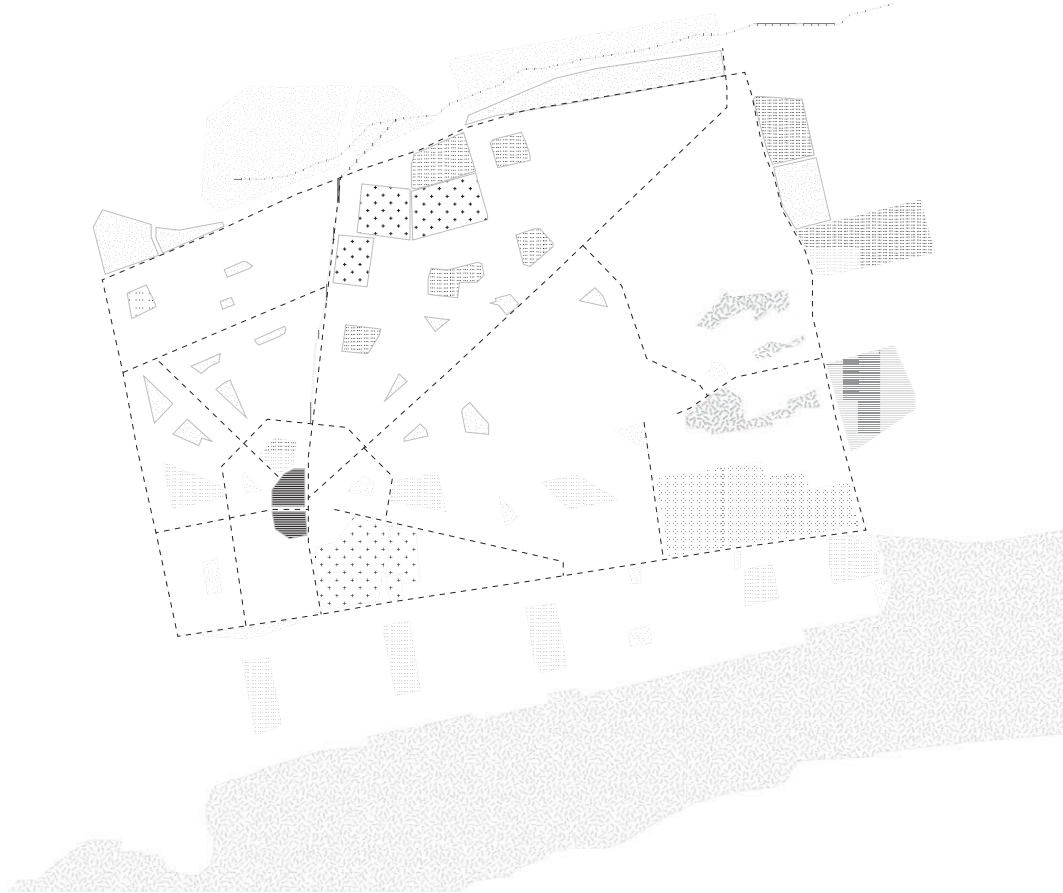


Fig. 31. Urban greenspaces of Atteridgeville.

At an urban level, the interest lies within *urban greenspace*:
...outdoor spaces that offer recreational, social,
cultural and environmental benefits to city dwellers
(Dee 2001:12).

These spaces are regularly neglected in large redevelopment schemes despite their critical importance for the well-being of inhabitants. The figure ground study in chapter 1 shows how successful these spaces are when supported by residential activity.

The open green-spaces have unfortunately deteriorated due to neglect but provide ample opportunity to form part of a larger connected network of neighbourhood parks. Also, sport and recreation facilities are well utilised, which can help support the system of *urban greenspaces*. Unlike Mamelodi, Atteridgeville has an existing series of neighbourhood parks that can bring back the urban greenspaces as described by Dee (2001:12).

CONCLUSION

The quantitative reveals the richness of the available assets in Atteridgeville. This chapter is used as a resource to develop an the urban vision. In summary, the analysis has lead the authors to conclude that the richness and diversity of Atteridgeville can be attributed to the harmony of the garden city layout and the serene topography in which it is situated, creating a tight-knit community and a creatively adapted urban fabric to meet the needs of the residents.

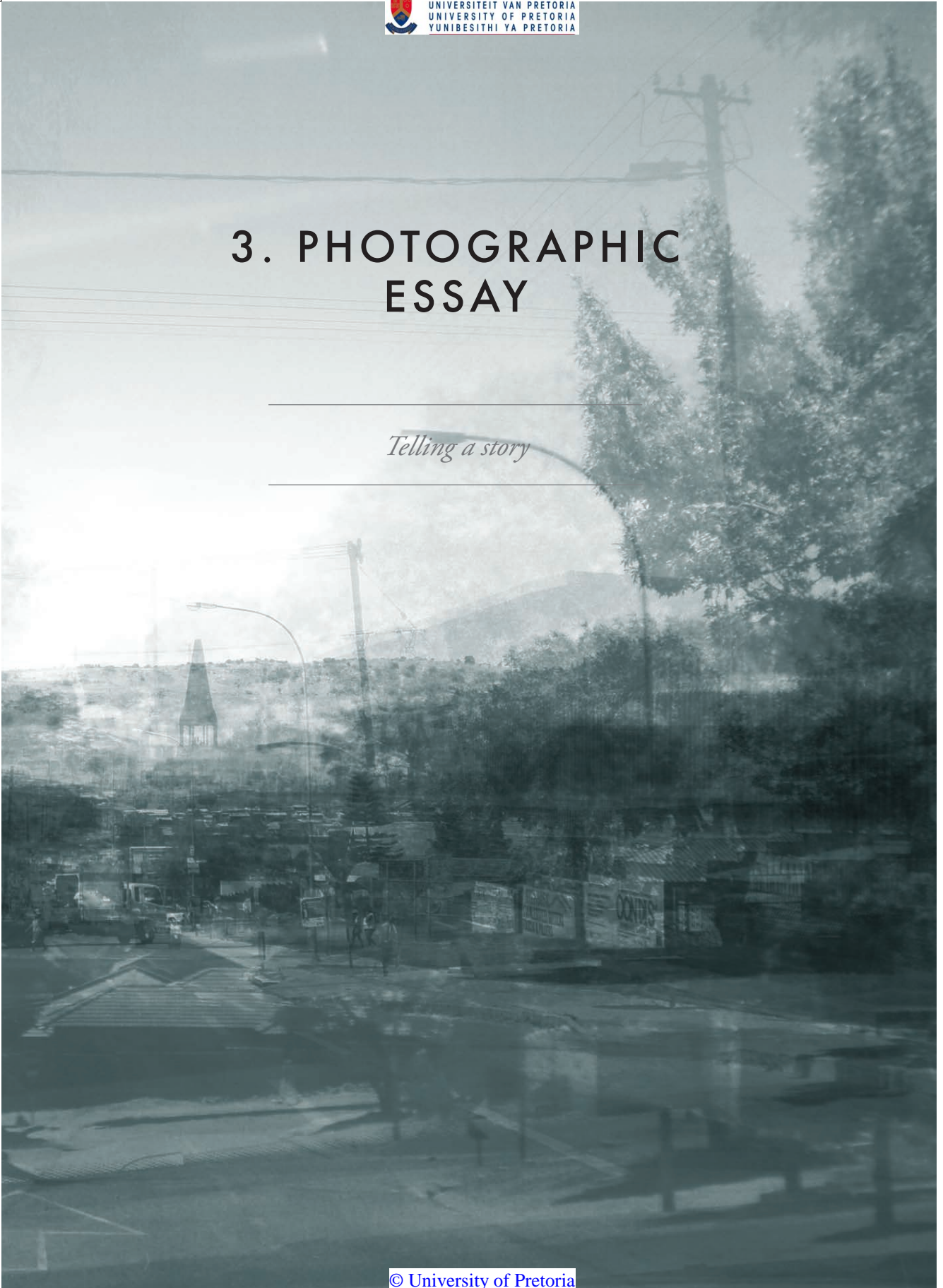
The infrastructure planning and engineering principles upon which the garden city layout was implemented has set Atteridgeville ahead of other townships, making it the most accessible and connected location to orbit Pretoria.

In 2015 Mafolo's book served as a commemoration of the adversity of the township, marking the 75 year anniversary since the establishment of Atteridgeville. However, there are countless opportunities to make Atteridgeville overcome remnants of the legacy of apartheid in the urban fabric. Issues of dependency, separation, diversity of land-use and lack of collective destination should be addressed. Today, the authors question the trajectory of townships suffering from the legacy of apartheid such as Atteridgeville in a democratic South Africa.



3. PHOTOGRAPHIC ESSAY

Telling a story



A photographic essay is a collection of images ordered in such a way that a story is told, a series of events is illustrated or emotions and concepts are conveyed. The same techniques used in conventional writing is used, but translated into visual images.

This photographic essay is a series of photographs taken in Atteridgeville during transect walks conducted by the authors. This serves as a means to invite the reader into Atteridgeville and understand the context as thoroughly as possible. The images are ordered such that the reader may take a similar journey through Atteridgeville as the authors, in order to better understand the qualitative analysis to follow.

This provides a photographic archive of the state of Atteridgeville over the course of 2016.

Fig. 32. Atteridgeville photomontage (opposite page).

03 | PHOTOGRAPHIC ESSAY



Fig. 33. Streets of Atteridgeville 01.

03 | PHOTOGRAPHIC ESSAY

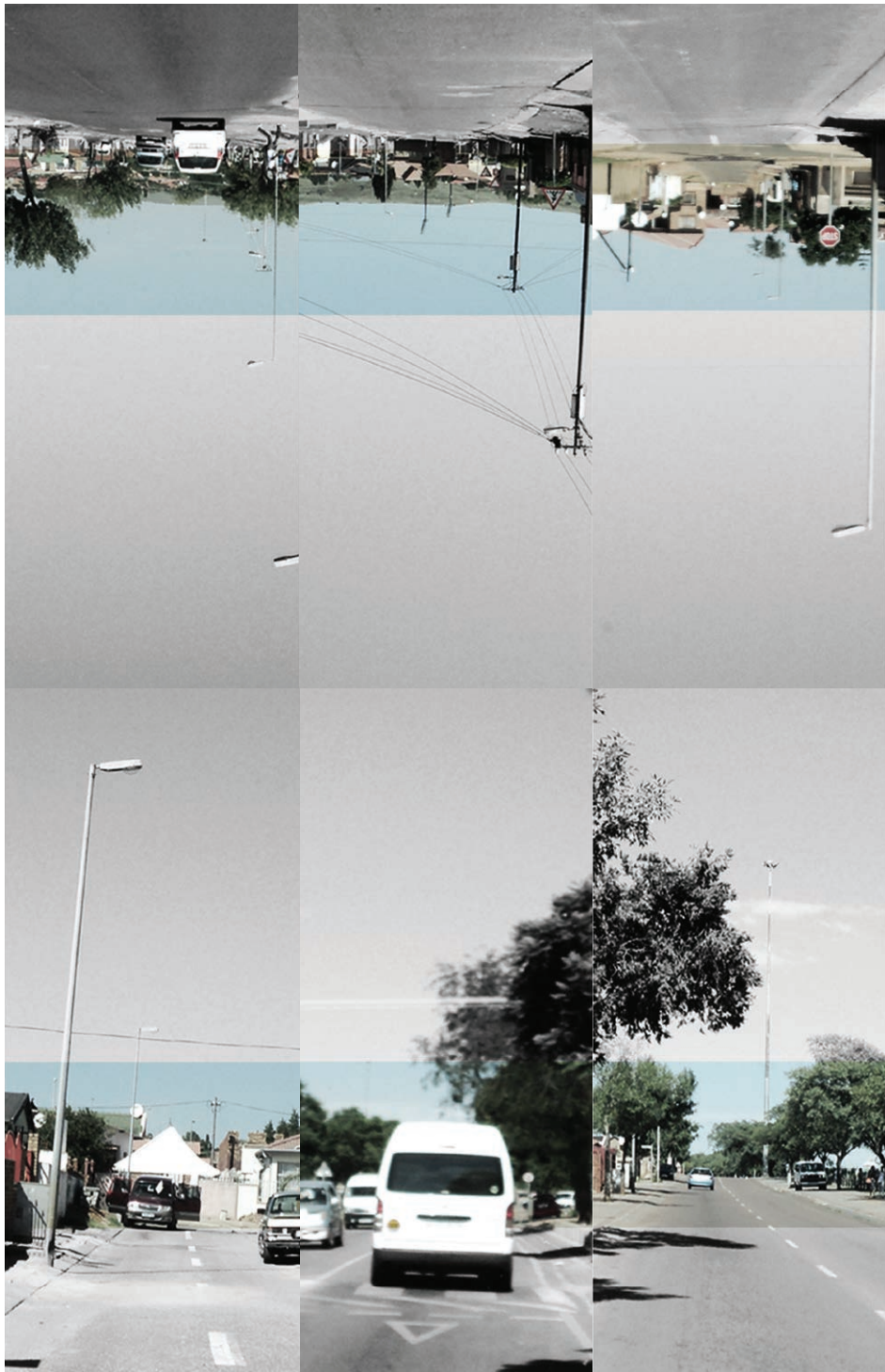


Fig. 34. Streets of Atteridgeville 02.



Fig. 35. Looking south-east towards Atteridgeville from Leratong Hospice (Atteridgeville West).



03 | PHOTOGRAPHIC ESSAY



Fig. 36. East view from Lucas Moripe Stadium.



Fig. 37. South-east view from Lucas Moripe Stadium



Fig. 38. Atteridgeville public swimming pool, with Lucas Moripe Stadium in background.



Fig. 39. Atteridgeville public swimming pool.

03 | PHOTOGRAPHIC ESSAY



Fig. 42. Looking south down Hlahla street.



Fig. 40. Icecream vendor riding now Mareka street.



Fig. 41. View down Ramushu street.

03 | PHOTOGRAPHIC ESSAY



Fig. 44. Southern view towards mosque from Ramohoebo Square.



Fig. 45. Mareka and Masibi street intersection.



Fig. 43. Atteridgeville Clinic on Mareka street.

03 | PHOTOGRAPHIC ESSAY



Fig. 46. Southern view of Atteridgeville Clinic on Ramohoebo



Fig. 47. Looking east over Ramohoebo Square.



