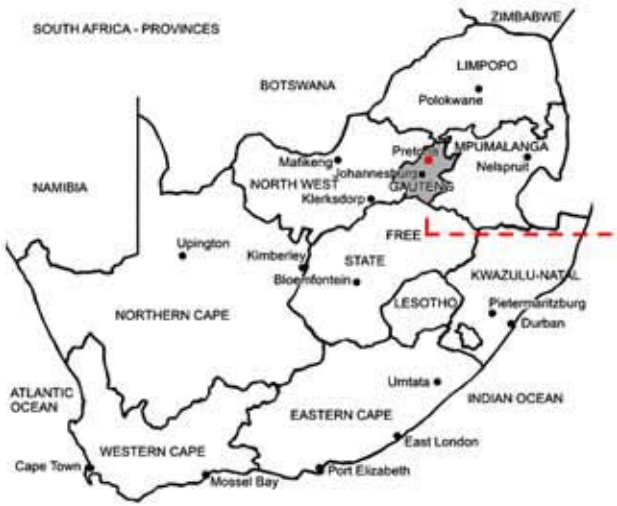
Context

1

1.1 Project location



001 (www.samaps.co.za)

Southern Africa with Pretoria in the north of the Gauteng province.

002 (COUNCIL:MUNITORIA:2007)

The CBD of Pretoria with Marabastad highlighted in red and the specific site framed with the red box

003 (COUNCIL:MUNITORIA:2007)

The specific site with its surrounding context

1.2 Project overview

Marabastad is a vibrant part of the city. There is a vast unofficial, visible but unrecorded economy of a multitude of tiny enterprises and occupations. This group was and to some extent can still be seen as the city's unrecorded residents. This community has the potential to evolve into a fully serviced diverse and economically viable suburb. This dissertation attempts to suggest ways in which the existing circumstances can be manipulated, enhanced and encouraged to create a platform on which these activities can flourish. This formalised solution or created environment with its structures, boundaries and limitations would allow the informal activities to grow even stronger.

The diversity in Marabastad is not limited to the various cultures and racial groups in this area; it also extends to its built environment. This has manifested itself in the diverse architectural styles and typologies that have grown here and have given Marabastad its character. The CBD grid of the City of Tshwane is extended into Marabastad but on a much smaller scale and size. This creates smaller city blocks geared towards pedestrians and small business activity spines, with pedestrian movement currently favouring most of Marabastad's retail: small business.

Informal activities seem to now emerge around organised activities and fixed structures such as taxi and bus routes, bus stops and pedestrian routes. This pattern allows for development as it resulted from the organising of these individual activities and cultures as interdependent systems. The community of Marabastad is now able to represent itself as a collective within the City of Tshwane.

This thesis suggests that the issues and problems facing this particular community can be realised and addressed by "drawing on a variety of information from the multitude of small, relatively simple and local elements." (HAMDI,N:2004:21) A system where a platform is created that allows for effective communication emergence and development from the bottom up; from the individual to the collective.

To put in place formal systems and activities in a community such as Marabastad would have a negative impact in terms of outcomes and put to death the diversity that makes Marabastad the community it is today, hence the proposal for the setting of a stage on which the community can create, recreate and develop the peculiarities that allow them to identify function and live within Marabastad. As an attempt to promote and enlarge these informal activities and to address the need for proper services and infrastructure of integrity, a building material recycling depot will be introduced. It will be located in the city context to be used by the building companies of the city and still provide a level of informality in order to enhance the local informal activities of Marabastad.

1.3 Site analysis

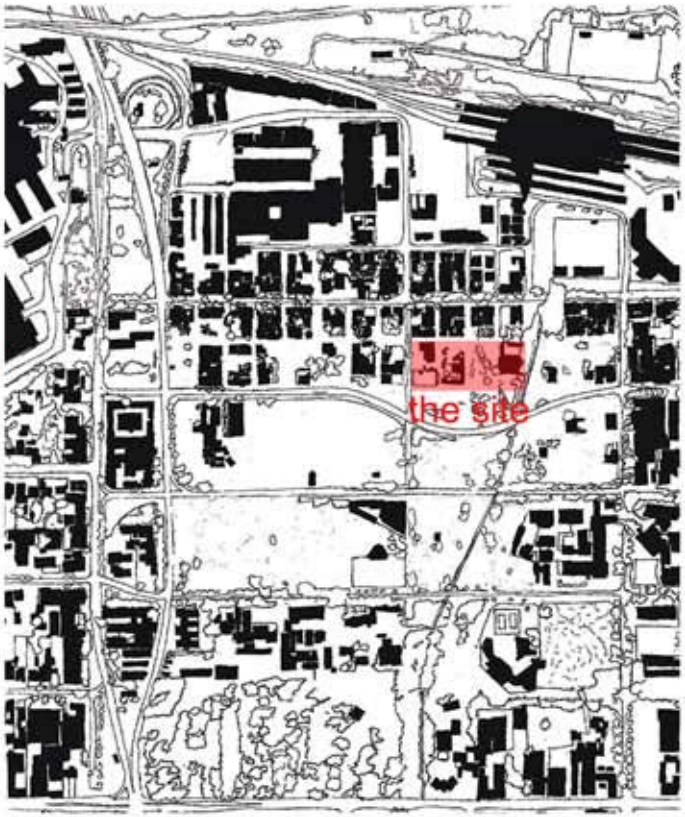
1.3.1 Macro scale

In the existing urban fabric of Marabastad it is clear that there is a lack of density, unlike the rest of the city blocks of the CBD. There exist urban density cavities that need to be filled to extend the continual density pattern throughout the city linking the different activities and functions. The selected site with its proposed series of programmes will aim to start a process of generating urban fabric from itself acting as a catalyst for the process.

