



CHAPTER 5

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SITE CONDITIONS

Figure 5.1 - The South African Reserve Bank.psd

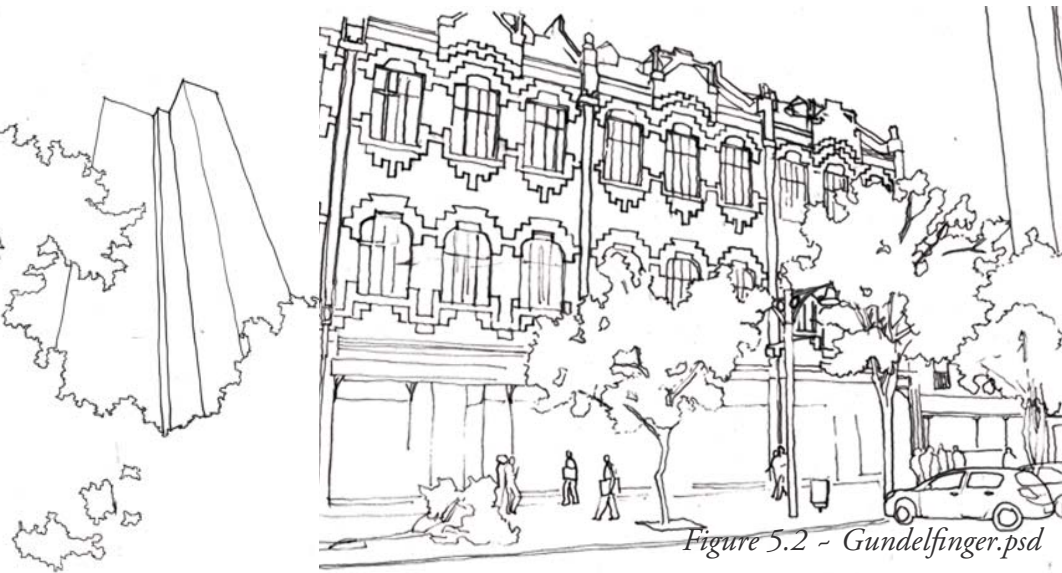


Figure 5.2 - Gundelfinger.psd



Figure 5.3 - Urban forest.psd



Figure 5.4 - The State Theatre.psd

Figure 5.5 - Polly's Arcade by Norman Eaton.psd

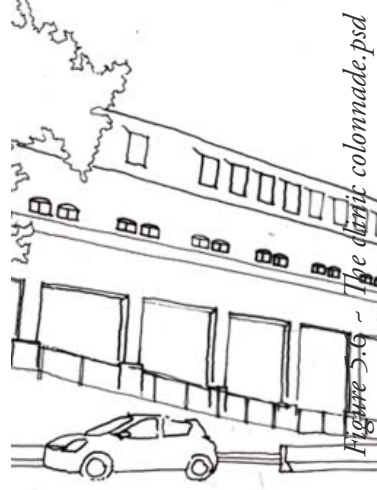
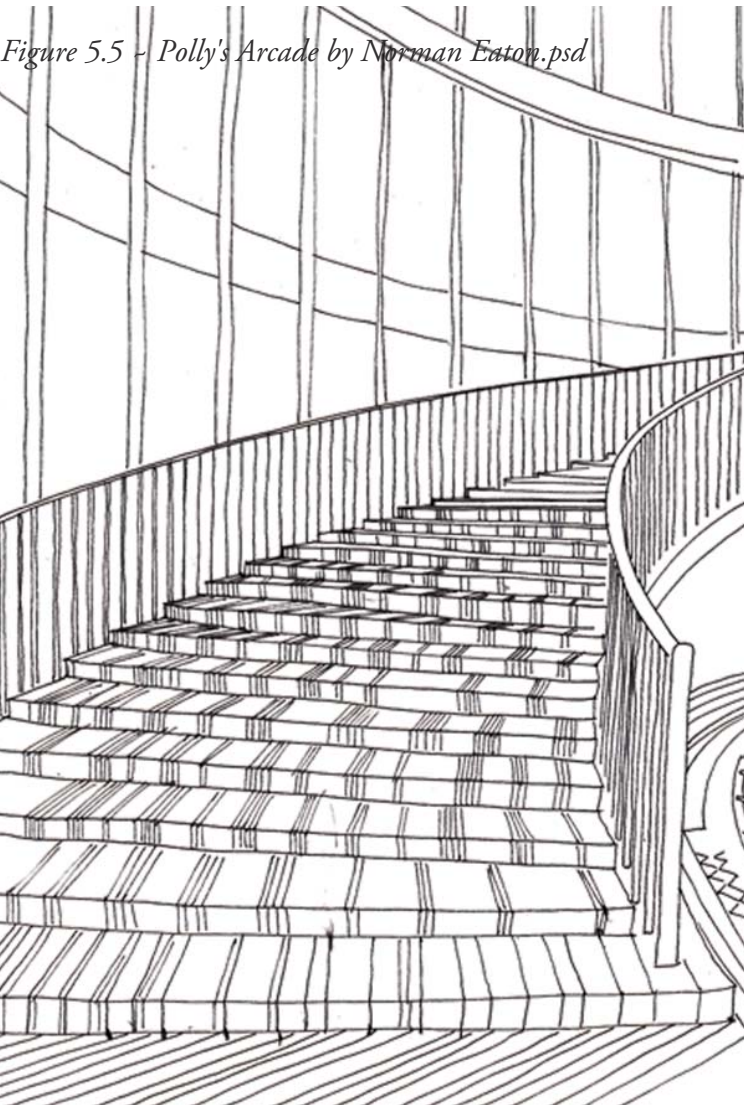