Fig. 48. View of the burnt remains of Sekgamorogo Shopping



Fig. 49. View towards Atteridgeville Post Office from Ramohoebo Square.

03 | PHOTOGRAPHIC ESSAY



Fig. 50. Recycling next to Atteridgeville Clinic.



Fig. 51. Church and drycleaners on Seeiso street.



Fig. 52. Sekgamorogo Shopping Centre.



Fig. 53. View towards CBD down Mabothe street.

03 | PHOTOGRAPHIC ESSAY



Fig. 56. Looking east Tladi street.



Fig. 55. View towards CBD down Mabothe street.



Fig. 54. Segoapa street.

03 | PHOTOGRAPHIC ESSAY



Fig. 57. Atteridgeville Cemetery on Shilote street.



Fig. 58. Atteridgeville Cemetery looking east.

03 | PHOTOGRAPHIC ESSAY



Fig. 60. House on Thindisa street.



Fig. 59. West on Mankopane street.

03 | PHOTOGRAPHIC ESSAY



Fig. 61. North-west on Seabi street.



Fig. 63. West on Thindisa street.



Fig. 62. Looking east at Holy Trinity High School.

03 | PHOTOGRAPHIC ESSAY



Fig. 65. Classrooms of Holy Trinity High School on Khoza



Fig. 64. Looking north-east at Holy Trinity High School on Khoza street.

03 | PHOTOGRAPHIC ESSAY



Fig. 66. Laudium reservoir from Maunde street.



Fig. 67. Atteridgeville Reservoirs - west towards stadium.



Fig. 68. Atteridgeville Reservoirs - south-east.

03 | PHOTOGRAPHIC ESSAY

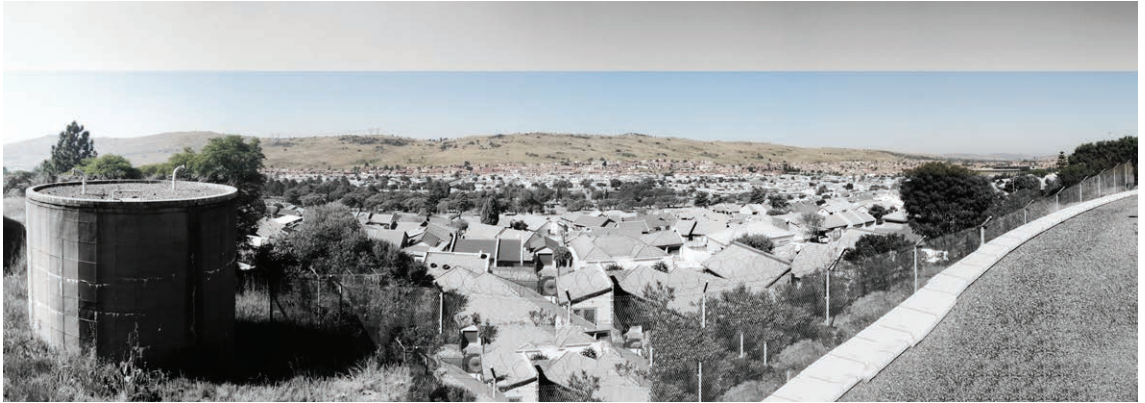


Fig. 69. Atteridgeville Reservoirs - south.



Fig. 70. Atteridgeville Reservoirs - north.



Fig. 71. Atteridgeville Reservoir - north.



Fig. 72. Atteridgeville Reservoir - east.



4. CHARACTER

Qualitative analysis

Following on the photographic study, the qualitative analysis delves deeper into the qualities that make up the character of Atteridgeville. The analysis begins with a reflection on the character of space and the predominant user of the public sphere.

The qualitative analysis develops into a study of the layers that constitute the street, highlighting the identified thresholds and their connection to the street. In an attempt to reveal the success of the semi-public realm, the street analysis studies the Municipal, Public, Trade and Residential typologies found in Atteridgeville proper, or Oudstad.

The study identifies the sidewalk as an anchoring device that the semi-public realm attaches to. The success of the semi-public threshold relies on the ability of the private to connect to this realm.

Fig. 73. Atteridgeville photomontage (opposite page).

CHARACTER

Genius Loci

Landlocked between a series of hilltops and valleys, the suburb of Atteridgeville has a unique sense of place combining a dynamic urban locale with a serene topography. Uniformity of scale, pristine gardens and swept streets exemplify the parallel development of

suburbs located within Pretoria (see below). Pride and ownership resonate in the original neighbourhood streets, offering a glimpse into how Atteridgeville is pioneering the unprecedented territory of a born-free South Africa.



Fig. 74. View towards CBD down Mabothe street.



Fig. 75. Section of Maunde street.

ISSUES

Access and choice

The analysis revealed that Atteridgeville suffers many symptoms of township conditions. For example, the public and private interventions are often grand schemes that neglect the needs of the inhabitants and signify a false sense of development. Secondly, the relationship between public space and the

public has been severed due to the implementation of new boundaries and barriers; or the design of the structure itself is 'selfish' and is not integrated with the larger urban fabric. These are all essentially issues regarding access and choice of public facilities.

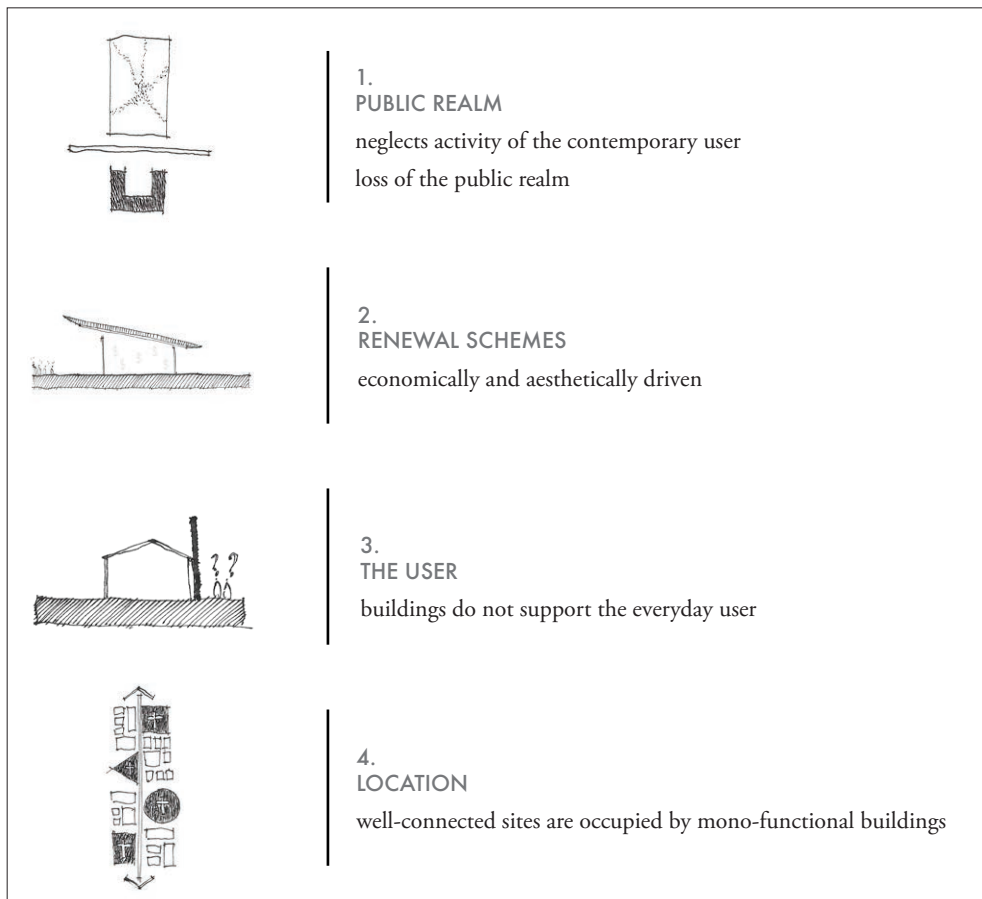


Fig. 76. Diagrams illustrating issues identified with regards to public buildings in Atteridgeville.

THE MAN AND THE STREET

The following study is an investigation of the occupation of space in relation to the street. Various characters were identified in conjunction with how this space is utilised, how barriers influence the condition, and the types of activity or business conducted.



Fig. 77. View of Atteridgeville from Kgere street in (West of Atteridgeville).

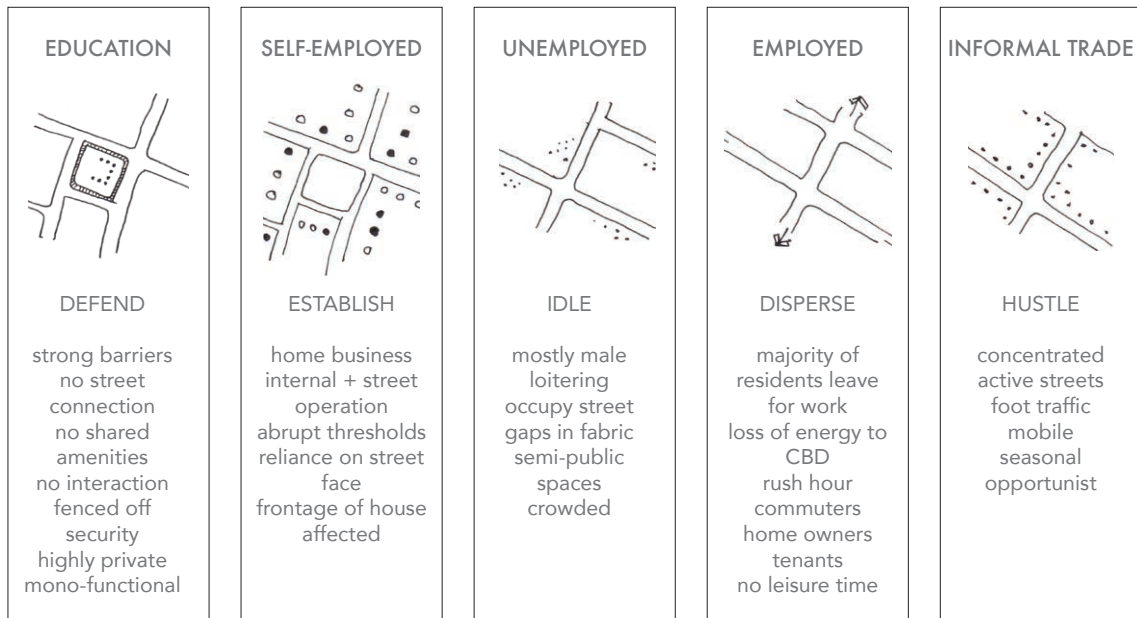







Fig. 78. Diagrams demonstrating the occupation of the streets of Atteridgeville.

LAYERING

The streets

Based on the observations expressed thus far, the authors embarked on a thorough analysis of the relationship between private and public space and boundaries. It was observed that this becomes the *third place* of Atteridgeville, and since the depletion of *urban greenspaces* (Dee 2001:12), an understanding of this dynamic becomes an important informant since the proposed interventions will both be public in nature.

The intention is to document how space is defined and then determine the ramifications of this definition. The following key is utilised in a sectional analysis according to the various typologies found in Atteridgeville:

-  PRIVATE
-  BARRIER
-  PEDESTRIAN
-  SEMI-PUBLIC
-  GREEN

Municipal

PRIVATE
 BARRIER
 PEDESTRIAN
 SEMI-PUBLIC
 GREEN

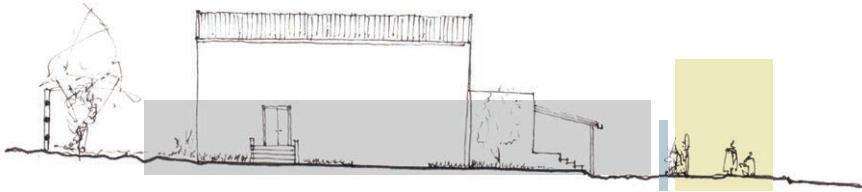


Fig. 74



Fig. 75

Fig. 79. Section through church (ex-theatre). The church's entrance is defined by the portico at the street edge, which also brings down the scale. Separated only by a palisade fence, a visual connection to the street is maintained. This building hosted the theatre but has since been converted to a church.

Fig. 80. Section through Lucas Moripe Stadium across Pilane street. The scale of the stadium is not bridged in relation to the residential scale. The high concrete wall prevents a connection to the public realm. There is potential to intervene in the large area between the stadium and Pilane street which could mediate the scale and create a public interface.

Fig. 81. Section through spaza shop and Moroe street park. A connection between the park and the street has been severed since the inclusion of two layers of barriers. The walkway is shaded which offers a pleasant walking route on both sides of the street. The residential side has developed into a semi-public zone due to the commercial activity attached to the street edge of the living unit.

Fig. 82. Section through children's' playground on Morula street. This section demonstrates the value of parks in neighbourhoods. A visual connection allows for passive surveillance, and the lack of barriers allows for an active edge. Ample seating is provided, with the hill and hospice as the backdrop.

Fig. 83. Pocket park on Molope street. This park serves as a communal garden in the neighbourhood. The absence of fences allows for unhindered visits, and the visual connection from street-facing houses allows for passive surveillance.