With the regeneration of urban fabric through building initiatives, Marabastad will start to reconnect with the CBD restoring its urban dignity. The larger inner city block density should start to overlap into the finer Marabastad grid. The proposed dissertation is to create a gradual transition from the inner city density to the fine Marabastad grid.

004 (COUNCIL:MUNITORIA:2007)

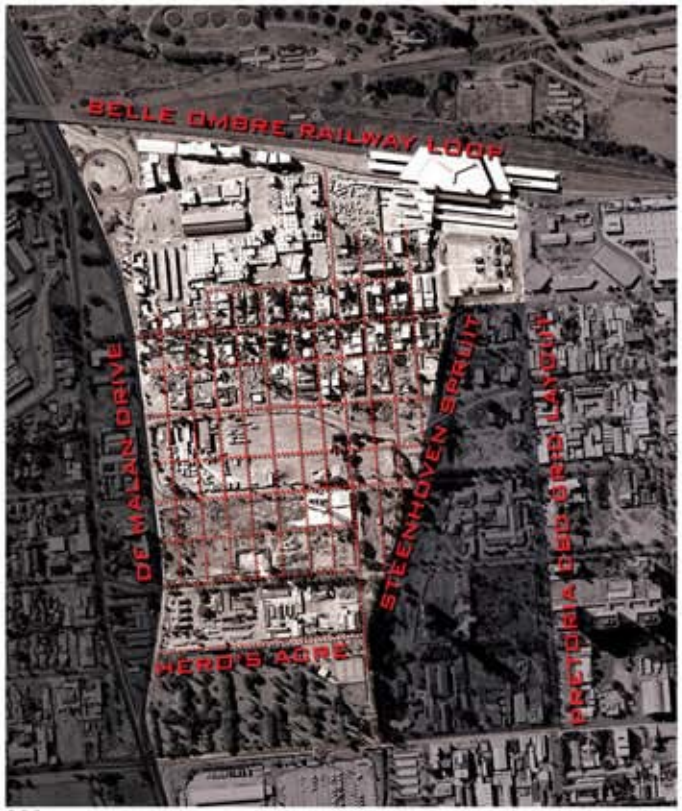
The CBD of Pretoria with Marabastad highlighted in red



005 (AZIZ TAYOB ARCHITECTS: 2002:50)

Figure ground of the urban fabric of Marabastad in 1998

1.3.2 Meso scale



006 (MARABASTAD GROUP FRAMEWORK:2007)

The barriers of Marabastad

The growth and extension of the Marabastad area is restricted and inhibited with physical boundaries around its current periphery.

To the north where the Belle Ombre train station is located, the railway loop with the ridge to its north prevents expansion. At the eastern boundary runs the channelised Steenhoven Spruit, acting as the transition in scale and size of the city's grid blocks. South expansion is buffered by the Heroe's Acre cemetery, filling a whole city block and to the west is a main road artery of multiple lanes: D.F.Malan Drive.

Although physical barriers exist, there are also social barriers between the inner city and Marabastad. This is due to the racial issues of the past that altered the area physically and the community of the area. The proposed dissertation project will overcome this social barrier with the functions it will provide. The building material recycling depot is open to anyone who wants to use it, allowing people from outside Marabastad to enter the community. A sense and awareness of recycling will be cultivated, and that is not bound to racial groups or the past. This will create a link between all the users of the city, starting with the breakdown of social barriers.

Historical background of Marabastad

(MARABASTAD GROUP FRAMEWORK:2007)

Early 1800's
Ndebele leader Mzilikazi attacked and drove local tribes from the highveld.

1840
White Voortrekkers moved into areas previously occupied by indigenous people.

1855
Pretoria was founded and named after Voortrekker Andries Pretorius. The area around the Steenhoven Spruit became known as Goedehoop and later Veldskoendorp.

1860
Pretoria was proclaimed capital city of the Transvaal Republic.

1867
Area along the east bank of the Steenhoven Spruit set aside for black people. The area was named Schoolplaats

1870
Chief Maraba set up his *kraal* on the western bank of the Steenhoven Spruit. Black people employed as servants found accommodation here. Over time a large settlement developed now known as Marabastad.

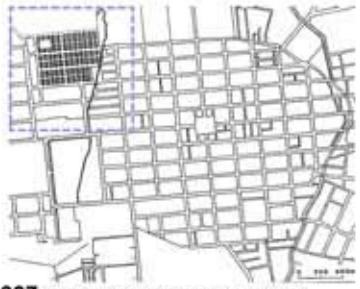
1877
The First Boer War broke out after the British annexed the Transvaal.

1880
Gold was discovered on the Witwatersrand.

1881
First Boer War ended with the Pretoria Convention in 1881. The convention gave Indian and Coloured people the right to own land in the Transvaal, leading to many Indian traders to migrate from Natal.

1885
Laws were passed that restricted property ownership and citizenship of Indians. Bazaars were set up where they could trade.

1800 **1850** **1875** **1885**



007 (AZIZ TAYOB ARCHITECTS: 2002:45)

The urban grid of the Pretoria inner city, with the smaller grid of the Asiatic Bazaar (**1950**)

1852
Population growth among black and white people posed a potential threat to peace, white settlers proclaimed certain areas as the blacks' areas and passed laws controlling the movement of black people.