Figure 5.6 - The dining colonnade.psd

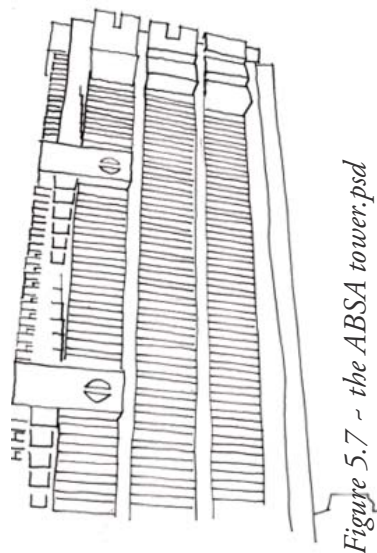
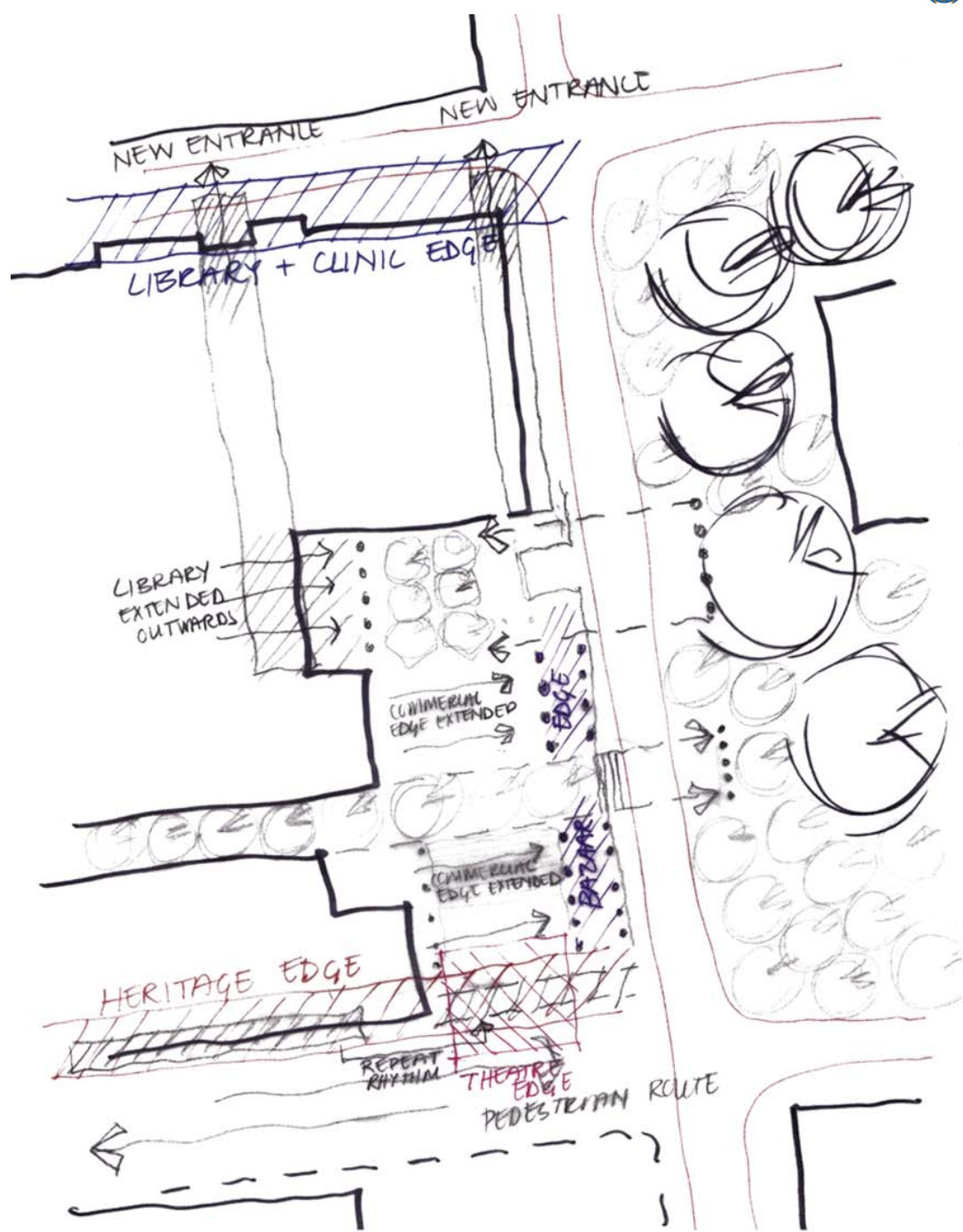


Figure 5.7 - the ABSA tower.psd



- SIT
- WAIT
- MEET
- READ
- WALK
- STUDY
- SEEK SHADE
- USE CELLPHONE
- CHILDCARE
- BRAID HAIR
- SLEEP
- STUDY
- SHOP
- REST
- EAT

Figure 5.8 - Activities on site.psd



No good design can exist in isolation. Unlike much of the existing architecture in Pretoria's inner city the aim of this design is to be contextual, sensitive, appropriate and relevant. To achieve this objective, a very good understanding of the site and its conditions is necessary.

In this chapter the historic conditions will be unpacked first. Thereafter, the existing programmes and their affect will be discussed. The actual built conditions and how it influences the site will be followed by a discussion on the material conditions. Then the circulation on site will be studied ending with a discussion on how the climate influences the site.

HISTORIC CONDITIONS

The main historic conditions on site includes the Asiatic Bazaar, the old water furrows, the tragic shooting by Barend Strydom and the watershed woman's march of 1952.

The area around Sisulu (Prinsloo) Street used to be a vibrant space with an established Indian community. It was a pleasant and intimate area rich in diverse cultures and a history as old as Pretoria.