04 | CHARACTER

Public

PRIVATE BARRIER PEDESTRIAN SEMI-PUBLIC GREEN

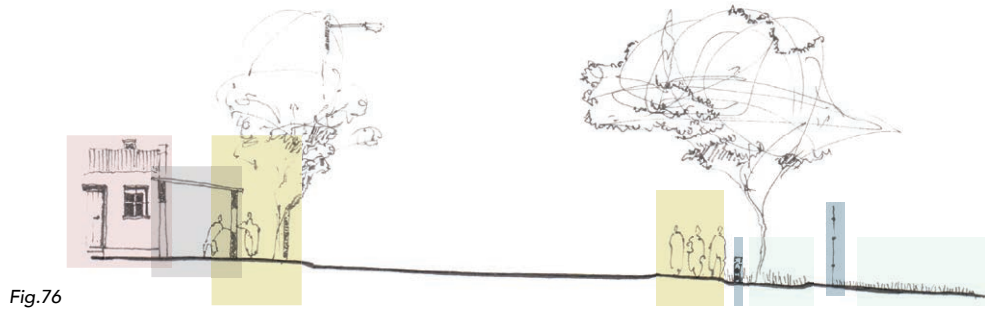


Fig. 76



Fig. 77



Fig. 78

Trade

PRIVATE BARRIER PEDESTRIAN SEMI-PUBLIC GREEN

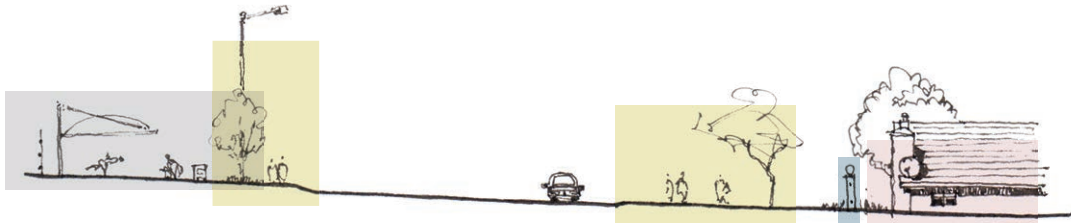


Fig. 84. Carwash on Mareka street. The extremely wide sidewalks on the main roads, such as Mareka street, allow for a variety of activities to take place. Here a car-wash allows for an active interface on the street, while the residential edge is permeable as boundary walls serve as ornament rather than security.



Fig. 85. Hair salon on Mareka street. A street facing shop-front is attached to the house using a shipping container. Similarly to the car-wash, an active street edge is created, which contributes to the success of public infrastructure such as bus stops. The threshold between public and private on the street edge is generally blurred allowing for maximum activity, interface and connection.

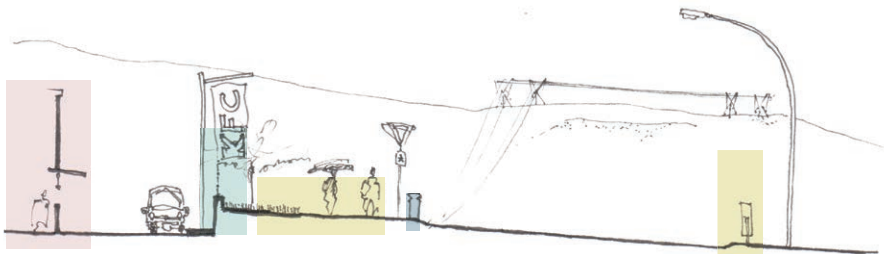


Fig. 86. Section at Atlyn Mall through Khoza street. Atlyn Mall is disconnected from the street due to the hard edge created by the security provision and stepping down of the site. The activity of the mall is confined within its boundaries, giving very little to the public space in Atteridgeville.

Residential

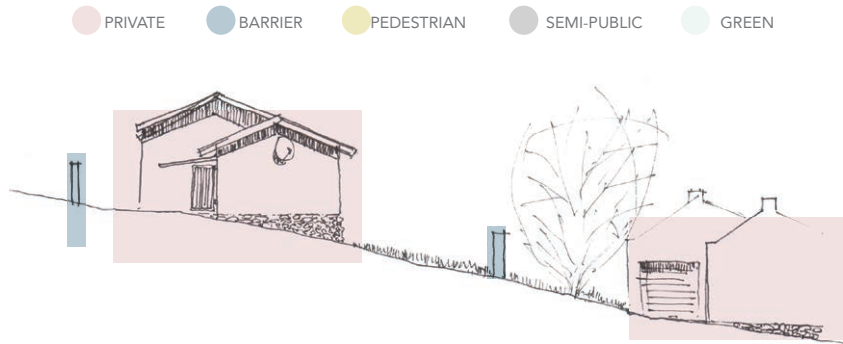


Fig. 87. Typical hillside home. This section illustrate how the NE51/6 houses do not take the 1:8 slope into account. The design of the NE51/6 was not flexible, as topography was not a consideration during implementation.

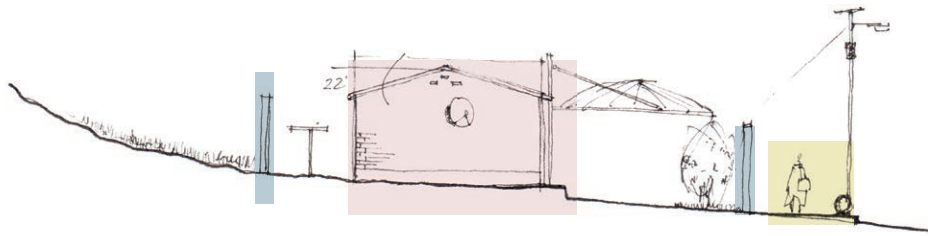


Fig. 88. Hillside home. The front and back conditions of the hillside homes highlight the uneconomical placement of the house in the plot. The house offers very little connection to the street without the residents' additions, and the connection to the hill is minimal.

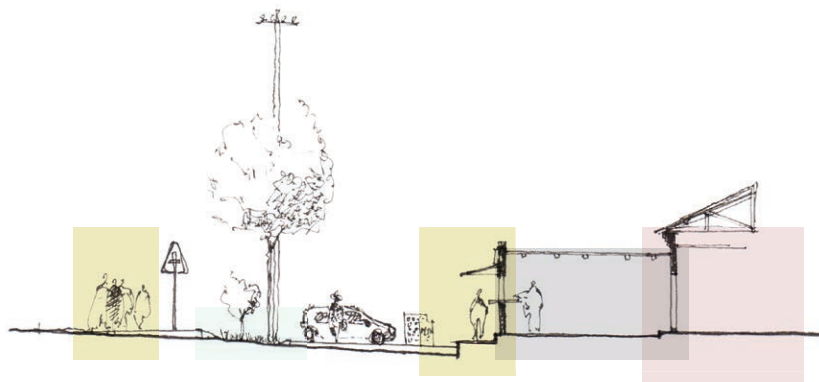


Fig. 89. Home-run business on Mareka street. Businesses often form the threshold between the private living-unit and the street edge. Here, on Mareka street, the large road reserves allow for an ample interface as entrepreneurs take advantage of the high foot-traffic. Parking has unfortunately taken priority, pushing pedestrians directly adjacent to the street.



5. THEORY

Approach

This chapter introduces the urban approach taken by the authors, which informs the direction taken for the development of a vision for Atteridgeville.

First, themes have been identified as a guide to inform the overall urban approach as well as the individual design interventions. This is done to maintain a holistic and succinct scheme but it can also be seen as a summary of the intentions for Atteridgeville.

The theory which follows ranges from Leon Battista Alberti's understanding of a city in the 1400's to Hannah Arendt's views of the active citizen in the 1950s. Also included is Patrick Geddes' approach to intervening known as 'Conservative Surgery' from 1886 and Ray Oldenburg's 'Third Place' concept of 1989. These concepts are discussed to introduce the reader to the theoretical background which informs the vision to follow. They were selected and honed based on the findings uncovered in the preceding chapters. Their relevance to Atteridgeville is explained such that their propositions are contextualised and are made authentic to place, contesting the notion of purely imported models or generic responses, which result in *township architecture*.

Finally, an approach has been developed taking all the preceding discussions into consideration. An attitude towards Atteridgeville has been established and objectives have been put in place which is to be followed by the final vision.

Fig. 90. Atteridgeville photomontage (opposite page).

THEMES

Informing theory, choice and approach

1.
DWELLING
encourage holistic use of space

2.
LONGEVITY
through incremental change

3.
CULTURE | MEMORY
preservation: topography + spatial legacy + spirit

4.
URBAN FABRIC
diversify programme + contain sprawl

5.
CIVIC SPACE
street activity | legibility | amenities | surveillance

6.
APPROPRIATION | INTERPRETATION
rdp house model | public space | apartheid planning

7.
SUPPORT STRUCTURES
agriculture | recycling | industry | craft

8.
IMAGEABILITY
legibility | coherence | radial plan | landmarks

LEON BATTISTA ALBERTI

Civic Space



Fig. 91. Etch of Alberti

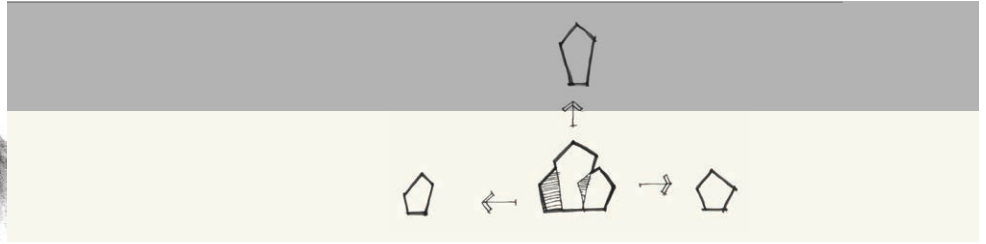


Fig. 92. Diagram illustrating the city as a series of rooms in a house.

In Alberti's *De Re Aedificatoria* (1485) the city is the place in which individual citizens pursue virtuous activities; more than that, for the first time the city is considered to be a collection of buildings and of open spaces consciously designed and related to one another, a collection that allows the citizens to bring order to their society through their participation in its affairs. Alberti states that all citizens rely on the city and the public services it provides. He puts emphasis on the relationship between buildings to one another and the spaces between them, in conjunction with the relationship to the citizen (Kostof 1991:69-70;131).

Alberti's approach offers insight on the relationship between the citizen and his participation in the built environment. By being cognisant of this approach, and taking into consideration the analysis presented by Stals (1998), the relationship between Atteridgeville's urban planning and social dynamic is clear. The intention is to build on and enhance this existing relationship.

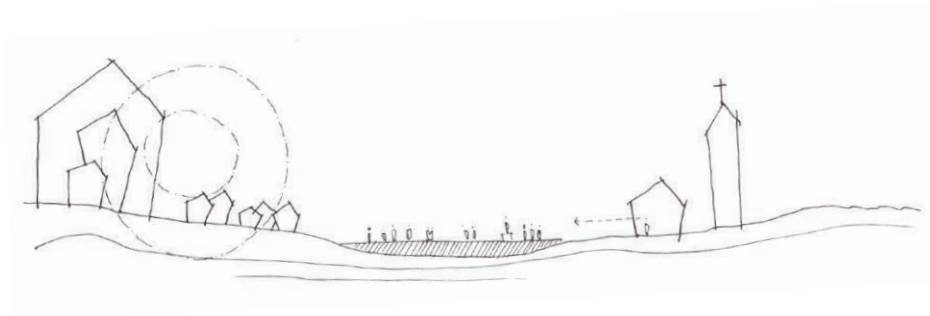


Fig. 93. The relationship between the built environment and the citizens.

HANNAH ARENDT

The active citizen

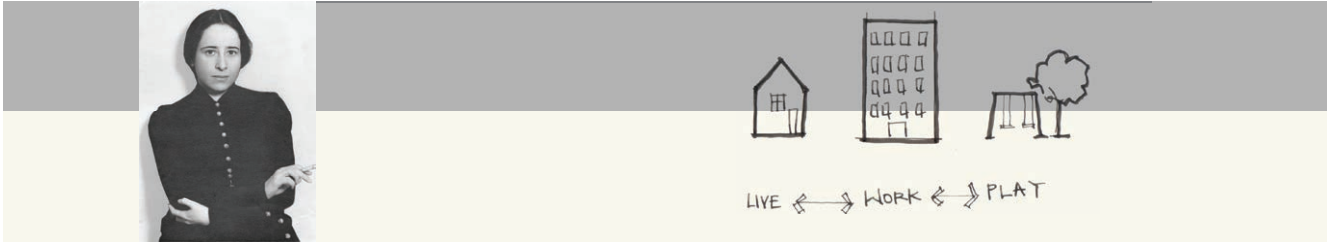


Fig. 94. Photograph of Hannah Arendt

Fig. 95. The value of including live, work, and play in cities.

In *The Human Condition*, Hannah Arendt (1958) explores the origins of democracy and brings an understanding of these theories of political philosophy to the modern era. Arendt argues that it is necessary to reassert politics as a valuable realm of human action, which has been devalued in modern human affairs. She scrutinises what this may entail, with the intention of reinstating the life of public and political action. Arendt argues that **vita activa** is the fundamental condition of human existence, which consists of three fundamental categories: labour, work and action (Arendt1958:7).

Labour corresponds to the basic necessities of human existence and biological processes. These are essentially the practices necessary to maintain life itself. These activities are characterised by a 'never-ending' nature, an action which creates nothing of permanence as its products are quickly consumed. This activity is based on **necessity** and occurs (should occur according to Arendt) in the *Aristotelian oikos* - the **private realm** of the household, as opposed to the *poleis*, the public realm of the political community (Arendt 1958:127).

Work, in contrast, relates to the 'unnatural' aspects of human existence - the fabrication of commodity-related things. Arendt identifies this quality inherent to homo faber - man the maker, a creature of physical and cultural walls separating man from nature. Work subsequently becomes **part of the polis**, rather than labour's private nature (Arendt1958:7).

"**Action**, the only activity that goes on directly between men...corresponds to the human condition of plurality, to the fact that men, not Man, live on the earth and inhabit the world. While all aspects of the human condition are somehow related to **politics**, this plurality is specifically the condition ... of all political life" (Arendt1958:7).

Arendt argues that politics is the continuous action of citizens engaging and exercising their capacity for agency and action, and thus freedom:

...freedom...is actually the reason that men live together in political organisations at all. Without it, political life as such would be meaningless. The raison d'être of politics is freedom, and its field of experience is action (Arendt 1960).

PATRICK GEDDES

Conservative surgery

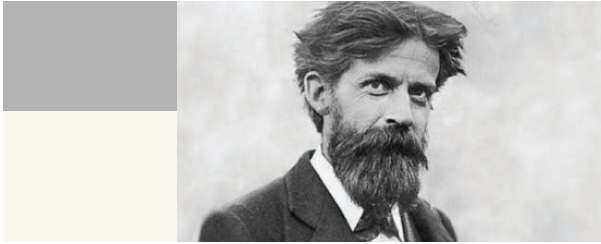


Fig. 96. Photograph of Patrick Geddes

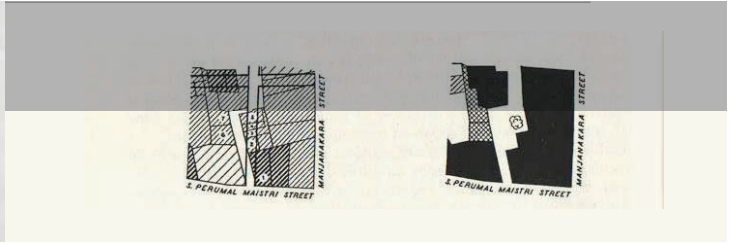


Fig. 97. Geddes' conservative surgery.