008 (AZIZ TAYOB ARCHITECTS: 2002:33)

Image of Marabastad (**1905**)

1903
Asiastic Bazaar was established as a township on a fine grid. It later developed into lively mixed used area.

1905
Marabastad and Schoolplaats consolidated into one township set aside for black people.

1912
The Pretoria town council started forced removal of residents of Marabastad to Bantule where Tshwane University of Pretoria is today.

1918
All homes in the old Marabastad demolished.

1920's
Channelisation of the Steenhoven Spruit.

1923
Natives Act is passed due to the increase of black people migrating into town, forcing black people to live in areas demarcated as black locations.

1925
Area between Steenhoven Spruit and D.F. Malan Drive, Barber Street and sewer works formed the boundaries of the new Marabastad, which developed into a vibrant community.

1934
Slums Act gave authorities power to demolish areas they deem to be slums. Marabastad was declared a slum.

1940
Authorities started to clear out the black population of Marabastad, moving many of the people to Atteridgeville. Only a small Coloured section remained.

1963
Cape Boys Location established between Jerusalem, Bloed, Struben and Ninth Streets. The location was later demolished to make way for an extravagant highway proposal.

1966
Community development acts freezed all development in Marabastad. Proposed Pretoria freeway scheme would have destroyed Marabastad and the Steenhoven Spruit.

009 (AZIZ TAYOB ARCHITECTS: 2002:47)

Asiatic bazaar (**1954**)

1987
Conceptual Master Plan for the Asiatic Bazaar was drawn up, but was never implemented.

1988
Remaining residents of Marabastad were displaced. The Belle Ombre station was built over the Steenhoven Spruit.

1993
New freeway proposal that still threatens the area today.

1994
The Birth of the New South Africa, drawing into the area many squatters, hawkers and small scale traders.

1996
The New Constitution erased all discriminating laws and policies to create i.e a free and fair new South Africa.

1900 1925 1950 1975 2000

Visual urban fabric history

(MARABASTAD GROUP FRAMEWORK:2007)

1934

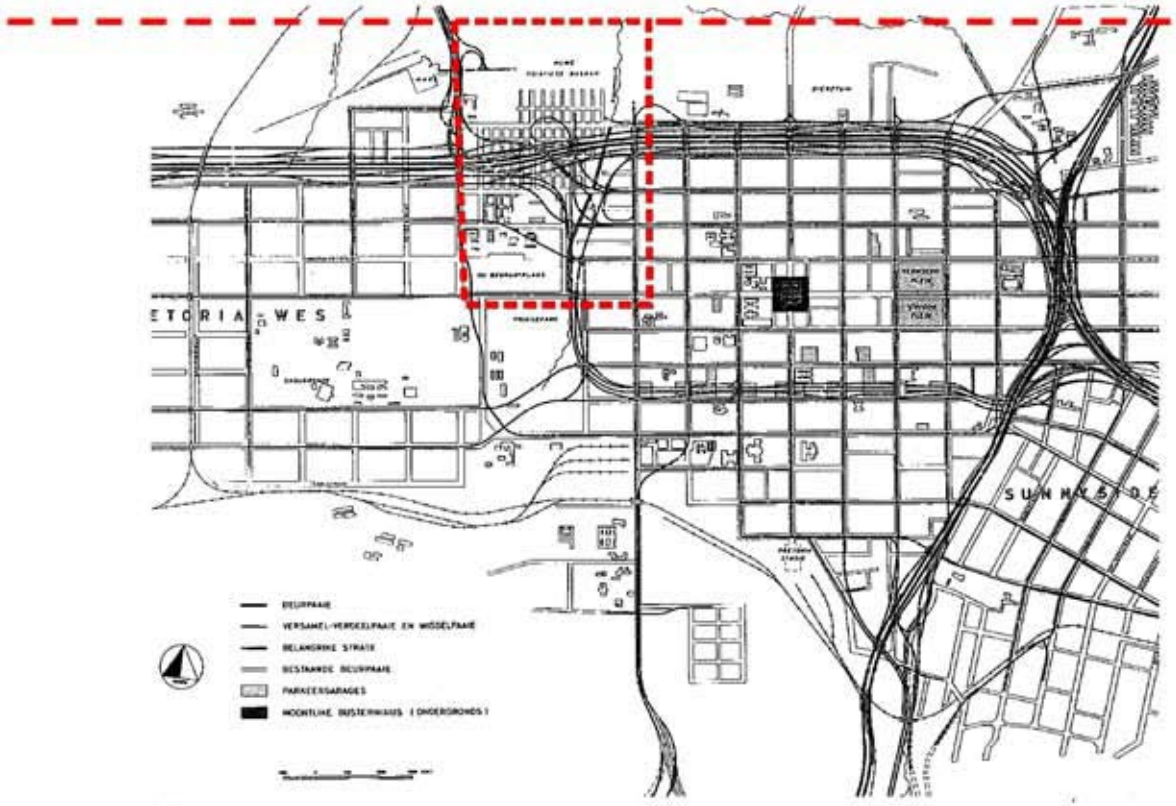
1965

1998

010 (AZIZ TAYOB ARCHITECTS: 2002:49)

Series of Marabastad Aerial Photographs

Based on a freeway proposal for Pretoria in 1967, the site selected for the material recycling depot was to become part of a major freeway circulation system giving access to the city via an interchange over the Asiatic Bazaar. (BRUINETTE:1967) All the existing structures had been demolished when suddenly the idea was dismissed. But it was too late, as Marabastad had already been destroyed. After the damage was done, there were plans to rebuild and re-establish the community as it was before. But March-past was never part of the inner city plan again. Today it is still the cavity in the urban fabric of Pretoria.