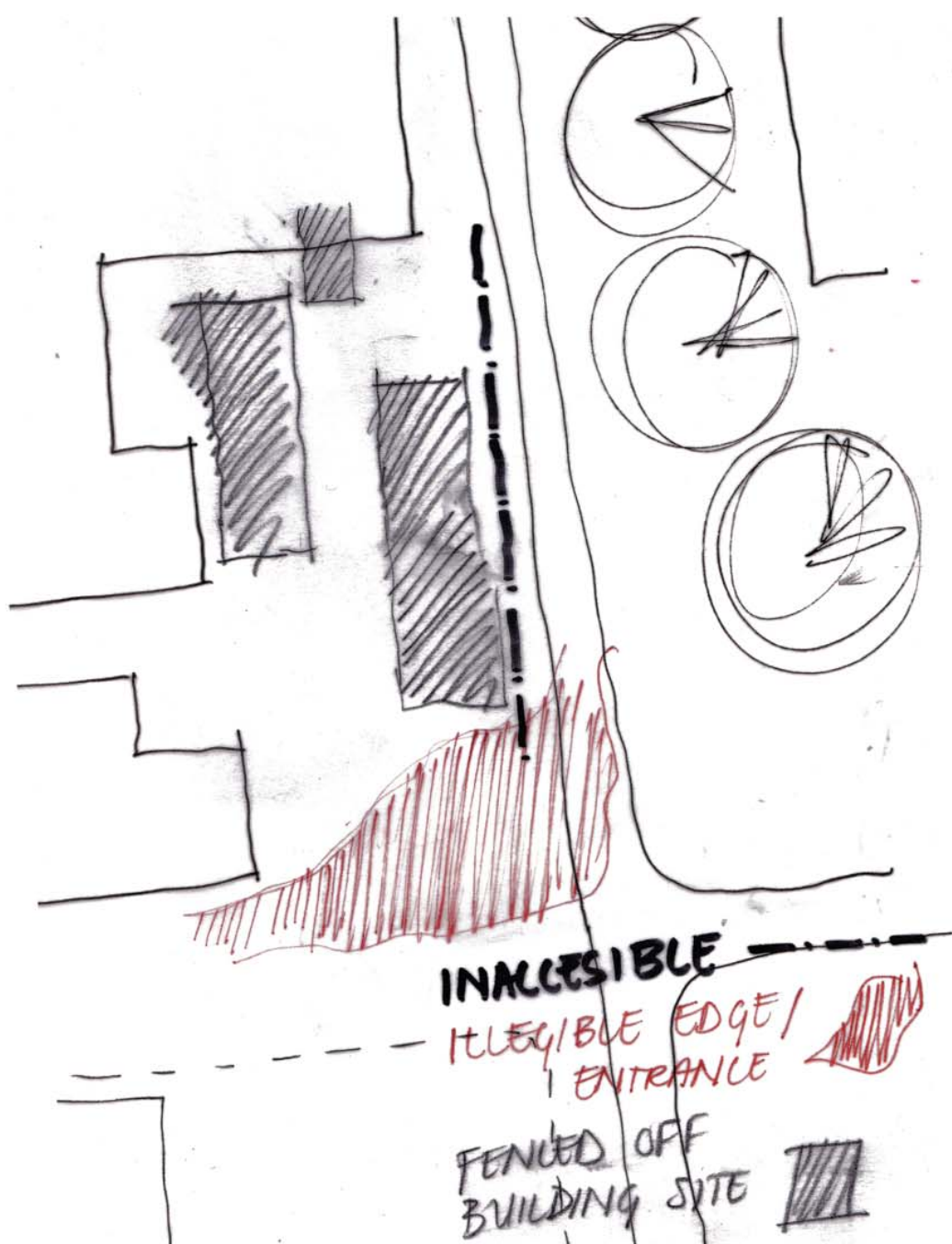


Figure 5.9 - Current condition and intent diagrams.psd

The Asiatic Bazaar

During the 1870s-1880s an influx of Indians settled in Pretoria on Lilian Ngoyi (Van der Walt) Street and Sisulu (Prinsloo) Street between Helen Joseph (Church) Street and Vermeulen (Madiba) Street (Jaffer 2012). This was in part due to increased hostility towards them in Natal (Jaffer 2012) and also following the burgeoning mining industry (Naidoo 2008).

The Indian traders were more successful with the local burghers who mostly consisted of simple farmers who were not under British rule (Jaffer 2012). The Indian trader charged less than the European traders (Jaffer 2012). Competition between the Indian and European traders caused the European traders to campaign against the Indian traders (Naidoo 2008). This led to the Law 3 of 1885 that imposed many restrictions on the movement, trade access and land procurement on the Indian people (Naidoo 2008).

Due to the Second Boer War (1899-1902) and the commencement of the new British Government this law was not strictly implemented until the Group Areas Act of 1950, 1957 and 1966 (Naidoo 2008). At the height of the implementation of the Group Areas Act, the South African government started large scale building projects to modernise Pretoria inner city. This further contributed to the evacuation of the Indian trade and residents of Sisulu (Prinsloo) Street.

Photos were taken by Lynn Moorhouse, of Sisulu (Prinsloo) Street before 1974. Only a few months later the Group Areas Act forced the last of the residents and their businesses to relocate.

From these photos we gather that the area around Sisulu (Prinsloo) Street used to be a vibrant space with an established Indian community. It was a pleasant and intimate area rich in diverse cultures and a history as old as Pretoria. If the Burra Charter existed in 1950, this could have been protected as a place of significance for the history of both Pretoria and the Indian community of Pretoria. The architecture could have been protected as having significance for both the memory of Pretoria and the Indian community of Pretoria (Burra Charter 2013).

Sisulu (Prinsloo) Street today especially on the corner of Helen Joseph (Church) Street, seems to have been forgotten. A large part of it is behind fences due to unfinished construction work. Its connection to public services like the library and clinic, as well as retail, makes it ideal for a vibrant public space. A space that might celebrate the Sisulu (Prinsloo) Street of the previous century. The proposed design hopes to not only augment the current programmes around the site, but also to support opportunities for small businesses and in doing that, hopefully a sense of the old vibrant Prinsloo Street can be recreated.



	R.P. in E. Store	R.P. in I. Store	Quantity
Coffee	2s 0d	1s 2d	lb.
Tea	4s 0d	2s 6d	lb.
Cheese	2s 3d	1s 0d	lb.
Candles	2s 0d	1s 0d	pkt.
Tin Milk	1s 6d	1s 0d	tin
Sardines	2s 0d	1s 0d	tin
Sardines	1s 0d	6d	tin
Matches	1s 0d	6d	box
Rice	9d	4d	lb.
White Sugar	1s 0d	6d	lb.

Figure 5.10 - Prinsloo Street before 1974.psd (Moorhouse 2005)

Figure 5.11 - Price differences.psd (Jaffer 2012)