Patrick Geddes is recognised for being an innovative Scottish town planner in the late 19th century. His pioneering approach of conservative surgery was developed in 1886 when Geddes and his wife purchased a row of slum tenements in Edinburgh. The row of tenements was converted into a single dwelling, “weeding out the worst of the houses that surrounded them...widening the narrow closes into courtyards” resulting in an improved access to natural light and ventilation. Certain houses were maintained and restored. Geddes believed this approach was more economical and humane as it contested the ‘sweeping clearances’ which was common at the time, so as to implement formal gridiron urban structures of colonial town designs.

The heritage of the gridiron plans goes back at least to the Roman camps. The basis for the grid as an enduring and appealing urban form rests on five main characteristics: order and regulatory, orientation in space and to elements, simplicity and ease of navigation, speed of layout, and adaptability to circumstance.

(Geddes 1947:15)

Geddes (1947:24) criticised this tradition as much for its “dreary conventionality” as for its failure to address in the long term the very problems it purport to solve. According to Geddes’ analysis, this approach was not only “unsparing to the old homes and to the neighbourhood life of the area” but also, in “leaving fewer housing sites and these mostly narrower than before” expelling a large population that would “again as usual, be driven to create worse congestion in other quarters”.

Geddes (1947:24) subsequently developed an approach based on **‘diagnosis before treatment’** which considered careful analysis and evaluation of the existing urban fabric, geology, geography and social structures before intervening. This observational technique led to a sensitive and well-considered approach.

This school strives to adapt itself to meet the wants and needs, the ideas and ideals of the place and persons concerned. It seeks to undo as little as possible, while planning to increase the well-being of the people at all levels, from the humblest to the highest (Geddes 1947:24)

THE SUBURB

Attitude for Atteridgeville

The condition of *borderlands* best characterises Atteridgeville due to the dichotomies identified in this *suburban-township*. Hosting higher densities than other suburban regions in Tshwane, almost no social space is provided free of charge. The developing dormitory town will continue to morph into a suburb if social anchors are not introduced to guide its development.

Atteridgeville provides a glimpse into surrounding townships' future development. This notion is challenged, and an approach has been developed in response to conventional township interventions in order to remedy the spatial legacy of apartheid. It is envisioned that this approach would lead to townships developing as self-sustaining entities capable of providing their residents with public space beyond the sidewalk.



Fig. 98. Suburbia 01.

GOAL

Civic Space

The intention is not to re-invent Atteridgeville as a metropolitan or urban hub, but instead to support the residents, work with existing networks and inject new opportunity, activity, energy and civic participation into the existing fabric. This approach comes from a contestation of the current trends of development that focus its efforts on individual schemes coupled with absurdly long-term organic development spines. The goal is to penetrate the fabric of Atteridgeville and locate strategic sites for intervention. This network of small scale interventions will act as a safety net for development, encouraging members of the community to participate in their region's development.

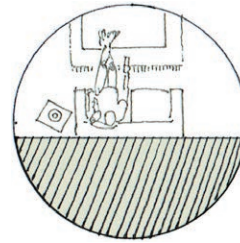


Fig. 99. Suburbia 02.

RAY OLDENBURG

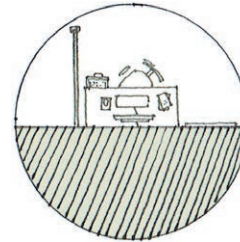
Third Space

Ray Oldenburg's (1991) theory on the essence of place identifies three principal social environments. These respective domains include, home, work, and the place on the corner. Recognising that home and work environments are static in their nature, Oldenburg hypothesises that dynamic societies exist when there is a social investment in the latter place. These places become social anchors which people aspire to occupy.



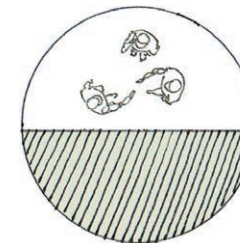
HOME

Atteridgeville's working class endure a daily exodus to their second place: work. This loss of the majority of the adult population to work opportunity leaves behind children and the elderly. With little to no amenities provided to these residents, the success of third place relies on the return of the citizens with disposable income.



WORK

This is a favourable moment in a democratic South Africa to respond to this issue. As townships gradually develop economically, they transform into suburbs. In order to intercept this mutation, an investment in the third place is of paramount importance to alleviate the dependency of townships on larger metropolitan locales. To instil pride and a relief from the mundane, third place environments need to be encouraged beyond the street and pavements.



PLAY

Fig. 100. First, second and third place.



Fig. 101. The merging of elements.

PSYCHOLOGICAL CITY WALLS

Enticing diversity

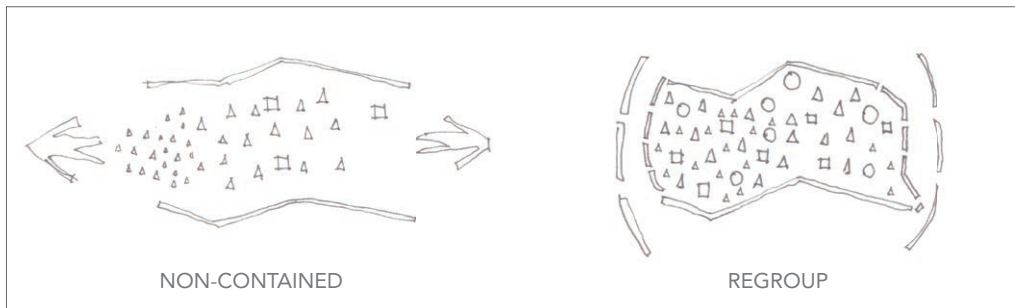


Fig. 102. Mediating between township-suburb conditions and creating a self-sustaining entity.

The removal of amenities and restricted trade laws made it impossible for townships to become resilient. The problem of dependency is perpetuated by the lack of diversity in the urban context. The monotonous suburban fabric does not cater for a diversity of activities or a variety of land-use. Atteridgeville's lack of social destinations and limited recreational facilities has resulted in an non-contained /dispersed identity.

In order to combat these external conditions, a series of incremental additions of activity could remedy the problem. Presented as psychological city walls, the intention is to implement a series of social destinations on identified sites in Atteridgeville to encourage a diversity of land use. This concept of activity as a boundary inspires a contained vibrancy within the suburb. The anticipated result is that townships become anchors in their own right. This is in reaction to new-urbanism tendencies that aim to resolve complex socio-economic ills with an individual node of intervention.

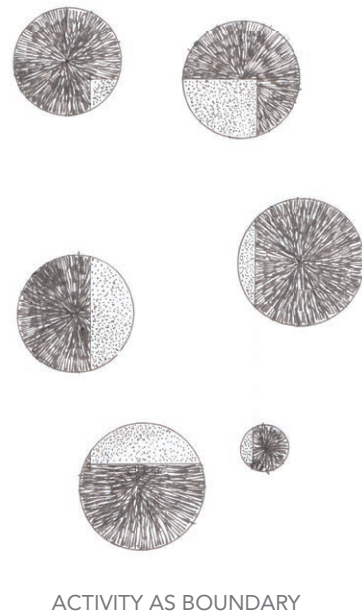


Fig. 103. Psychological city walls.



6. VISION

Urban approach

The urban vision proposes an incremental development strategy in order to diversify the urban fabric, and alleviate the monotony of the suburban condition. The identified locations include brown field sites, private property, the sidewalks of the high streets and municipal lots reserved for commerce and infrastructure.

This holistic approach aims to address the notion of *stepping-stone residences* that townships are synonymous with. The high densities in townships is seen as an advantage. The intention is to provide successful civic spaces and public buildings, reducing the dependency of residents on larger metropolitan areas to sustain their livelihoods.

The vision introduces twenty-one sites for potential to reinforce this incremental development strategy. From this vision two sites are selected to demonstrate the potential of well-connected, small-scale interventions for the tight-knit fabric of South African townships.

Fig. 104. Atteridgeville photomontage (opposite page).

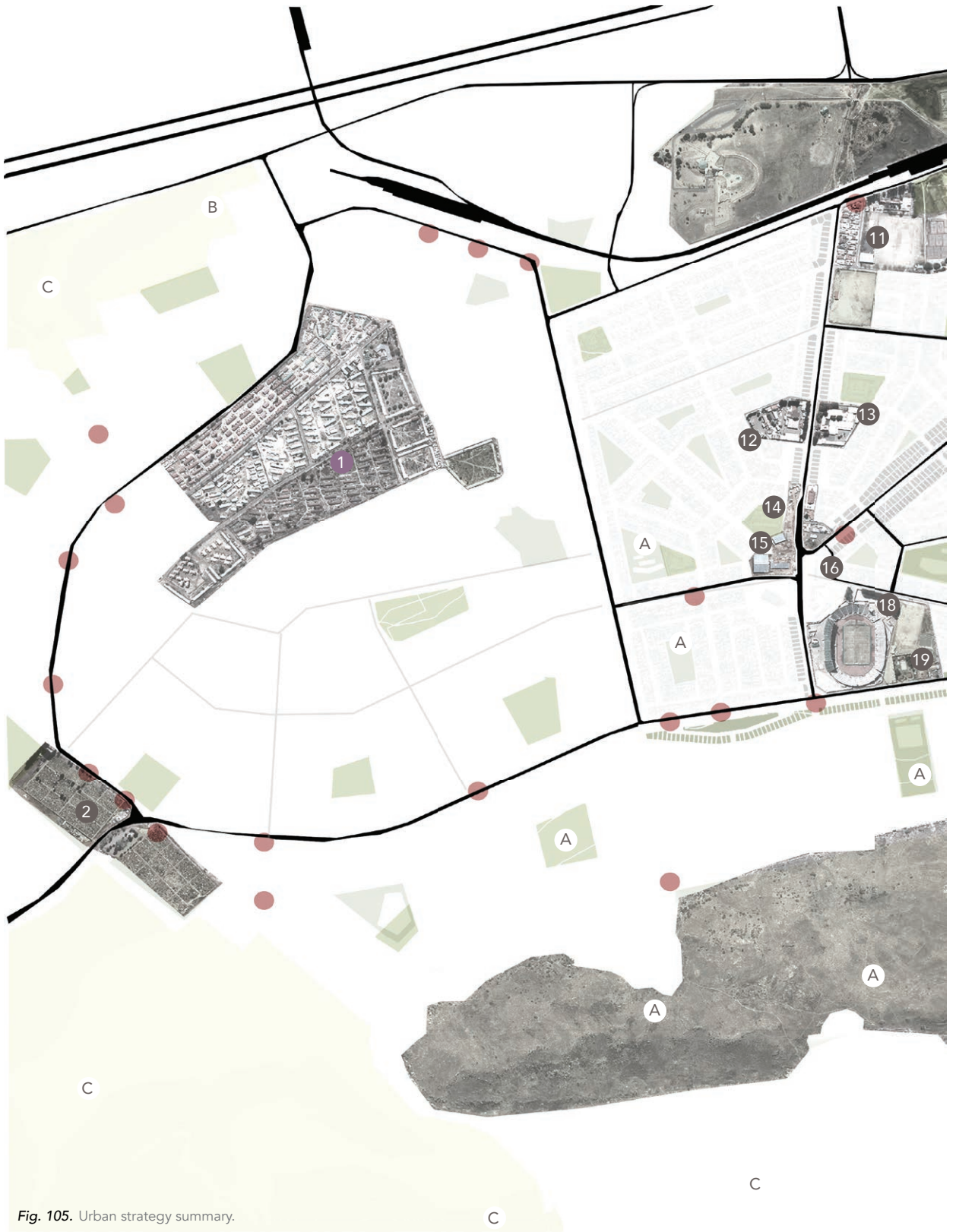
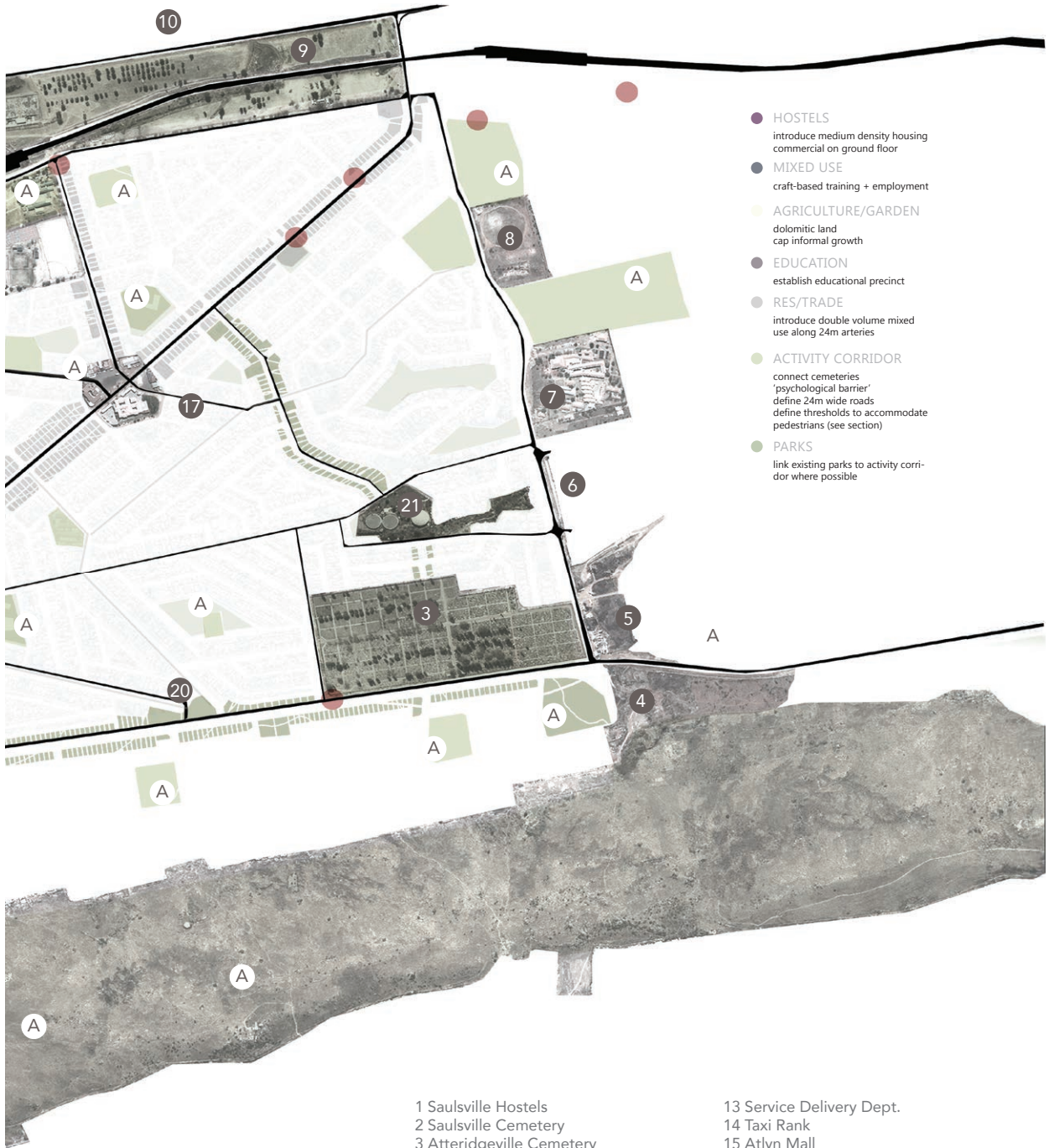


Fig. 105. Urban strategy summary.