011 (AZIZ TAYOB ARCHITECTS: 2002:95)

012 (AZIZ TAYOB ARCHITECTS: 2002:95)

1967 Freeway Proposal for Pretoria Interchange over the Asiatic Bazaar

Heritage background of the Marabastad area

(MARABASTAD GROUP FRAMEWORK:2007)

013 (AZIZ TAYOB ARCHITECTS: 2002:81)

Existing urban fabric with the heritage route indicated

- Irreplacable landmarks with determined functions
- Landmarks of which the function can be adjusted
- Usage landmarks
- Irreplacable buildings that are worth preserving
- Buildings that reinforce the qualities of the landmarks

1: Church Square
2: Paul Kruger House
3: Paul Kruger Reformed Church
4: Heroe's Acre Cemetery
5: Krugerpark Flats
6: Talking Beads Training Academy
7: Ishmael Mosque
8: Nawab Miriammen Temple
9: Orient Theatre
10: Belle Ombre Railway Station

014 (IMAGE COLLAGE BY AUTHOR) 2 3

Important buildings along the heritage route

The historical route proposed in the Tayob Framework for Marabastad 1998, will be expanded to become a tourist attraction and activity route. The route follows the newly upgraded Church Street west from Church Square and extends north via the Heroe's Acre cemetery. From here it extends further north along Jerusalem Street, past the Miriammen Temple (1927) all the way up to the produce market where it turns east towards the station and continues past the Islamic mosque and the old Orient Theatre recently restored. It meanders past the proposed building material recycling depot with its community centre. A network of public squares and green areas will create opportunities for market activities along the Spruit's green zone. It returns via the Steenhoven Spruit completing the loop back to Church Square. (AZIZ TAYOB ARCHITECTS: 2002:192) It is via the Steenhoven Spruit green route that the building material recycling depot is connected to the heritage route. This ensures that tourists will pass the proposed development where they will be introduced to the theme of recycling awareness within the city context.

This tourist walk is accompanied by a tour operator from the townships called "Jimmy's Face to Face". He has established a presence in Cafe' Riche on Church Square from where he guides tourists around the city. (AZIZ TAYOB ARCHITECTS: 2002:192)

The current isolation of this suburb from the CBD, and the negative perception of the area held by Greater Pretoria prevents Marabastad from attracting many customers. With the uplifment of Marabastad and the re-establishment of its attractive vibrancy, the heritage route will acknowledge Marabstad's history. Talking about the history of Marabastad and that of Church Square at the same time creates the link of the community to the inner city.

4 5 6 7 8 9 10

Marabastad group framework

015 (MARABASTAD GROUP FRAMEWORK:2007)

Proposed urban fabric

The framework, within which this dissertation is set, is a combination of the existing Marabastad area, the Integrated Urban Design Framework for Marabastad and the integration of proposed dissertations, forming a network of needed functions.

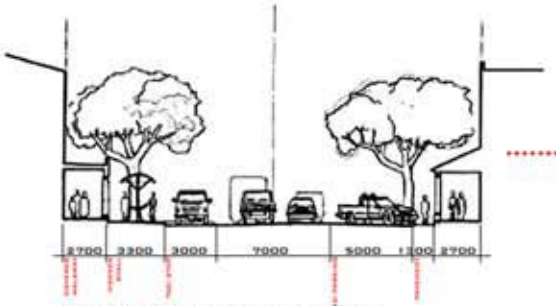
The main aim is to weave together the diverse strands of social, economic, legislative and physical environments within Pretoria CBD. The cavity left by the political history needs to be filled with an environmentally sustainable development with human beings at the centre of concerns. (AZIZ TAYOB ARCHITECTS: 2002:22) It needs to be reinstated within the Pretoria central business district, becoming a tourist attraction and in effect the "African Market" of Tshwane that currently hosts 18% of Pretoria's informal trade.

Indicated on the proposed urban fabric network map is the housing development in yellow ensuring the social improvement of Marabastad. The tourist heritage route is shown with the yellow dotted line creating a link between Church square and Marabastad. The other proposed functions consist of sport and various types of educational facilities and an art gallery in the old theatre.

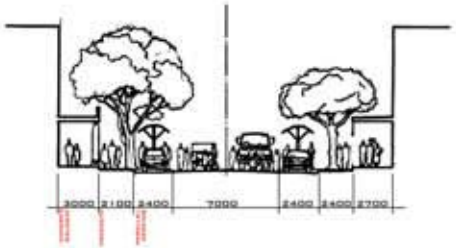
The proposed building material recycling depot is located between the social housing schemes and the train station to the north. It is embedded into the "African Market" urban fabric indicated with blue on the map.

Due to the sufficient public transport infrastructure, accessibility is more than adequate. There's a bus terminus and taxi rank at the station. Taxi ranks will also be provided on the traffic island between the two D.F. Malan Drives East and West. The flow of pedestrians across these drives will need to be addressed by pedestrian crossings. The PUTCO bus depot will also have to be relocated (possibly to the Belle Ombre loop) in order to return the smaller grid to the site and to reach high-density housing of 60 units per hectare. (AZIZ TAYOB ARCHITECTS: 2002:160) An overnight taxi holding area is proposed across the Spruit to the east, utilised during the day by existing informal trade. A police station will be provided adjacent to the trading area. According to the Gap Proposal for Pretoria Inner City, there will be a tram running along Boom and Church Street, with bus and taxi stops at the corner of Church and Cowie Street.