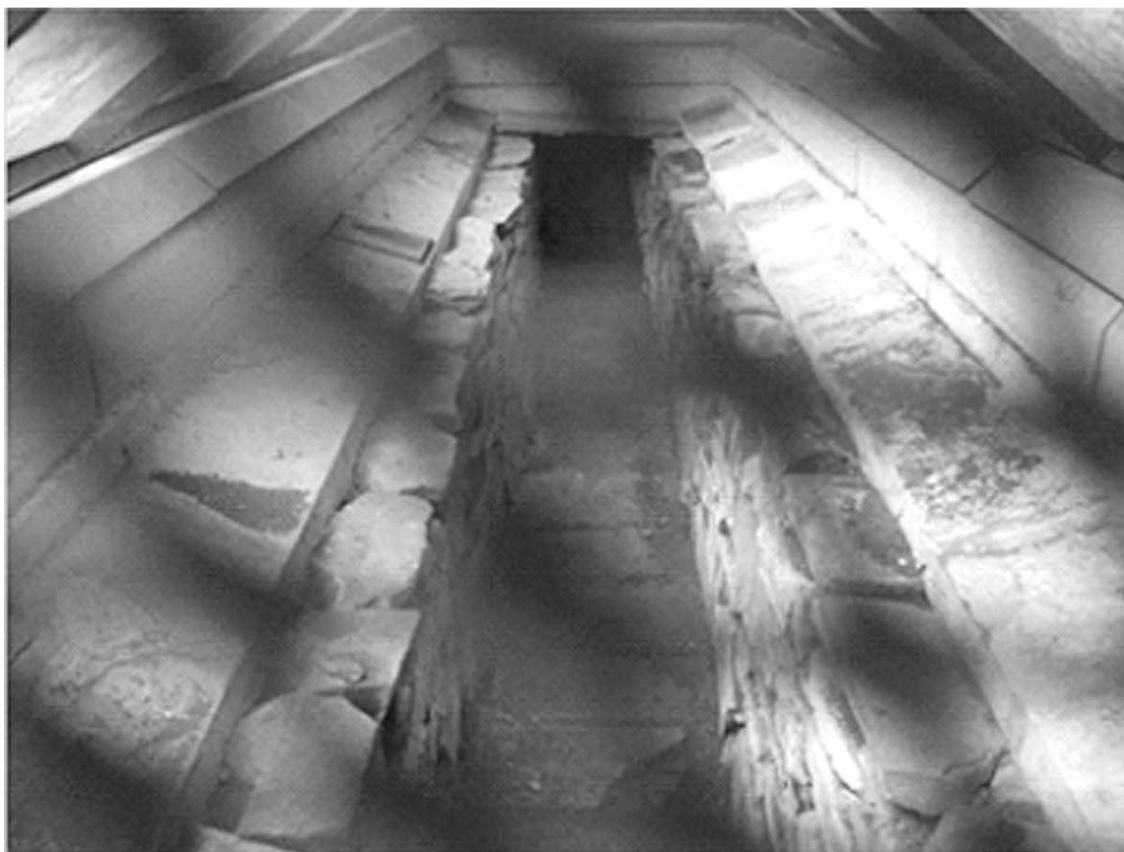


Figure 5.12 ~ Water furrows.psd
Inscription on the copper plaque:
"Water furrow (± 1860)

One of the oldest relics of Pretoria's pioneering years. From 1860 to 1910 water from the Fountains was supplied to the central part of Pretoria by means of a network of furrows. The furrows were covered with slate by approximately 1885, later with earth and finally with paving. They were used as storm water channels until the 1940s"

Water furrows

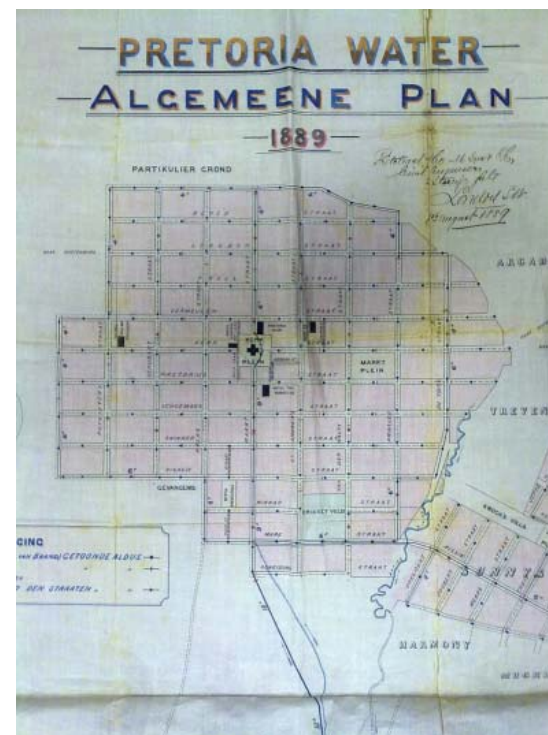


Figure 5.13 ~ Pretoria water plan 1889.psd
(Van der Walt 2012)

In 1855 the first water furrow and holding dam was built at the Pretoria fountains (Dippenaar 2013:20). By 1863 the Zuid-Afrikaanse Republiek (ZAR) had purchased the fountains in the valley from the Bronkhorst Bros, in order to distribute water to the town of Pretoria (Dippenaar 2013:20). With the increase of the population the furrows in town became infected and spread typhoid, cholera and enteric fever. This caused the furrows to be abandoned by 1877 and cast iron pipes to be laid instead (Dippenaar 2013:21). In 1900 when Pretoria was under British rule, the military controlled the distribution of the water (Dippenaar 2013:25).

Water metering was only introduced in 1920 (Dippenaar 2013:30). Today the fountains are still used to supplement the city's water with clean spring water. The fountains discharge 40million litres per day (Dippenaar 2013:34).

Remnants of the old furrows are still buried under the pavements of the city. One of these furrows is exposed for viewing in front of the State Theatre.

Very few people know about this rich historical layer under the city pavements of Pretoria. Apart from this one small piece of exposed furrow there is no integration of this historical narrative in either the physical city or the programmes on the streets. If one considers the Historic Landscape approach

Remnants of the old furrows are still buried under the pavements of the city.

by Bandarin and Van Oers, a myriad of urban and public opportunities can be generated by reintroducing the essence of what the furrows were into the contemporary city.

The definition of a Historic Urban Landscape (HUL) is,

"An urban settlement understood as a historic layering of cultural and natural values, extending beyond the notion of 'historic centre' of 'ensemble' to include the broader urban context and its geographical setting. This wider context includes ... its infrastructure above and below ground" (Bandarin & Van Oers 2014).

In a city with a politically contested history, water and access to water became one of the tools used to confirm power. The privately owned Bronkhorst Bros in all probability started the distribution of water to supply the farms with water when the Apies River ran dry in the winter. When the ZAR founded the first government they took over the management of the water distribution. (Dippenaar 2013:21) In 1900, the British military took over the control of the water distribution (Dippenaar 2013:25). During apartheid non-whites where not allowed to use public ablutions in the city and very few of the public ablutions had facilities for non-whites. (Nothnagel 2015) In this way access to water and sanitation was controlled and at times withheld from a large portion of Pretoria's inhabitants. The way in which the furrows and water are remembered and treated can be a statement to undermine its historic political role.

Women's March

In 1952, Act no.67 forced black women to also carry a reference book, previously a pass book, only carried by black men (O'Malley, n.d.). This book served as a passport indicating when they were supposed to be where. It limited their movement based on where they worked and lived. The Act was however not enforced until 1954 (Anonymous, 2011). On 9 August 1956, 20 000 women lead by Lilian Ngoyi, Helen Joseph, Rahima Moosa and Sophie Williams marched from Strijdom Square to the Union Buildings. They carried thousands of petitions to the J.G. Strijdom administration opposing this Act.

It is very significant that the same Strijdom Square where the march congregated is now the site of the new Women's Memorial, honouring the four women who lead the march. Once it was a symbol of national pride, freedom from British rule and independence of the Afrikaner government. Now it is the symbol of woman's pride, freedom from the apartheid rule and independence for the black woman. Neither in the 1960s nor now does it address the whole of society or even acknowledge the layered history of the site. Like a slate wiped clean it only propagates the existing historical bias.

Barend Strydom

On 15 November 1988, 23-year old Barend Strydom parked his car in Sisulu (Prinsloo) Street and walked to Strijdom Square shooting people with his pistol as he walked. He walked to Strijdom Square and back to Prinsloo Street, turning north towards Struben Street. (The 1988 Square Massacre 2001). He shot 24 people and killed seven ("Barend Strydom" 2015).