- HOSTELS
introduce medium density housing
commercial on ground floor
- MIXED USE
craft-based training + employment
- AGRICULTURE/GARDEN
dolomitic land
cap informal growth
- EDUCATION
establish educational precinct
- RES/TRADE
introduce double volume mixed
use along 24m arteries
- ACTIVITY CORRIDOR
connect cemeteries
'psychological barrier'
define 24m wide roads
define thresholds to accommodate
pedestrians (see section)
- PARKS
link existing parks to activity corri-
dor where possible

- | | |
|----------------------------|-----------------------------|
| 1 Saulsville Hostels | 13 Service Delivery Dept. |
| 2 Saulsville Cemetery | 14 Taxi Rank |
| 3 Atteridgeville Cemetery | 15 Atlyn Mall |
| 4 Maunde Street Gateway | 16 Engen Service Centre |
| 5 SS Mendi Memorial | 17 Ramohebo Square |
| 6 Atlyn Mall | 18 Empty Plot (Matshiga st) |
| 7 Tshwane South College | 19 Swimming Pool |
| 8 Empty Plot (Khoza st) | 20 Empty Plot (Maunde st) |
| 9 Moroe St Park | 21 Reservoirs |
| 10 WF Nkomo - Green Strip | A School Grounds |
| 11 Mbolekwa Sports Complex | B Natural Buffer |
| 12 Municipal Offices | C Dolomitic Land |

CONNECT

Third Space



"...whether born under divine guidance or speculative urge, the pattern will dry up, and even die, unless the people forge within it a special, self-sustaining life that can survive adversity and the turn of fortune"

(Kostoff 1991:16).

Fig. 106. Urban strategy - Connect.

Starting at the urban scale, the framework attempts to draw connections between the 21 proposed sites, attempting to encourage outdoor activities. Residents can walk between these points along a route.

These connections already exist, and in order to preserve them, conclusions were drawn with regard to the transitions from the public sidewalks to the semi-private commercial outlets on the high streets. These currently provide the primary interface of activity.



Fig. 107. View over Atteridgeville | looking south east

INTERFACE

Reconfiguring thresholds

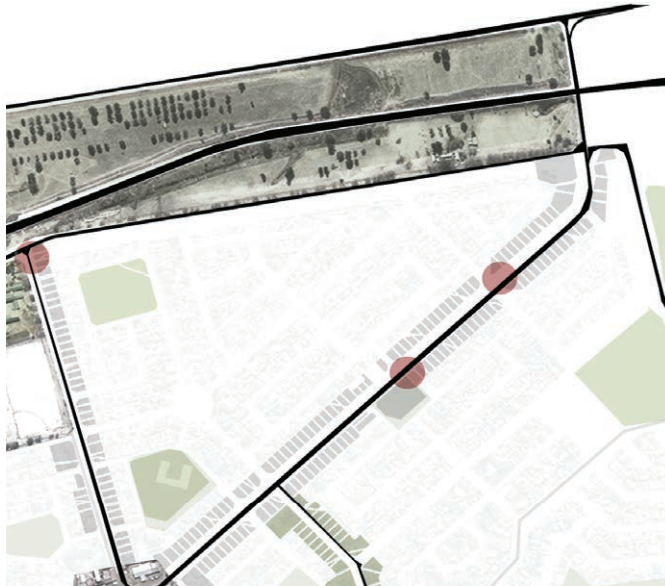


Fig. 108. Urban strategy - Interface.

By renegotiating thresholds to capitalise on the existing energy on the street edge, new developments are encouraged, drawing in passers-by away from the street.

This provides for parking opportunity at the street edge, shielding pedestrians from the traffic. The theme of *interface* aims to encourage formal development along the street fronts. It is envisioned that these commercial outlets become the first to develop, which encourages a higher density along these high streets.



Fig. 109. Section illustrating micro-economic connection to street.

ACTIVITY

As boundary

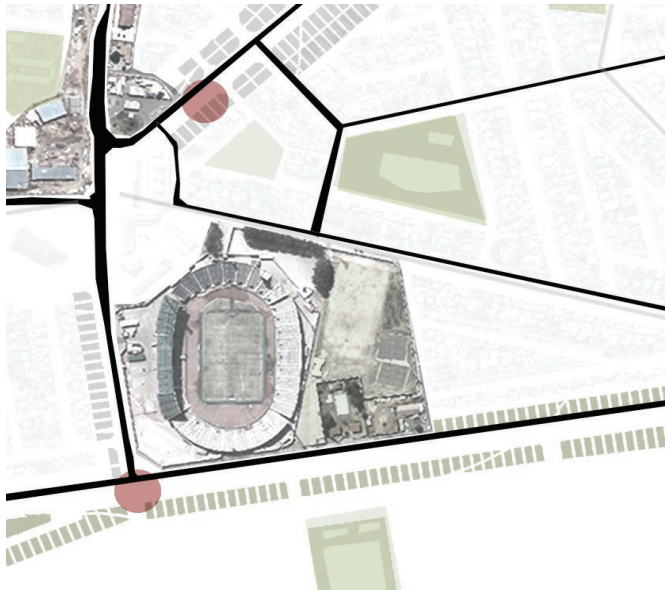


Fig. 110. Urban strategy - Activity.

Focused primarily on brown field sites, the concept of *activate* aims to diversify the urban fabric with new developments that reinvigorate social space. The example below indicates the secondary parking lot to the stadium, which is seldom used. An urban market with detachable stalls, with an open-plan configuration, provides an opportunity for daily trade whilst maintaining the usability of the parking lot during match days.

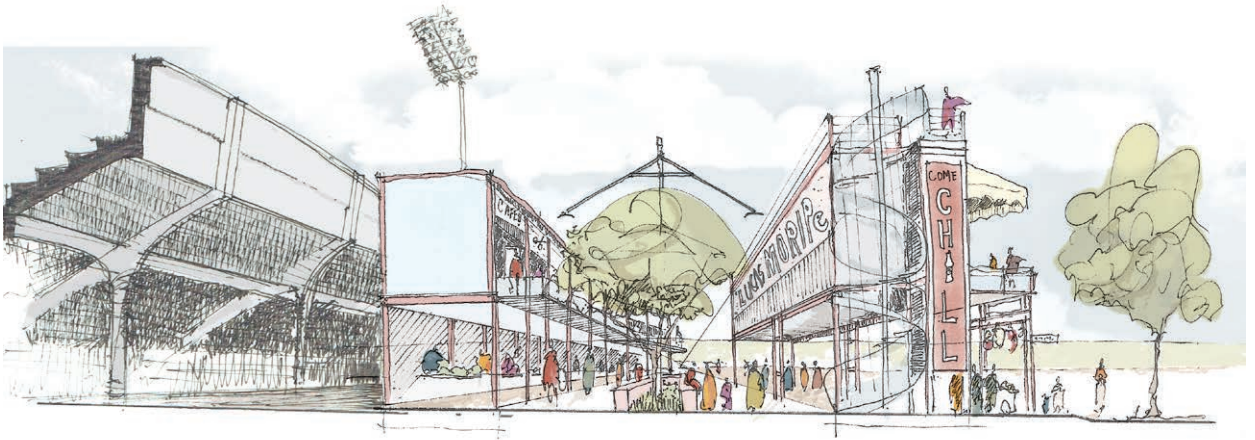


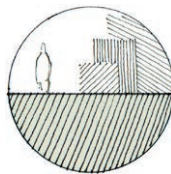
Fig. 111. Reconfiguration of Lucas Moripe Stadium parking lot: remove existing boundaries, establish trade and activate edge.

TWENTY-ONE SITES

Case studies



DEFINITION



BARRIER



NEGLECT

Twenty-one sites have been selected as case studies. This was determined by three categories: barriers, neglect and definition. It is envisioned that these sites would form part of a larger, incremental approach to development. Each site's current condition is identified, a proposal is offered and is supported by a rationale. This process was driven by the vision intentions: connect, activity and interface.

Two of the following sites will be selected and used in volumes two and three for the individual students' dissertations.

Fig. 112. Definition, Barrier and neglect - categories of analysis.

01 SAULSVILLE HOSTELS

Mashao street

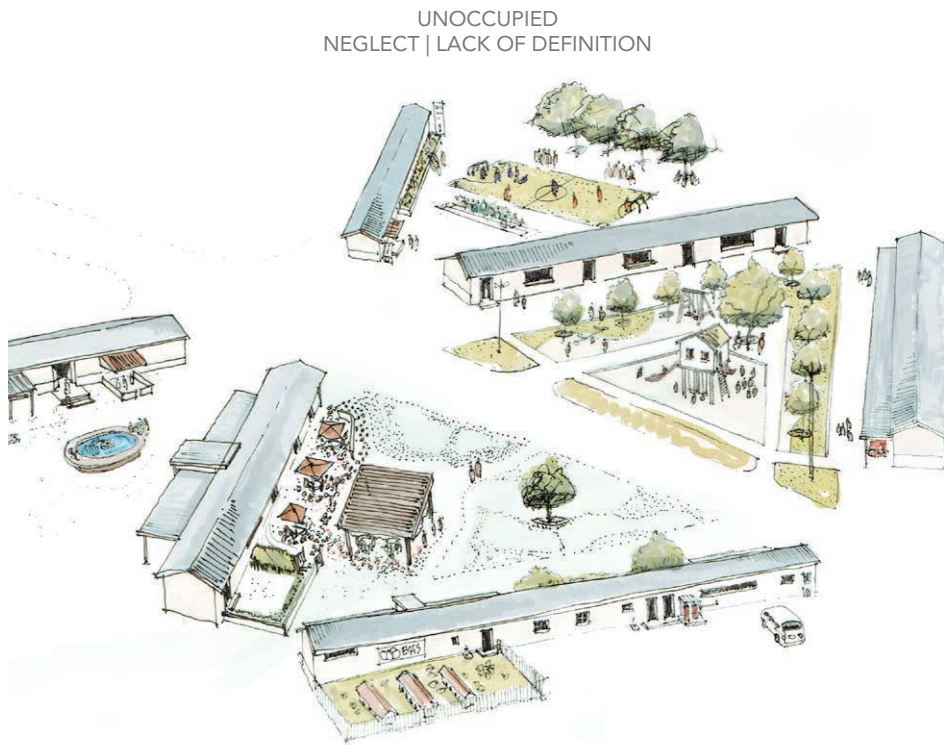


Fig. 113. Case study 01.

PROPOSAL

densification

mixed use | residential + light industrial

craft-based employment and training

RATIONALE

close proximity to successful train station

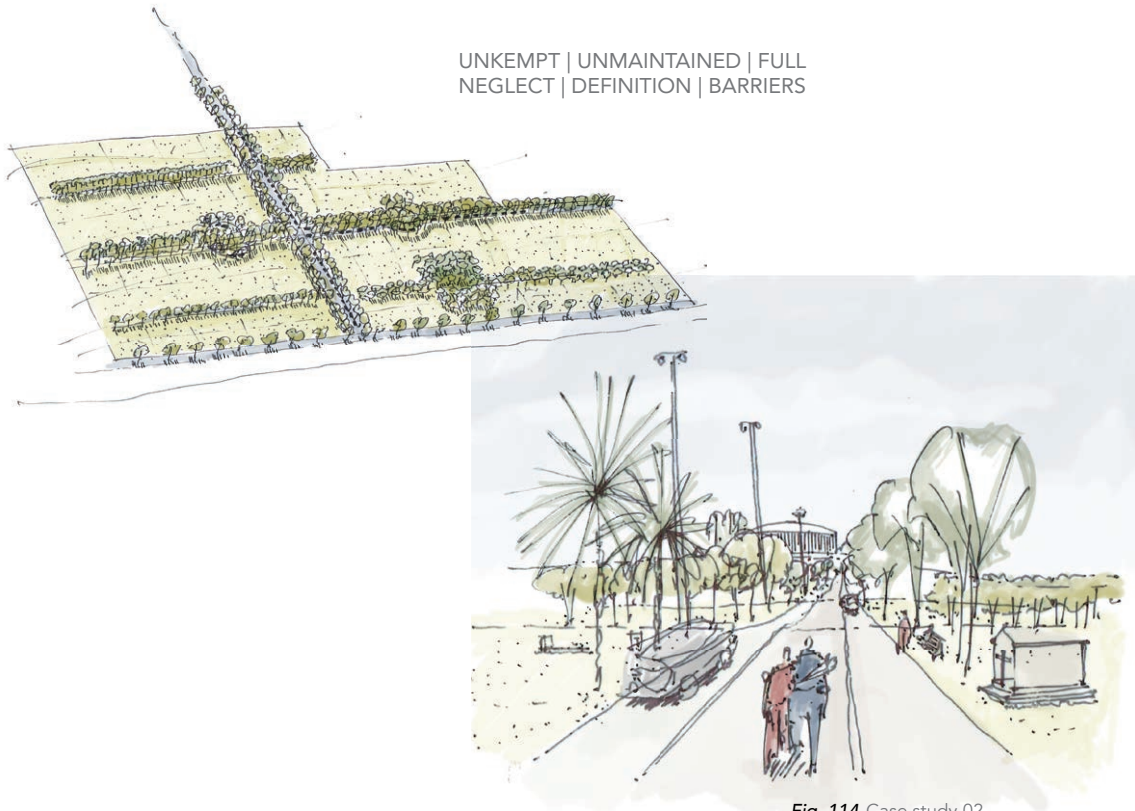
large, unused prominent site

opportunity to establish pedestrian-friendly area

responding to massive informal growth to west

02 + 03 CEMETERIES

52 Makhaza street + 453 Maunde street



UNKEMPT | UNMAINTAINED | FULL
NEGLECT | DEFINITION | BARRIERS

Fig. 114. Case study 02.