In order to implement pedestrian movement, the majority of north-south routes are pedestrianised, thus west-east routes carry faster moving traffic. Covered walkways and hawker stalls line these routes. Signage should make a positive contribution to the vibrant character of Marabastad by being legible and creative.

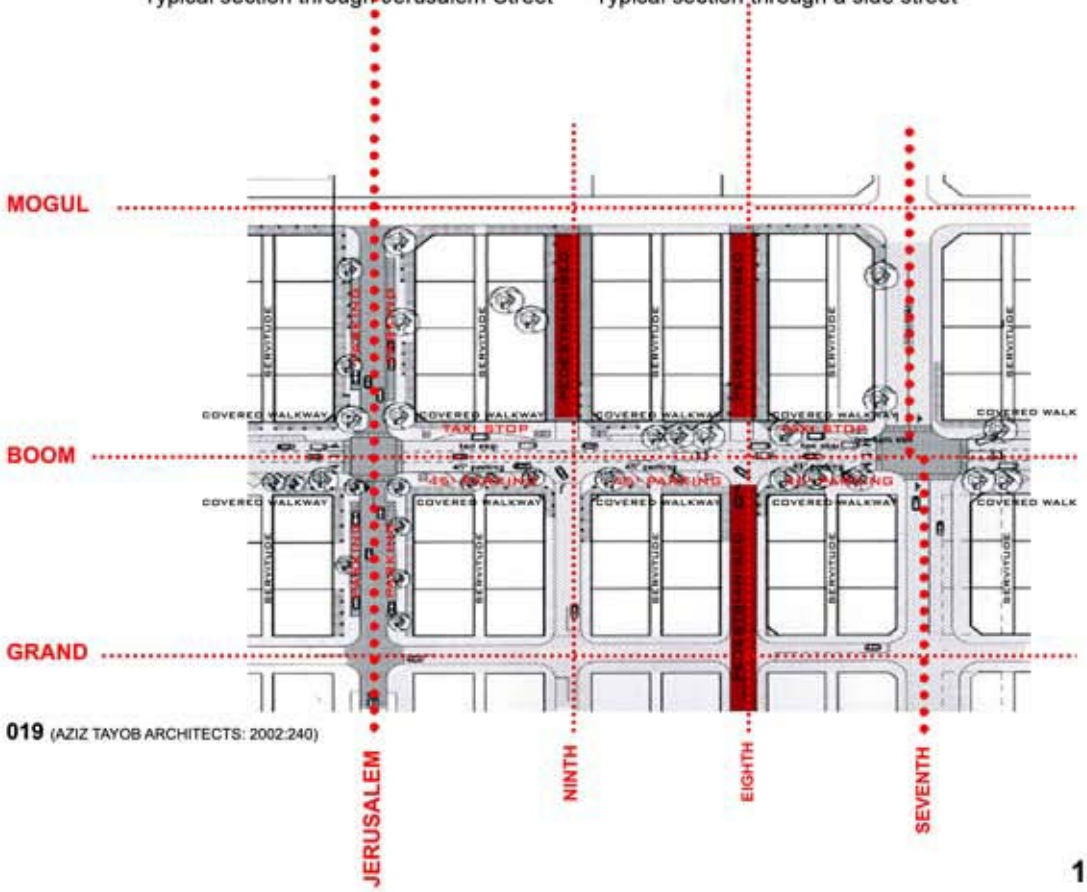


016 (AZIZ TAYOB ARCHITECTS: 2002:241)
Typical section through Boom Street



017 (AZIZ TAYOB ARCHITECTS: 2002:241)
Typical section through Jerusalem Street

018 (AZIZ TAYOB ARCHITECTS: 2002:241)
Typical section through a side street



019 (AZIZ TAYOB ARCHITECTS: 2002:240)

Streetscape design for the Marabastad environment

Infrastructural analysis

020 (COUNCIL:MUNITORIA:2007)

Access map to Marabastad highlighted in yellow

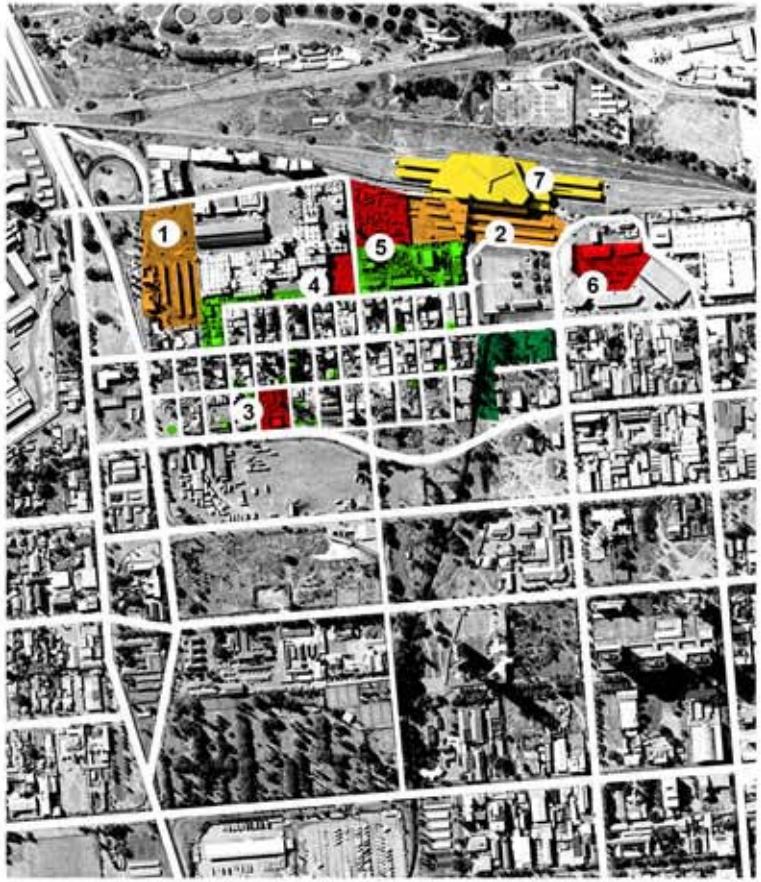
Access to Marabastad is adequate due to the main traffic arteries, indicated with the red lines, running through it. D.F. Malan Drive is a large artery providing access to the CBD from the north-west. This is the entrance to the city from the north-west regions outside the CBD used by the commuters coming from Soshanguve township. Church Street gives access to Atteridgeville township from the west and Mamelodi township from the east.