This very brutal side of the history of Pretoria and its significance for the site is currently completely disregarded and forgotten. The seven victims of Strydom's massacre are unrecognized and forgotten by everyone except their families.

Due to the fact that the incident happened right on the design site, some form of recognition must be given the victims of this tragic shooting. A competition can be launched for an art installation that will memorialise the victims. Local artists can compete. In this way a broader group of people will be exposed to the narrative.

The seven victims of Strydom's massacre are unrecognized and forgotten by everyone.



Figure 5.14 ~ Women's March leaders.psd (New street names in the CBD 2015)
Rahima Moosa, Lilian Ngoyi, Helen Joseph and Sophie Williams at the Union Building



Figure 5.15 ~ New women's memorial.psd (Fourie 2014)

*Wathint'abafazi, wathint'imbokodo!
(Now you have touched the women,
you have struck a rock.)*

PROGRAMMATIC CONDITIONS

The library, clinic, theatre and retail programmes will form the programmatic basis of the design's own programmes. The new intervention aims to augment the existing programmes. These will be discussed in terms of how they can drive the design.

Library

The Es'kia Mphahlele Library is situated inside the new Sammy Marks Building. It is a meeting place for students from the many colleges in the area, a sanctuary for working people over lunch time and for many it is the only way to access information, whether by internet or print media and other publications. It is a safe haven for mothers with no childcare over school holidays, because they offer holiday programmes. This gives it a prominent role in the life of the single parent. There is however no signage to indicate the presence of this library and the entrance is hidden, uninviting and unobtrusive. It has no visual or physical interaction with the city. It cannot be stumbled upon. Unless you know of the existence of the library you can live and work in the area and never know of its existence.

Its lack of interaction with the public, the lack of visibility and its unobtrusiveness needs to be addressed. The design solution for this is to open the library up to the public, where it can be stumbled upon and to make the entrance more visible in the city. A new entrance is proposed on the northern façade, with the eastern façade opening onto the square to extend the existing coffee bar to the outside.