PROPOSAL

cemetery as destination
establish as public park
reconnect to people

RATIONALE

promote + knowledge ritual of visiting graves
no longer purely a burial space
redefine as memorial space
integrate with residential fabric

04 GATEWAY

465 Maunde street

UNKEMPT | UNMAINTAINED | UNOCCUPIED
NEGLECT | LACK OF DEFINITION | BARRIERS

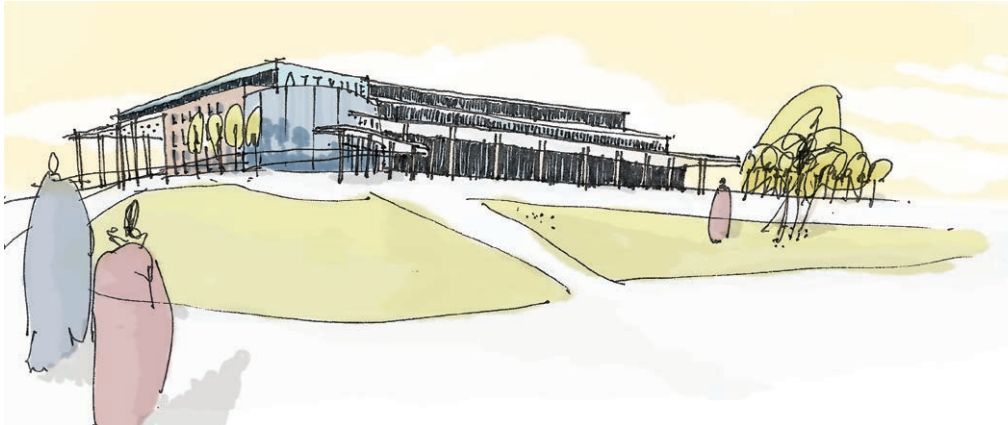


Fig. 115. Case study 03.

PROPOSAL

establish as proper gateway
reinforce public avenue towards Kalofong hospital
modal interchange supporting surrounding townships

RATIONALE

celebrate entrance to atteridgeville (oudstad)
respond to visitors

05 SS MENDI MEMORIAL

86 Khoza street

UNKEMPT | EMPTY SITE
NEGLECT | DEFINITION | BARRIERS



Fig. 116. Case study 04.

PROPOSAL

relocate war memorial from Ga-Mothakga
linear route from cemetery to monument
public park | civic space
relocate urban market from school up the road

RATIONALE

reinforce cemetery as memorial space
celebrate the unity during war
promote public space for pedestrian

06 ATLYN MALL

76 Khoza street

UNATTRACTIVE TO PEDESTRIAN | UNFRIENDLY STREET EDGE
DEFINITION | BARRIERS



Fig. 117. Case study 06.

PROPOSAL

street furniture
reduce vehicular speed
lighting for 24-hour activity

RATIONALE

encourage active edge
promote pedestrian movement

07 TSHWANE SOUTH COLLEGE

47 Khoza street

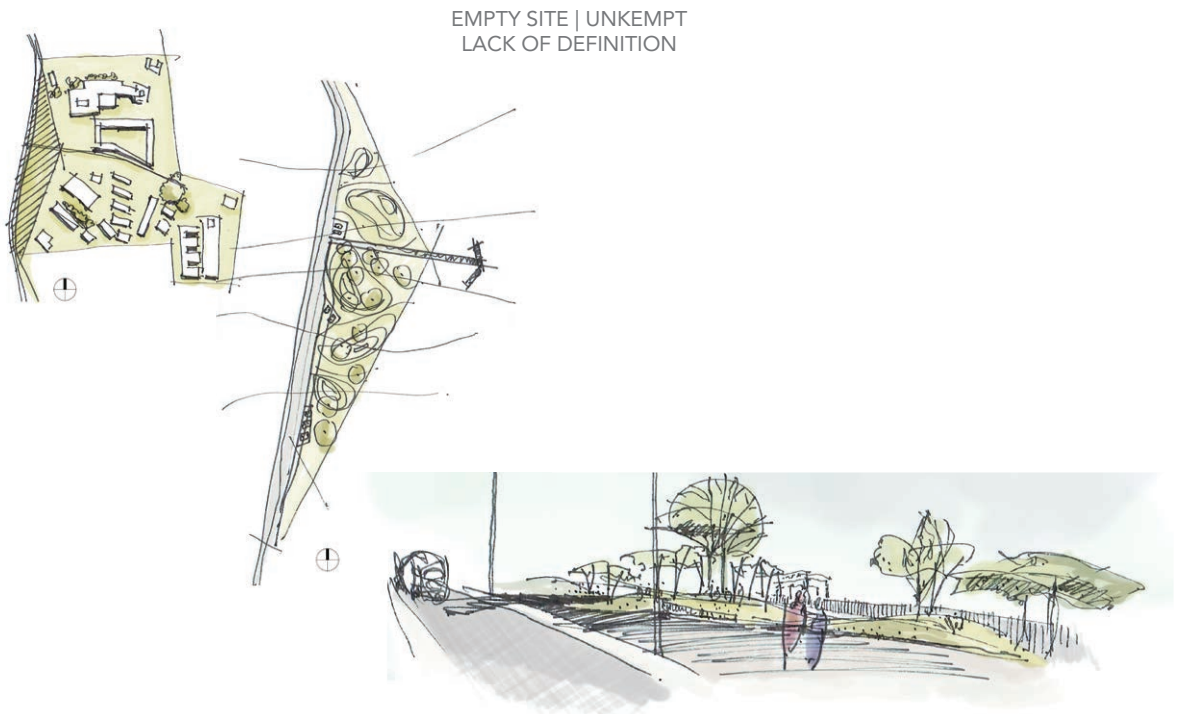


Fig. 118. Case study 07.

PROPOSAL

lighting | landscaping | street furniture
activity as barrier
limit vehicular movement to street

RATIONALE

define to contribute to pedestrian avenue
organise movement | prioritise pedestrian
promote public space for pedestrian

08 EMPTY PLOT

51 Khoza street

GAP IN SPINE | EMPTY | UNKEMPT
DEFINITION | BARRIERS | NEGLECT

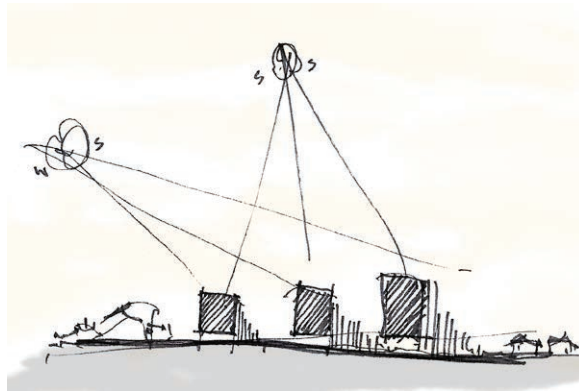
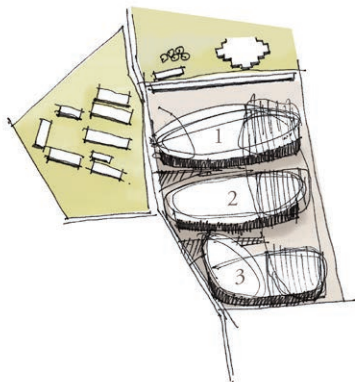


Fig. 119. Case study 08.

PROPOSAL
student housing
restaurants | trade
densification

RATIONALE
encourage active civic space
promote pedestrian movement
promote safe 24 hour activity

09 MOROE STREET PARK

1 Moroe street

SELDOM USED | NO CONNECTION TO RESIDENTS
BARRIER



Fig. 120. Case study 09.

PROPOSAL

lighting | landscaping | street furniture
remove barriers
activity as barrier

RATIONALE

disconnected from public
safety issues
promote 24 hour use

10 GREEN STRIP

WF Nkomo street

EMPTY | UNKEMPT
LACK OF DEFINITION | BARRIERS | NEGLECT

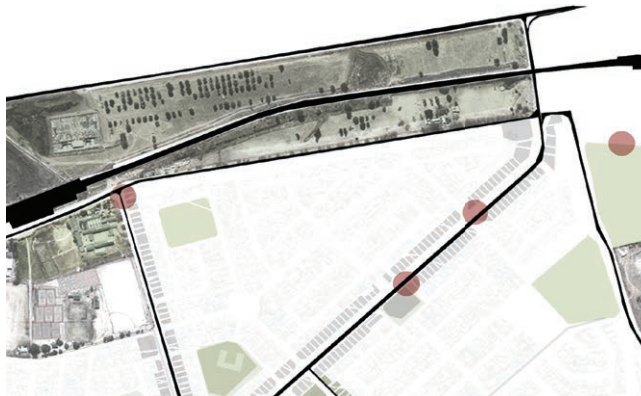


Fig. 121. Case study 10.

PROPOSAL

maintain natural greenery
small bus stop and pit-stop
picnic area

RATIONALE

create safe pickup area along main road

11 MBOLEKWA SPORTS COMPLEX

146 Sekhoho street

WELL UTILISED | BADLY MAINTAINED | SUBSTANTIAL EMPTY LAND
BARRIER

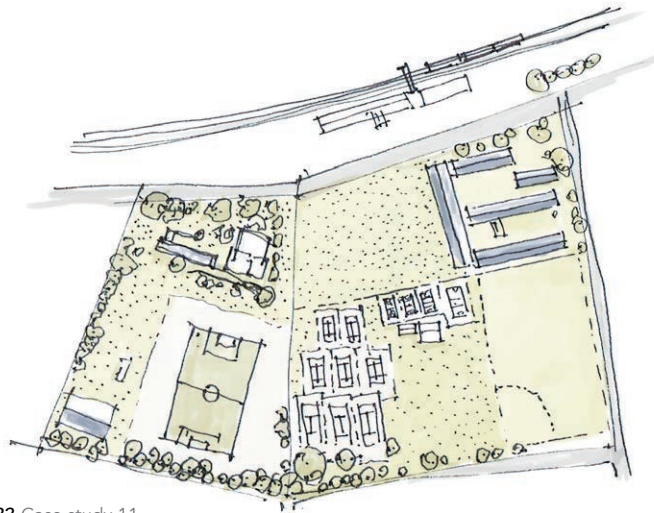


Fig. 122. Case study 11.

PROPOSAL

encourage indoor evening activities
(club soccer + cricket)
relate to street

RATIONALE

need to expose public facilities to community
establish identity within sporting community
promote competition amongst schools
awareness of healthy body and mind

12-16 ADMINISTRATIVE CORE

Khomane street

12 + 13

Municipal Offices + Service Delivery
34 + 69 Komane Street

ILL-CONSIDERATION OF PROGRAMMES |
NOT INTEGRATED AS PART OF INTENDED
ADMINISTRATIVE CORE
BARRIERS | NEGLECT

PROPOSAL

move municipal services to core
introduce banks to centre

RATIONALE

reinforce administrative core
pedestrian friendly civic centre
remove vehicles from core

14

New Taxi Rank
50 Komane street

WHITE ELEPHANT | NOT WELL UTILISED
BARRIERS | NEGLECT

PROPOSAL

form part of administrative core
introduce commercial activity
mixed use

REASONING

ill-considered proposal
not appropriate for context

15 + 16

Attlyn Mall + Engen Service Centre
52 Komane Street + Mareka Street

ILL-CONSIDERATION OF PROGRAMMES |
CIVIC SQUARE CONGESTED
DEFINITION | BARRIERS

PROPOSAL

move mall and garage north
active street edges

REASONING

promote activity spine along Komane street
remove vehicles from core



Fig. 123. Case study 12.

17

RAMOHOEBO SQUARE

(see Volume II)

1A Mareka street

UNESTABLISHED | FEW PUBLIC FACILITIES | MODAL INTERCHANGE | LOST SPACE
NEGLECT | LACK OF DEFINITION

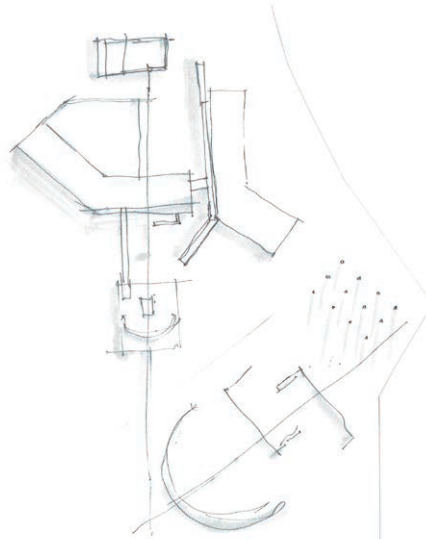


Fig. 124. Case study 17.