The bus route network in the city is indicated with the yellow dotted line, providing transport to and through Marabastad that acts as a transitional space for all commuters. The proposed dissertation site is indicated on the map and it is conveniently accessible via all means of transport.

1: D.F. Malan Drive
2: Boom Street
3: Bloed Street
4: Struben Street
5: Church Street
6: Skinner Street
7: Paul Kruger Drive
8: Nelson Mandela Drive
9: Belle Ombre Railway Loop

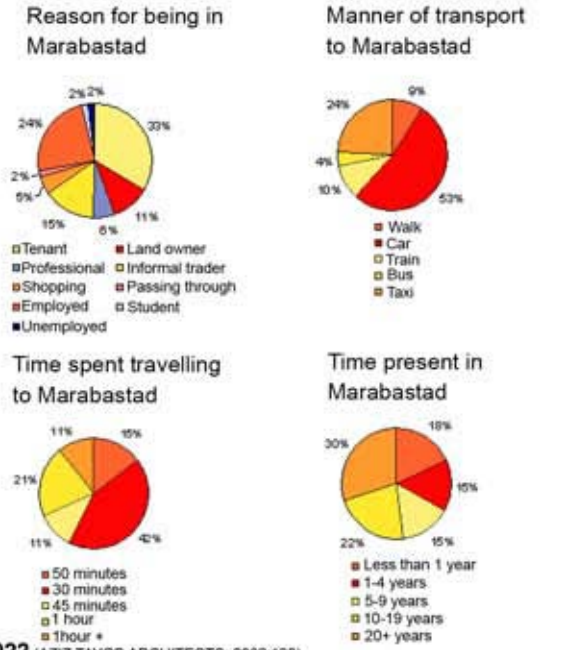
Social and economical analysis

(MARABASTAD GROUP FRAMEWORK:2007)



021 (MARABASTAD GROUP FRAMEWORK:2007)

Transport and trading analysis of Marabastad



022 (AZIZ TAYOB ARCHITECTS: 2002:138)

1: Marabastad bus rank - 12 000 people pass per day
2: Belle Ombre bus rank - 9 000 people pass per day
3: Jerusalem taxi rank - 3 500 people pass per day
4: 7th Street taxi rank - 500 people pass per day
5: Bazaar Street taxi rank - 3 500 people pass per day
6: Belle Ombre taxi rank - 700 people pass per day
7: Belle Ombre train station - 24 000 people pass per day

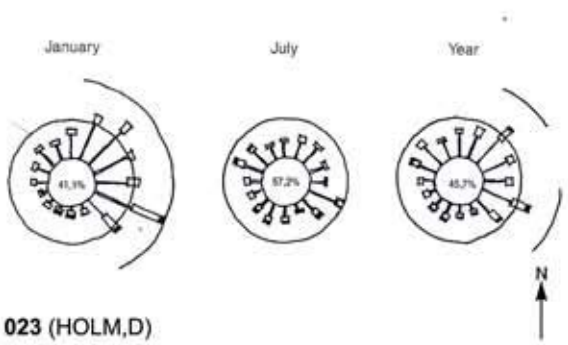
Marabastad hosts 18% of Pretoria's informal trading and with all the commuters passing through via different means of transport, it is clear why trading is a growing economy. Most of the commuters are from the north-west passing through Marabastad every day. (AZIZ TAYOB ARCHITECTS: 2002:103) This makes Marabastad a transition area to commuters between the inner city and outlying regions.

Most people that trade in Marabastad have been there for years selling to their loyal customers passing through.The formal traders of Marabastad consist mainly of the Indian community whereas the informal trade is a mixture of black cultures. (AZIZ TAYOB ARCHITECTS: 2002:126)

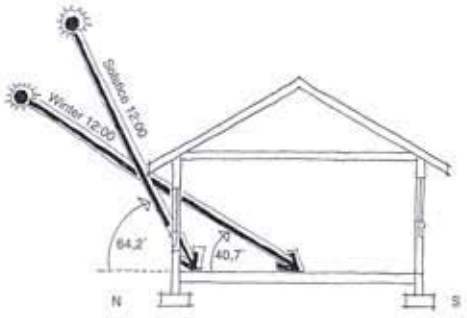
The concentration of informal trading, indicated with green, is highest closest to all the different ranks and the station where all the commuters wait for their transport or emerge from the specific transport used. The informal trade provides an income to numerous people and helps counter unemployment.

Informal trading is an existing activity on the proposed site, informing the design on a public space that needs to accomodate it.