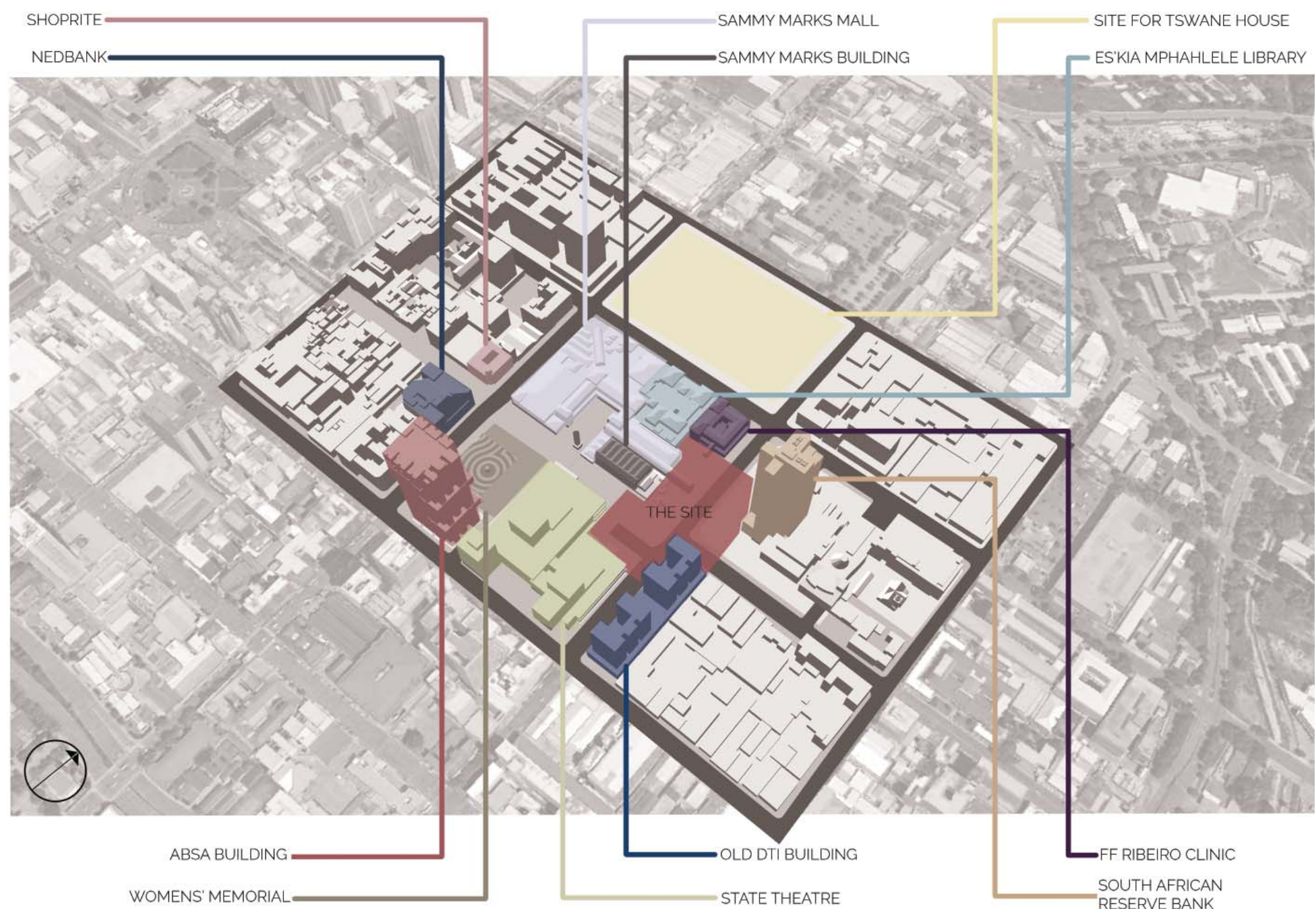
Clinic

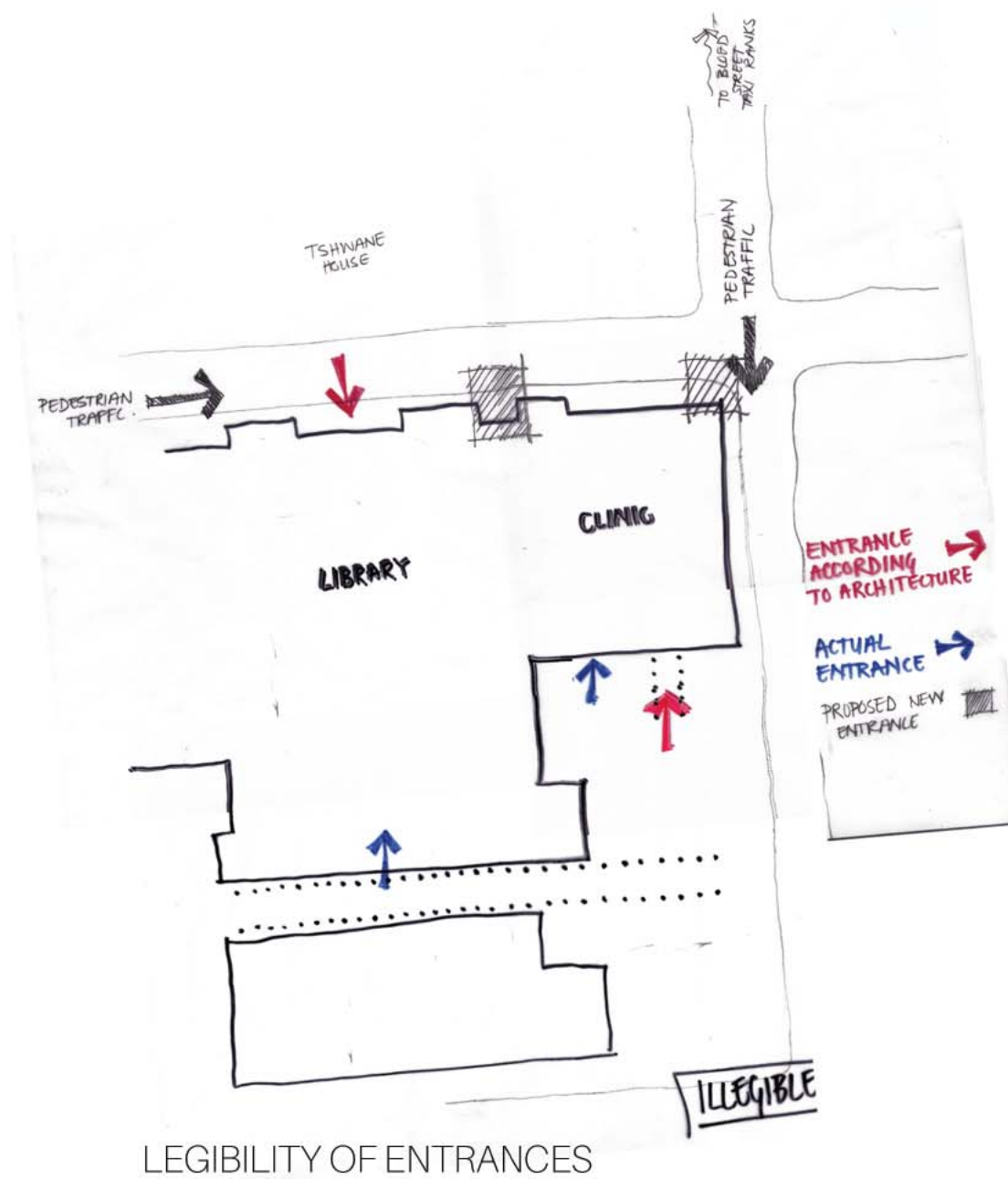
The FF Ribeiro Clinic is situated in the new Sammy Marks buildings next to the library. The focus of the clinic is on the improved health and well-being of the local community. Their services include HIV, AIDS and TB-related treatment, care and support. Being a primary health care facility, it serves fortified porridge to underweight patients, it offers treatment on opportunistic infections and it provides maternity and pregnancy support. (FF Ribeiro Clinic, 2014)

The clinic's entrance is obscured from passers-by. And the route to the entrance is undefined due to unfinished construction and protective fencing. The building is right on the street corner of a very busy pedestrian route from the main precinct transport interchange in Bloed Street. It is ideally situated next to other institutional services, namely the library and the municipality, giving it more gravity.

It has the potential to augment the current programmes with healthier waiting rooms, accessible informative meeting space, services for mothers with babies, childcare facilities and public ablutions. The design strategy is to define the entrance towards the north and to augment the current program with semi-outdoor waiting areas, intimate meeting rooms, baby care classes, childcare facilities and public washrooms.

Figure 5.16 - Programmes on and around the site.psd





LEGIBILITY OF ENTRANCES

Theatre

The traditional function of the theatre was more for than just entertainment, it was the place where public life happened. It was a place of meeting, of exchanging information, ideas and opinions. The theatre productions were a commentary on life and it was a way through which you could perceive your world in a new way. Most of all it was energetic, engaging and even educating.

The placement of the theatre in this part of the city indicates that the planners understood the legacy of old market square. It also was a place for trade and exchange of ideas, goods and information. The State Theatre did however not succeed in retaining the spirit of the market square. Instead the theatre became a monument to the republic. Its presence is overpowering and out of scale. It only functions during the night and it has no interaction with the city.

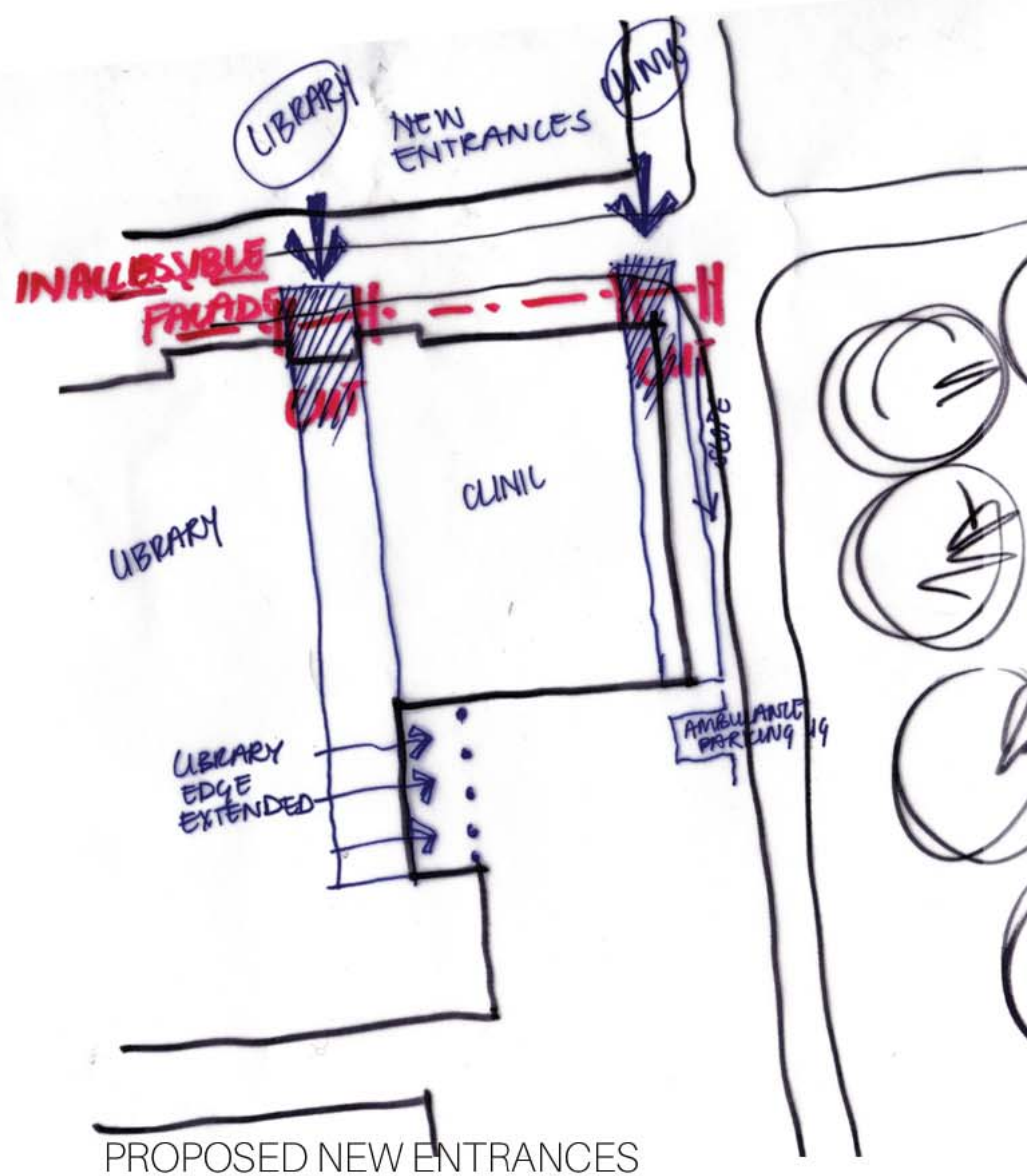
The program is however very appropriate and the design intention is that the theatre will be freed from its brutal walls and be allowed to happen outside where it can function as an event space at any time of the day. This will be done by creating an amphitheatre that connects to the State Theatre's underground parking. It will accentuate the urban vision of extending the State Theatre foyer out into the street.