PROPOSAL

take advantage of diverse activities on site
defined public realm | 24-hour activities
create destination | active civic space

RATIONALE

not utilised by people
high pedestrian movement on adjacent streets
flat site - good pause area
planned heart of the city
dead site with bad street edge
revive space

18 LUCAS MORIPE STADIUM

22 Matshiga street

ADJACENT EMPTY PLOT UNUSED
DEFINITION | BARRIERS | NEGLECT

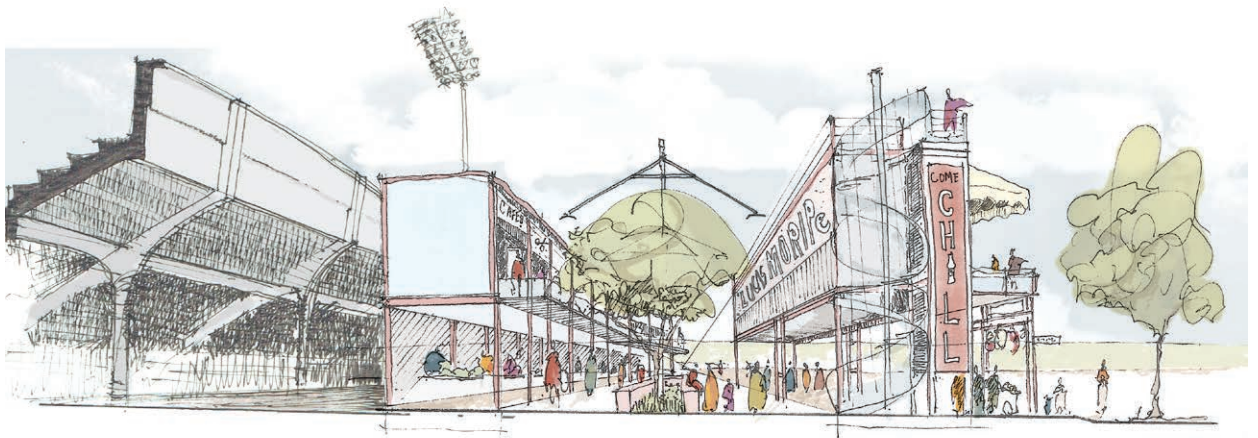


Fig. 125. Case study 18.

PROPOSAL
market as barrier

RATIONALE
stadium does not contribute to surroundings
creates harsh | dead edge
diversity is necessary during times without sporting activities

19 PUBLIC SWIMMING POOL

273 Maunde street

POOL IS WELL USED YET 'ISOLATED' | EMPTY UNDERUTILISED GROUNDS
BARRIER

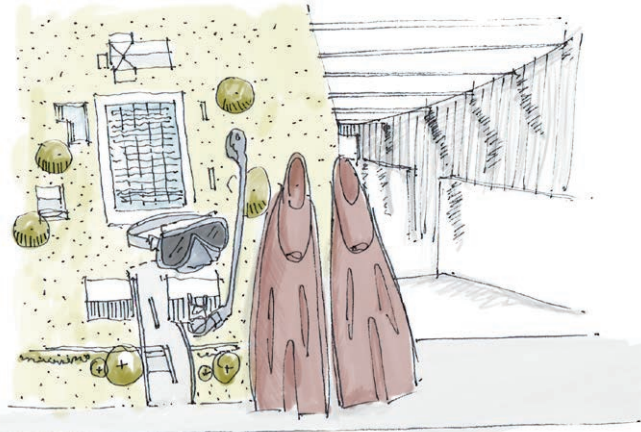


Fig. 126. Case study 19.

PROPOSAL

- introduce indoor sporting facilities
- integrate with pool
- remove boundaries
- inviting active edges
- indoor swimming pool

RATIONALE

- need to expose public facilities to community
- establish identity within sporting community
- promote competition amongst schools
- awareness of healthy body and mind
- promote competition amongst schools
- awareness of healthy body and mind

20 EMPTY PLOT

Maunde street

UNUSED
DEFINITION | BARRIERS | NEGLECT

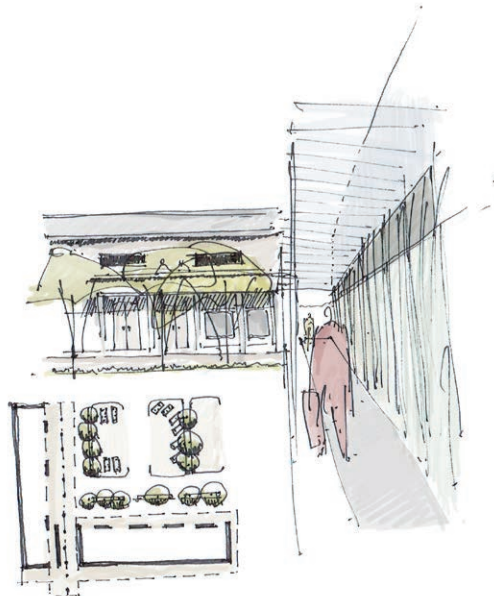


Fig. 127. Case study 20.

PROPOSAL
doctors' complex

RATIONALE
diversity of services necessary

21 RESERVOIRS

(see Volume III)

Thindisa street

HILL AS PERIPHERY CONDITION | INFRASTRUCTURE DOES NOT RESPOND TO
PUBLIC REALM | LOST SPACE
BARRIER | DEFINITION

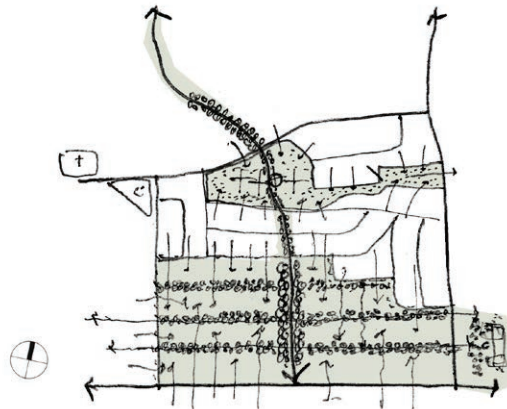


Fig. 128. Case study 21.

PROPOSAL

stitch cemetery, mall, schools, residence
green destination
appeal to schools
highlight 'sense of place'

RATIONALE

celebrate context
need for shared amenities for schools
reclaim space

A SCHOOL GROUNDS

28 schools

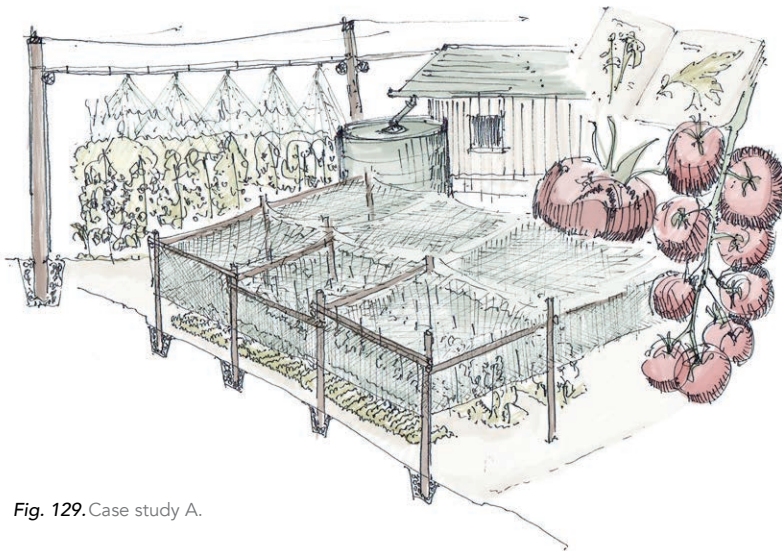


Fig. 129. Case study A.

PROPOSAL

mini urban agriculture

RATIONALE

foster sense of responsibility amongst children
expose children to environmental and social issues
promote sustainable living
reinforce ideas of existing 'urban market'
sports facilities will be shared amongst schools at complex
after school activities and competition
idea of school belonging to community
contest idea of multi-purpose halls

B NATURAL BUFFER

WF Nkomo (west)



Fig. 130. Case study B.

PROPOSAL

small scale farming
small plantations
(roses, flowers, fruit, herbs)

RATIONALE

diversity of activities
aimed at retired citizens

C INFORMAL GROWTH

West of Saulsville



Fig. 131. Case study C.

PROPOSAL

large scale agriculture

RATIONALE

barrier to cap informal growth

psychological boundary

reinforce ideas of garden city

dolomitic land is not safe for development

self-reliant community





Fig. 132. Contour model of Atteridgeville and surrounds.

CONCLUSION

The way forward

Volume I provides the historical, theoretical, quantitative and qualitative study of Atteridgeville, and is concluded by a proposal for an incremental development scheme after identifying 21 potential sites of development. Various strategies were employed to analyse the existing conditions and develop an approach and methodology for intervention.

The study revealed the suburban-township state of Atteridgeville, and the symptoms thereof, most notably, the aspects of dependency on Pretoria. The focus lay in the recreational spaces of Atteridgeville, and the culmination of the study proposes an incremental approach, taking the existing network of urban green-spaces into account, in an attempt to strengthen and build on their essence.

This document serves as the departure point for the individual schemes. This was done to acknowledge and learn from Atteridgeville's rich heritage and its community, and to develop a clear argument derived from place.

A new approach to township architecture is proposed; one which recognises townships as self-sustaining entities that may receive the same facilities as wealthier neighbourhoods. It is also considered that the asymptotic journey to suburbia is potentially dangerous as it perpetuates many of the underlying issues of a dormitory town.

LIST OF FIGURES

Fig. 01.	NEL, K. & SADIQ, A. 2016. <i>Borderlands</i> [Illustration].	i
Fig. 02.	NEL, K. & SADIQ, A. 2016. <i>View over Atteridgeville</i> [Illustration].	x
Fig. 03.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville</i> [Illustration].	02
Fig. 04.	DAUSKARDT, R.P.A. 1989. <i>Atteridgeville municipal location</i> [Illustration].	03
Fig. 05.	NEL, K. & SADIQ, A. 2016. <i>Locality Map of Pretoria</i> [Illustration].	05
Fig. 06.	NEL, K. & SADIQ, A. 2016. <i>Events from 1852 to 2016</i> [Illustration].	08
Fig. 07.	NEL, K. & SADIQ, A. 2016. <i>Summary of town-planning principles</i> [Illustration].	09
Fig. 09.	NEL, K. & SADIQ, A. 2016. <i>Comparison of Marabastad and Atteridgeville Noli maps</i> [Illustration adapted from Stals 1998:80].	10
Fig. 08.	TUROK, I. <i>Crude Urban Zoning, the Apartheid City way</i> [Illustration].	10
Fig. 10.	NEL, K. & SADIQ, A. 2016. <i>Location plan - Atteridgeville</i> [Illustration].	11
Fig. 11.	NEL, K. & SADIQ, A. 2016. <i>Garden City model: intentions vs. implementation</i> [Illustration].	11
Fig. 12.	NEL, K. & SADIQ, A. 2016. <i>Comparison of NE51/6 and 51/9</i> [Illustration adapted from Stals 1998:32].	12
Fig. 13.	NEL, K. & SADIQ, A. 2016. <i>Typical residential block in Atteridgeville</i> [Illustration].	13
Fig. 14.	NEL, K. & SADIQ, A. 2016. <i>Typical section</i> [Illustration].	13
Fig. 15.	VAN DER WALL COLLECTION. <i>Historical aerial photographs of Atteridgeville (1954)</i> Available at: www.repository.up.ac.za [Accessed: 03.03.2016].	14
Fig. 16.	NEL, K. & SADIQ, A. 2016. <i>Phasing developments of Atteridgeville</i> [Illustration].	16
Fig. 17.	NEL, K. & SADIQ, A. 2016. <i>Aerial photograph of Atteridgeville 2016</i> [Photograph adapted from UP Geography Dept, 2013].	17
Fig. 18.	NEL, K. & SADIQ, A. 2016. <i>Muckleneuk - Block study 2016</i> [Illustration].	19
Fig. 19.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville - Block study 2016</i> [Illustration].	19
Fig. 20.	NEL, K. & SADIQ, A. 2016. <i>Mamelodi - Block study 2016</i> [Illustration].	20
Fig. 21.	NEL, K. & SADIQ, A. 2016. <i>Jeffsville - Block study 2016</i> [Illustration].	20
Fig. 22.	NEL, K. & SADIQ, A. 2016. <i>Looking over Atteridgeville</i> [Illustration].	21
Fig. 23.	NEL, K. & SADIQ, A. 2016. <i>A new collective vision</i> [Illustration from UP Geography Dept, 2013].	24
Fig. 24.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville photomontage</i> [Photomontage].	26
Fig. 25.	NEL, K. & SADIQ, A. 2016. <i>Road and rail analysis</i> [Illustration].	27
Fig. 26.	NEL, K. & SADIQ, A. 2016. <i>Ambulation, nodes and public transport analysis</i> [Illustration].	28
Fig. 27.	NEL, K. & SADIQ, A. 2016. <i>Education facilities</i> [Illustration].	29
Fig. 28.	NEL, K. & SADIQ, A. 2016. <i>Municipal mapping</i> [Illustration].	30
Fig. 29.	NEL, K. & SADIQ, A. 2016. <i>Recreation facilities</i> [Illustration].	31
Fig. 30.	NEL, K. & SADIQ, A. 2016. <i>Cultural and historical points of interest</i> [Illustration].	32
Fig. 31.	NEL, K. & SADIQ, A. 2016. <i>Urban greenspaces of Atteridgeville</i> [Illustration].	33
Fig. 32.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville photomontage</i> [Photomontage].	36
Fig. 33.	NEL, K. & SADIQ, A. 2016. <i>Streets of Atteridgeville 01</i> [Photograph].	37
Fig. 34.	NEL, K. & SADIQ, A. 2016. <i>Streets of Atteridgeville 02</i> [Photograph].	38