Bio-physical analysis



023 (HOLM,D)



024 (HOLM,D)

Jan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
Maximum average monthly temperature (°c)	28,6	28	27	24,1	21,9	19,1	19,6	22,2	25,5	26,6	27,1	28	24,81
Minimum average monthly temperature (°c)	17,4	17,2	16	12,2	7,8	4,5	4,5	7,6	11,7	14,2	15,7	16,8	12,13
Average monthly amplitude (K)	11,2	10,8	11	11,9	14,1	14,6	15,1	14,6	13,8	12,4	11,4	11,2	12,68
Average monthly relative humidity (%)	58,0	59,5	60,0	59,5	55,0	53,0	50,0	46,0	45,0	49,5	54,0	56,5	53,83
Average monthly rainfall (mm)	136	75	82	51	13	7	3	6	22	71	98	110	56,17
Rham 72	74	76	78	76	75	71	64	61	64	68	70	75	70,75
Rhpm 44	45	44	41	34	31	29	28	29	35	40	43	44	36,92

025(HOLM,D)

Climate: Marabastad is characterised by generally high temperatures and relatively low local humidity frequently combined with high afternoon temperatures in the summer. The summer rains reach an average of 741mm per year. (HOLM,D) This allows the proposed building material recycling depot to harvest rainwater providing accessible water to the informal activities. Precipitation occurs mostly due to thunderstorms with rates around 90 to 100mm per hour. Hailstorms are fairly common as well.

Wind: Prevailing winds are calm and blow from the north-east in the morning backing to north-west in the afternoon. During winter cold snaps bring winds from the south, while in the summer thunderstorms are accompanied by turbulent wind patterns. The proposed roof structures and facilities should be designed to maximise cross ventilation by utilising the prevailing wind directions.

Topography: Marabastad falls in a gentle slope from the south-west to the north-east at about 1:36. This slope places no constraints on development. The underlying geology is composed of localised Andesitic lava with interbedded agglomorate, shale and tuff. Soil conditions are such that highly variable foundation conditions may be expected to occur, from solid rock at shallow depth to potentially expansive residual andesite soils. (AZIZ TAYOB ARCHITECTS: 2002:73)

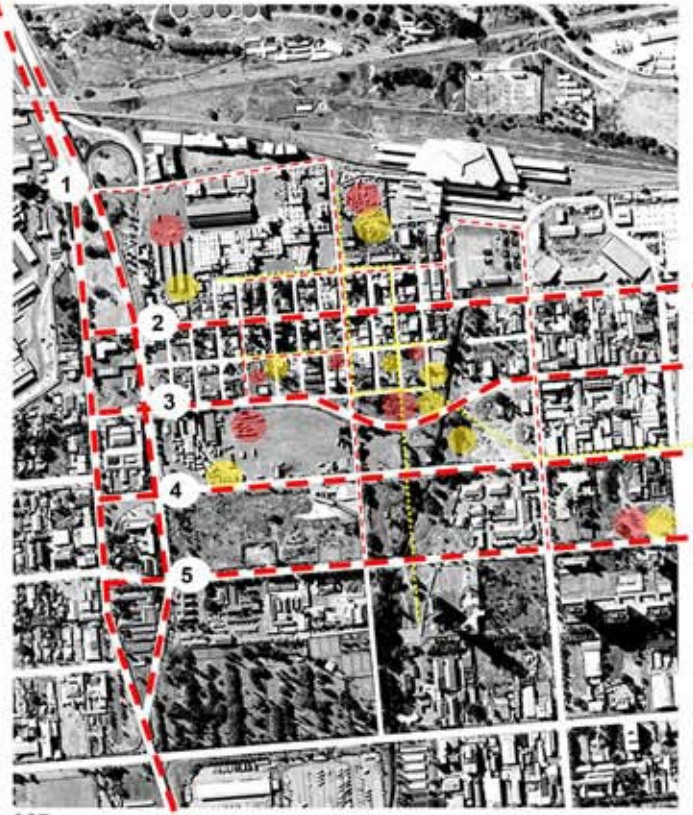
026(IMAGE COLLAGE BY AUTHOR)

An image collage of existing buildings on the site with the city as backdrop

1.3.3 Micro scale

Key:

- Vehicular movement
- Pedestrian movement
- Pedestrian gathering points
- Vehicular gathering points



027 (MARABASTAD GROUP FRAMEWORK:2007)

Existing zoning:
undetermined

Building lines:
2500 from Grand Sreet

Existing services:
Water supply and stormwater pipes are located under the streets

Sewerage pipes run through the middle of each block in a south-north direction

A municipal substation is located north of Boom Street, between Potgieter and 11th Street.

1: D.F.Malan Drive
2: Boom Street
3: Bloed Street
4: Struben Street
5: Proes Street

Behavioural analysis of Marabastad

Behavioural analysis

1-5: Small retail shops
6: Creche
7: Mechanic with bar
8: Retail
9: Mechanic and funeral parlour
10: Retail
11: Mechanic
12: Crescent Clinic
13: Liquor store and bar
14: Mechanic
15: Retail
16: Zion's Church of Christ (ZCC)

boom street
pedestrian movement between zcc and cbd
grand street
pedestrian movement between taxi rank and zcc
bloed street
pedestrian movement between zcc and housing
pedestrian movement between housing and train station/taxi rank