Retail

The new Sammy Marks buildings accommodate various formal retailers. As the historic market space of the city of Pretoria this is an appropriate program for the building. However, all the retailers are large franchised companies, with no direct link to the site. Walking into the Sammy Marks buildings is like walking into any mall anywhere in South Africa. On the edges of Helen Joseph (Church) Street you find informal vendors with fold away tables and canopies that sell goods to the pedestrians. Of these the only vendors with a direct link to the site are the ones selling fruit and vegetables. Many sell similar but cheaper versions of what can be bought in the formal retail stores.

This parallels the history of the early traders in Sisulu Street (Prinsloo Street), where the more affluent European shops sold the same goods as the Indians to the burghers, but at a higher price. In the Sammy Marks building the formal, more expensive, retailers have higher rent to pay than the small rent the vendors need to pay.

The proposed design hopes to bridge this gap by creating smaller more affordable rental spaces that are well designed and permanent fixtures, with services like the formal retail spaces that has access to the pedestrian and the street. However, it will be much more affordable for a local small trader to rent. In this way the small entrepreneur gets the benefits of locality, comfort and quality, as well as it being economically sustainable.



PROPOSED NEW ENTRANCES

Figure 5.17 - Library and clinic analysis.psd

BUILT CONDITIONS

The buildings surrounding the site have a very strong influence on how the site is experienced. The buildings that have direct impact on the site include the State Theatre, the Gundelfinger building, the Sammy Marks buildings, the South African Reserve Bank and the Urban Forest. These buildings interact very specifically with the street edges based on their architecture. The built conditions immediately surrounding and influencing the site are considered here and responses are recommended.