Fig. 35.	NEL, K. & SADIQ, A. 2016. <i>Looking south-east towards Atteridgeville</i> [Photograph].	39
Fig. 36.	NEL, K. & SADIQ, A. 2016. <i>East view from Lucas Moripe Stadium</i> [Photograph].	41
Fig. 37.	NEL, K. & SADIQ, A. 2016. <i>South-east view from Lucas Moripe Stadium</i> [Photograph].	41
Fig. 38.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville public swimming pool</i> [Photograph].	41
Fig. 39.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville public swimming pool</i> [Photograph].	41
Fig. 42.	NEL, K. & SADIQ, A. 2016. <i>Looking south down Hlahla street</i> [Photograph].	42
Fig. 40.	NEL, K. & SADIQ, A. 2016. <i>Icecream vendor riding now Mareka street</i> [Photograph].	42
Fig. 41.	NEL, K. & SADIQ, A. 2016. <i>View down Ramushu street</i> [Photograph].	42
Fig. 44.	NEL, K. & SADIQ, A. 2016. <i>Southern view towards mosque from Ramohoebo Square</i> [Photograph].	43
Fig. 45.	NEL, K. & SADIQ, A. 2016. <i>Mareka and Masibi street intersection</i> [Photograph].	43
Fig. 43.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Clinic on Mareka street</i> [Photograph].	43
Fig. 46.	NEL, K. & SADIQ, A. 2016. <i>Southern view of Atteridgeville Clinic on Ramohoebo Square</i> [Photograph].	44
Fig. 47.	NEL, K. & SADIQ, A. 2016. <i>Looking east over Ramohoebo Square</i> [Photograph].	44
Fig. 48.	NEL, K. & SADIQ, A. 2016. <i>View of the burnt remains of Sekgamorogo Shopping Centre</i> [Photograph].	44
Fig. 49.	NEL, K. & SADIQ, A. 2016. <i>View towards Atteridgeville Post Office</i> [Photograph].	44
Fig. 50.	NEL, K. & SADIQ, A. 2016. <i>Recycling next to Atteridgeville Clinic</i> [Photograph].	45
Fig. 53.	NEL, K. & SADIQ, A. 2016. <i>View towards CBD down Mabothe street</i> [Photograph].	45
Fig. 51.	NEL, K. & SADIQ, A. 2016. <i>Church and drycleaners on Seeiso street</i> [Photograph].	45
Fig. 52.	NEL, K. & SADIQ, A. 2016. <i>Sekgamorogo Shopping Centre</i> [Photograph].	45
Fig. 56.	NEL, K. & SADIQ, A. 2016. <i>Looking east Tladi street</i> [Photograph].	46
Fig. 55.	NEL, K. & SADIQ, A. 2016. <i>View towards CBD down Mabothe street</i> [Photograph].	46
Fig. 54.	NEL, K. & SADIQ, A. 2016. <i>Segoapa street</i> [Photograph].	46
Fig. 57.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Cemetery on Shilote street</i> [Photograph].	47
Fig. 58.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Cemetery looking east</i> [Photograph].	47
Fig. 60.	NEL, K. & SADIQ, A. 2016. <i>House on Thindisa street</i> [Photograph].	48
Fig. 59.	NEL, K. & SADIQ, A. 2016. <i>West on Mankopane street</i> [Photograph].	48
Fig. 61.	NEL, K. & SADIQ, A. 2016. <i>North-west on Seabi street</i> [Photograph].	49
Fig. 63.	NEL, K. & SADIQ, A. 2016. <i>West on Thindisa street</i> [Photograph].	49
Fig. 62.	NEL, K. & SADIQ, A. 2016. <i>Looking east at Holy Trinity High School</i> [Photograph].	49
Fig. 65.	NEL, K. & SADIQ, A. 2016. <i>Classrooms of Holy Trinity High School on Khoza street</i> [Photograph].	50
Fig. 64.	NEL, K. & SADIQ, A. 2016. <i>Holy Trinity High School on Khoza street</i> [Photograph].	50
Fig. 66.	NEL, K. & SADIQ, A. 2016. <i>Laudium reservoir from Maunde street</i> [Photograph].	51
Fig. 67.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoirs - west towards stadium</i> [Photograph].	51
Fig. 68.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoirs - south-east</i> [Photograph].	51
Fig. 69.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoirs - south</i> [Photograph].	52
Fig. 70.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoirs - north</i> [Photograph].	52
Fig. 71.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoir - north</i> [Photograph].	52
Fig. 72.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville Reservoir - east</i> [Photograph].	52
Fig. 73.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville photomontage</i> [Photograph].	54

Fig. 74.	NEL, K. & SADIQ, A. 2016. <i>View towards CBD down Mabothe street</i> [Photograph].	55
Fig. 75.	NEL, K. & SADIQ, A. 2016. <i>Section of Maunde street</i> [Illustration].	55
Fig. 76.	NEL, K. & SADIQ, A. 2016. <i>Diagram: issues</i> [Illustration].	56
Fig. 78.	NEL, K. & SADIQ, A. 2016. <i>Diagram: occupation of the streets of Atteridgeville</i> [Illustration].	57
Fig. 77.	NEL, K. & SADIQ, A. 2016. <i>View of Atteridgeville from Kgere street</i> [Illustration].	57
Fig. 79.	NEL, K. & SADIQ, A. 2016. <i>Section through church (ex-theatre)</i> [Illustration].	59
Fig. 80.	NEL, K. & SADIQ, A. 2016. <i>Section through Lucas Moripe Stadium across Pilane street</i> [Illustration].	59
Fig. 81.	NEL, K. & SADIQ, A. 2016. <i>Section through spaza shop and Moroe street park</i> [Illustration].	59
Fig. 82.	NEL, K. & SADIQ, A. 2016. <i>Section through children's' playground on Morula street</i> [Illustration].	59
Fig. 83.	NEL, K. & SADIQ, A. 2016. <i>Pocket park on Molope street</i> [Illustration].	59
Fig. 84.	NEL, K. & SADIQ, A. 2016. <i>Carwash on Mareka street</i> [Illustration].	61
Fig. 85.	NEL, K. & SADIQ, A. 2016. <i>Hair salon on Mareka street</i> [Illustration].	61
Fig. 86.	NEL, K. & SADIQ, A. 2016. <i>Section at Atlyn Mall through Khoza street</i> [Illustration].	61
Fig. 87.	NEL, K. & SADIQ, A. 2016. <i>Typical hillside home</i> [Illustration].	62
Fig. 88.	NEL, K. & SADIQ, A. 2016. <i>Hillside home</i> [Illustration].	62
Fig. 89.	NEL, K. & SADIQ, A. 2016. <i>Home-run business on Mareka street</i> [Illustration].	62
Fig. 90.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville photomontage</i> [Photomontage].	64
Fig. 91.	UNKNOWN. [n.d.] <i>Etch of Alberti</i> . Available at: https://www.thetotalsite.it/wp-content/uploads/2010/12/leonobattista-alberti-1404-1472-italian-mathematician-architect-painter-and-writer-stipple-engraving-french-1838-granger.jpg [Accessed 19.02.2016].	66
Fig. 93.	NEL, K. & SADIQ, A. 2016. <i>The relationship between the built environment and the citizens</i> [Illustration].	66
Fig. 92.	NEL, K. & SADIQ, A. 2016. <i>Diagram illustrating the city as a series of rooms in a house</i> [Illustration].	66
Fig. 94.	GRANGER. [n.d.] <i>Photograph of Hannah Arendt</i> . Available at: http://www.mantlethought.org/sites/default/files/styles/article_image_breakpoints_theme_mantle_large_1x/public/article/299/body-images/young%20arendt.jpg?itok=yPZGlf3y [Accessed 19.02.2016].	67
Fig. 95.	NEL, K. & SADIQ, A. 2016. <i>The value of including live, work, and play in cities</i> [Illustration].	67
Fig. 96.	UNKNOWN. [n.d.] <i>Photograph of Patrick Geddes</i> . Available at: http://static1.squarespace.com/static/554a4780e4b046069e1d04e6/t/55bf19e4e4b049e5a7a61f66/1438587365094/ [Accessed 19.02.2016].	68
Fig. 97.	GEDDES, P. 1947. <i>Geddes' conservative surgery</i> . Available at: https://www.recivilization.net/img/conservativesurgery.jpg [Accessed 19.06.20.16].	68
Fig. 98.	NEL, K. & SADIQ, A. 2016. <i>Suburbia 01</i> [Photomontage].	69
Fig. 99.	NEL, K. & SADIQ, A. 2016. <i>Suburbia 02</i> [Photograph].	70
Fig. 101.	NEL, K. & SADIQ, A. 2016. <i>The merging of elements</i> [Illustration].	71
Fig. 100.	NEL, K. & SADIQ, A. 2016. <i>First, second and third place</i> [Illustration].	71
Fig. 102.	NEL, K. & SADIQ, A. 2016. <i>Mediating</i> [Photograph series].	72
Fig. 103.	NEL, K. & SADIQ, A. 2016. <i>Psychological city walls</i> [Illustration].	72
Fig. 104.	NEL, K. & SADIQ, A. 2016. <i>Atteridgeville photomontage</i> [Photomontage].	74
Fig. 105.	NEL, K. & SADIQ, A. 2016. <i>Urban strategy summary</i> [Illustration].	75
Fig. 106.	NEL, K. & SADIQ, A. 2016. <i>Urban strategy - Connect</i> [Illustration].	77

Fig. 107.	NEL, K. & SADIQ, A. 2016. <i>View over Atteridgeville</i> [Illustration].	78	
Fig. 108.	NEL, K. & SADIQ, A. 2016. <i>Urban strategy - Interface</i> [Illustration].	79	
Fig. 109.	NEL, K. & SADIQ, A. 2016. <i>Section illustrating micro-economic connection to street</i> [Illustration].		80
Fig. 110.	NEL, K. & SADIQ, A. 2016. <i>Urban strategy - Activity</i> [Illustration].	81	
Fig. 111.	NEL, K. & SADIQ, A. 2016. <i>Reconfiguration of Lucas Moripe Stadium</i> [Illustration].	82	
Fig. 112.	NEL, K. & SADIQ, A. 2016. <i>Definition, Neglect, Barriers - categories of analysis</i> [Illustration].	84	
Fig. 113.	NEL, K. & SADIQ, A. 2016. <i>Case study 01</i> [Illustration].	85	
Fig. 114.	NEL, K. & SADIQ, A. 2016. <i>Case study 02</i> [Illustration].	86	
Fig. 115.	NEL, K. & SADIQ, A. 2016. <i>Case study 03</i> [Illustration].	87	
Fig. 116.	NEL, K. & SADIQ, A. 2016. <i>Case study 04</i> [Illustration].	88	
Fig. 117.	NEL, K. & SADIQ, A. 2016. <i>Case study 06</i> [Illustration].	89	
Fig. 118.	NEL, K. & SADIQ, A. 2016. <i>Case study 07</i> [Illustration].	90	
Fig. 119.	NEL, K. & SADIQ, A. 2016. <i>Case study 08</i> [Illustration].	91	
Fig. 120.	NEL, K. & SADIQ, A. 2016. <i>Case study 09</i> [Illustration].	92	
Fig. 121.	NEL, K. & SADIQ, A. 2016. <i>Case study 10</i> [Illustration].	93	
Fig. 122.	NEL, K. & SADIQ, A. 2016. <i>Case study 11</i> [Illustration].	94	
Fig. 123.	NEL, K. & SADIQ, A. 2016. <i>Case study 12</i> [Illustration].	95	
Fig. 124.	NEL, K. 2016. <i>Case study 17</i> [Illustration].	96	
Fig. 125.	NEL, K. & SADIQ, A. 2016. <i>Case study 18</i> [Illustration].	97	
Fig. 126.	NEL, K. & SADIQ, A. 2016. <i>Case study 19</i> [Illustration].	98	
Fig. 127.	NEL, K. & SADIQ, A. 2016. <i>Case study 20</i> [Illustration].	99	
Fig. 128.	SADIQ, A. 2016. <i>Case study 21</i> [Illustration].	100	
Fig. 129.	NEL, K. & SADIQ, A. 2016. <i>Case study A</i> [Illustration].	101	
Fig. 130.	NEL, K. & SADIQ, A. 2016. <i>Case study B</i> [Illustration].	102	
Fig. 131.	NEL, K. & SADIQ, A. 2016. <i>Case study C</i> [Illustration].	103	
Fig. 132.	NEL, K. & SADIQ, A. 2016. <i>Contour model of Atteridgeville</i> [Photograph].	105	

LIST OF REFERENCES

BOOKS

- ARENDR, H. 1958. *The human condition*. Chicago: University of Chicago Press.
- DEE, C. 2001. *Form and fabric in landscape architecture: a visual introduction*. Abington: Spon Pres.
- GEDDES, P. 1947. *Town planning in Kapurthala: A report to H.H. the Maharaja of Kapurthala, 1917*, in Tyrwhitt, J. : *Patrick Geddes in India*. London: Lund Humphries, pp24
- HOWARD, E. 1898. *To-morrow: A peaceful path to real reform*. London: Swan Sonnenschein & Co.
- KOSTOF, S. 1991. *The city shaped: urban patterns and meanings through history*. London: Thames & Hudson.
- TUROC, I. 1993. *Urban planning in the transition from apartheid*. Glasgow: University of Strathclyde, Centre for Planning.
- MAFOLO, M.T. 2015. *Pheli - The narrative history, 75th anniversary of Atteridgeville*. [S.I.]:[S.n.].
- OLDENBURG, R. 1989. *The great good place*. New York: Paragon House.

JOURNALS

- DAUSKARDT, R.P.A. 1989. Local state, segregation and transport provision: The Atteridgeville bus boycott. *The South African geographical journal*. 71(2)1947: 109-114.
- ARENDR, H. 1960. Freedom and politics: A lecture. *Chicago Review*. Spring 14(1): 28-46.

THESES

- STALS, M. 1998. *Fragmentation and Unity: The search for the design of the 'model' township. The case of Atteridgeville, Pretoria*. MProf dissertation. Katolieke Universiteit Leuven, Leuven.

GOVERNMENTAL PAPERS

CITY OF TSHWANE. 2013. *Tshwane Vision 2055*. Available online: [http://www.gis.tshwane.gov.za/Documents/Online%20version-%20CoT%202055%20vision\[smallpdf.com\].pdf](http://www.gis.tshwane.gov.za/Documents/Online%20version-%20CoT%202055%20vision[smallpdf.com].pdf) [Accessed 3 May 2016]

JUNOD, H.P. 1955. The Bantu population of Pretoria, in Engelbrecht, S.P. (chairman) *Pretoria: The City Council of Pretoria*, pp 61-85.

STATUTES (not extant)

SOUTH AFRICA. 1913. *The Natives Land Act* (Act No. 27 of 1913) .

SOUTH AFRICA, 1923. *The Natives Urban Act* (Act No. 21 of 1923).

SOUTH AFRICA. 1950. *The Population Registration Act* (Act No. 30 of 1950) .

SOUTH AFRICA. 1950. *The Group Areas Act* (Act No. 41 of 1950).

SOUTH AFRICA. 1953. *The Reservation of Separate Amenities Act* (Act No. 49 of 1953).

SOUTH AFRICA. 1979. *The Slums Act* (Act No. 76 of 1979)