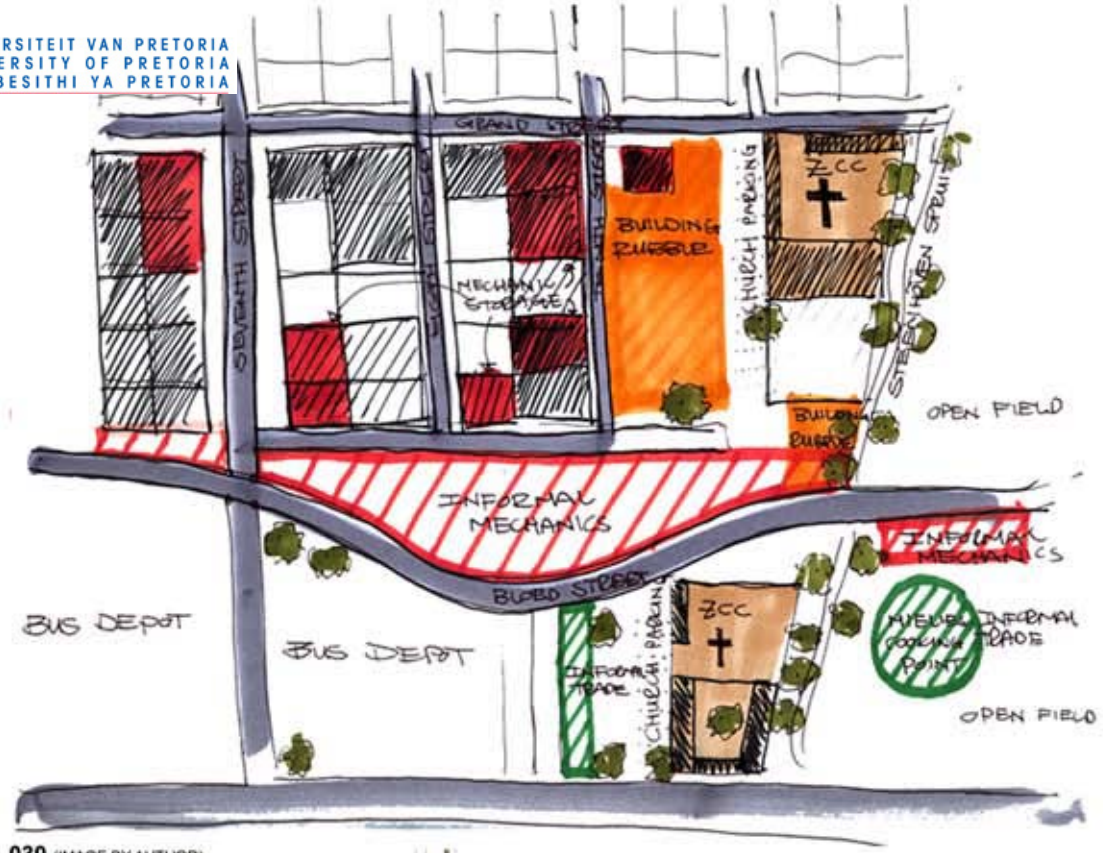
028 (COUNCIL MUNITORIA)

Site specific analysis

Site activities

There are numerous heterogeneous activities on site, but they all share the same purpose, and that purpose is survival. The activities can be called survivalist enterprises because the business aspect thereof has no growth prospects.

All of the activities on this site are informal and it is done with the bare essentials, if any. Many are interconnected and interdependent. The small moveable market-like tuckshops are dependent on the taxi drivers buying fruits or sweets when they come to the site to repair their taxi's exhaust and tyres at the informal mechanics. The mechanics only have a few tools and second-hand tyres that they store on site, for their business. Some locals salvage illegally dumped building rubble to re-sell to the local community as building material, where others boil mealies in steel drums to sell on the streets to pedestrians passing by.



030 (IMAGE BY AUTHOR)

029 (IMAGE COLLAGE BY AUTHOR)

An image collage of the activities on site

Recycling analysis

With the city's continual growth and expansion, discarded building material gets taken from the city to the outskirts where it is dumped in landfill sites or used as landfill for new developments. Most of the building material, grouped with this rubble, has the potential for reuse, but is discarded anyway to save the trouble of sorting it first to separate rubble from reusable material. Smaller batches of building rubble get dumped illegally on vacant or unused sites in the city itself, polluting the city physically and visually: in effect shifting the mundane landscape.

The Pretoria CBD does not have a building rubble dump site due to waste of valuable commercial and retail property and lack of open space. It is for this reason that the Tshwane City Council has a legal building rubble dump site in Garstkloof, to the South-east of Pretoria outside the CBD, where there is enough space. There building removal companies, as well as the public, can discard their load where local salvagers collect, recycle and sell salvaged building material to the public. However, the distance to this site limits residents and building companies in the city creating the need for a building material recycling depot closer to the CBD, forcing them to dump illegally on the vacant sites of Marabastad.

The building rubble dumped on site consists of:

- Clay bricks, whole and broken, with plaster and mortar attached.
- Broken and whole ceramic tiles.
- Precast concrete units such as lintels, water channels, etc.
- Glass bricks.
- Steel window and door frames.

As recycling is of major importance in this dissertation, the process introduced will involve:

- Physical recycling of dumped building material.
- Re-use of existing dilapidated buildings on site.
- Accommodating the existing activities on site, thus the recycling of activities to enhance it.
- Breaking down of the poverty cycle. In other words, recycling of social dilemmas ensuring upliftment.
- Recycling of the existing brown field site to become economically viable.

032 (AZIZ TAYOB ARCHITECTS: 2002:80)

A map indicating the known illegal dumping zones

031 (IMAGE COLLAGE BY AUTHOR)

An image collage of dumped building material on site