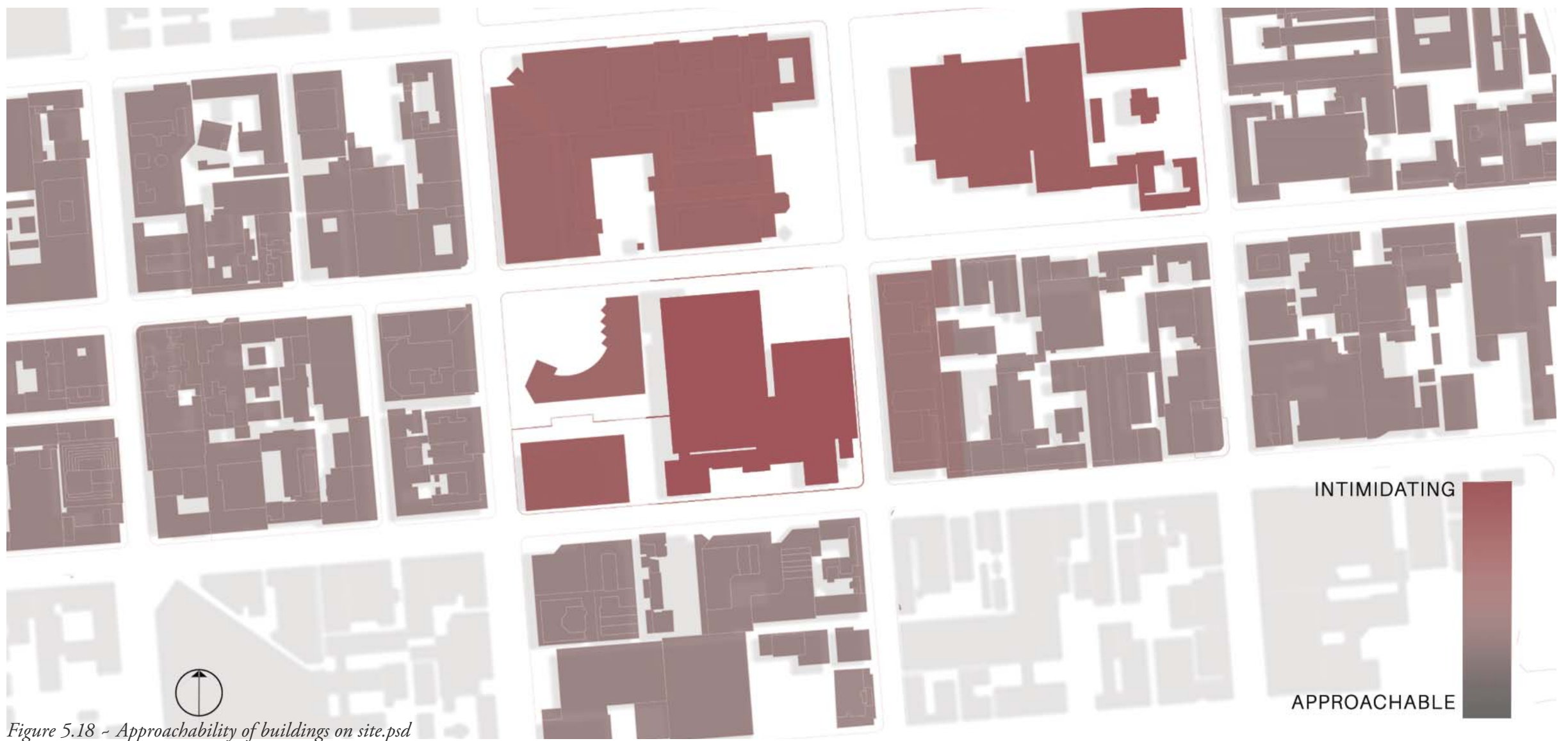


Figure 5.18 ~ Approachability of buildings on site.psd

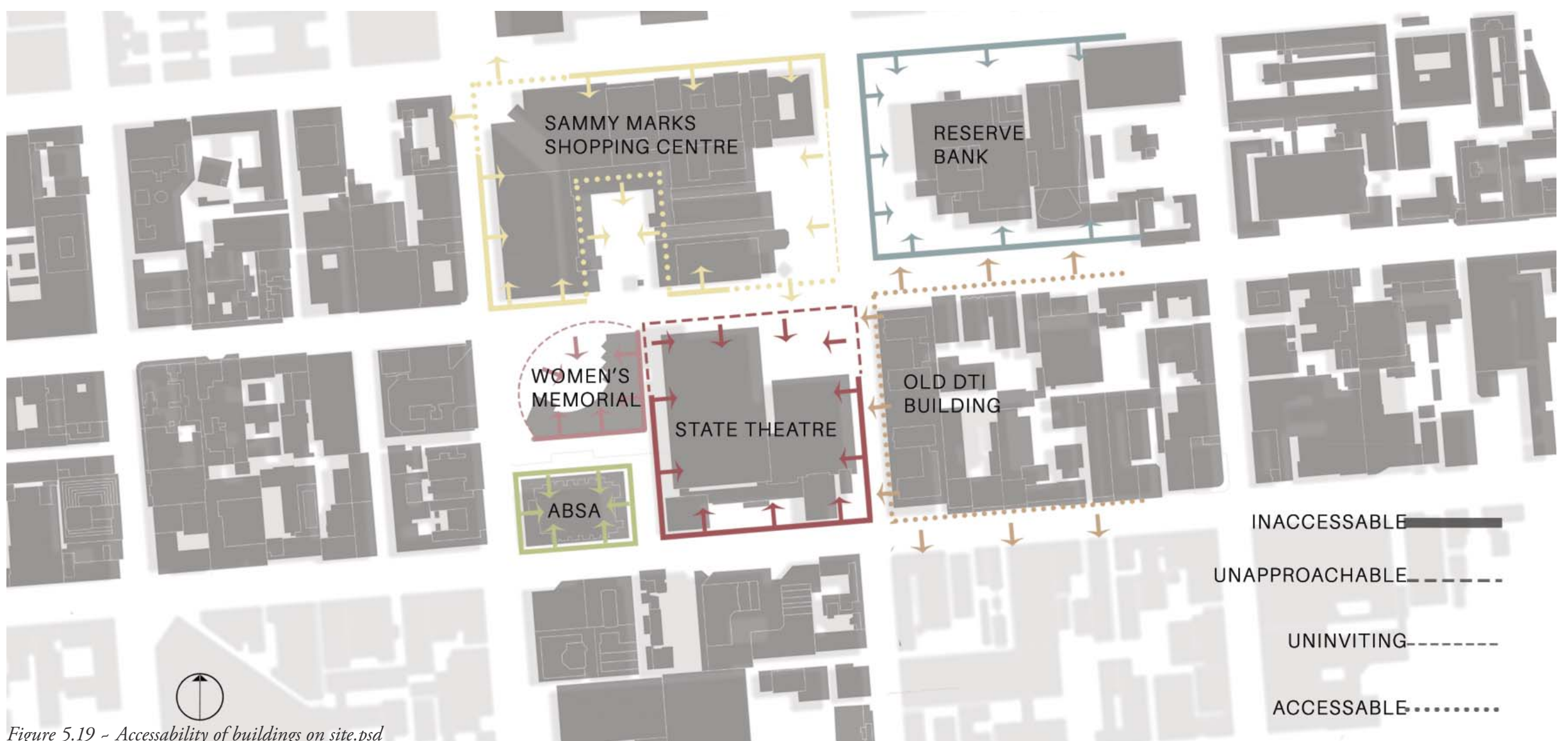


Figure 5.19 ~ Accessibility of buildings on site.psd



Figure 5.20 - Character study of the Gundelfinger building.psd

Gundelfinger and Kynoch buildings

Across from the State Theatre stands the Gundelfinger building, also known as Metro Cycle House. It was built as a commercial property in 1903, by W.J. de Zwaan for Sammy Marks, to serve as an inheritance for his descendants (Bakker, Clarke & Fisher 2014). It is an exquisitely preserved example of the Wilhelmiens architecture of the 1800s (Bakker et al. 2014).

This charming building is beautifully proportioned to celebrate the materials used at the time: red brick and sandstone. It has a glass and cast iron façade on the ground floor with beautifully detailed curved glass thresholds.

GM van der Waal reported the following on the building's significance in the Restorica No 8:16.

- It is probably the only commercial and wholesale building of its kind in both Gauteng and South Africa.
- Historically it has immense significance for art and architecture, because it illustrates a unique building style found in South Africa based on Dutch Wilhelmiens.
- It is the last surviving commercial building in South Africa that consists of a row of identical shops that still functions as separate small shops.
- It was a very significant commercial building at its time.
- It is a landmark in the city.
- It is one of the best preserved, both physically and functionally,



Figure 5.21 - The Gundelfinger and Kynoch buildings.psd
(Slideshow of Marks Building - Gundelfinger - Metro Cycle House photos 1980)

buildings from this period in the history of Pretoria.

- It has a very pleasing aesthetic, a well composed façade and beautiful finishes. (Marks Building - Gundelfinger - Metro Cycle House, Pretoria n.d.)

To that we might add that it has significance as part of the oeuvre of the architect W.J. de Zwaan. It also gives us insight into the local building practices of the time, both in terms of technique and materials.

The Kynoch building east of the Sammy Marks building is a small double storey structure that dates from before 1889. It was built as an armoury shop for the gunsmith, George Kynoch. The architect is unknown (Kynoch Building, Pretoria n.d.). According to the website, Artefacts, it might be the oldest surviving commercial building in Pretoria (Kynoch Building, Pretoria n.d.).

The Kynoch building has significance in the history of the built environment in Pretoria. Being one of the earliest buildings in the city it should be preserved for future generations.

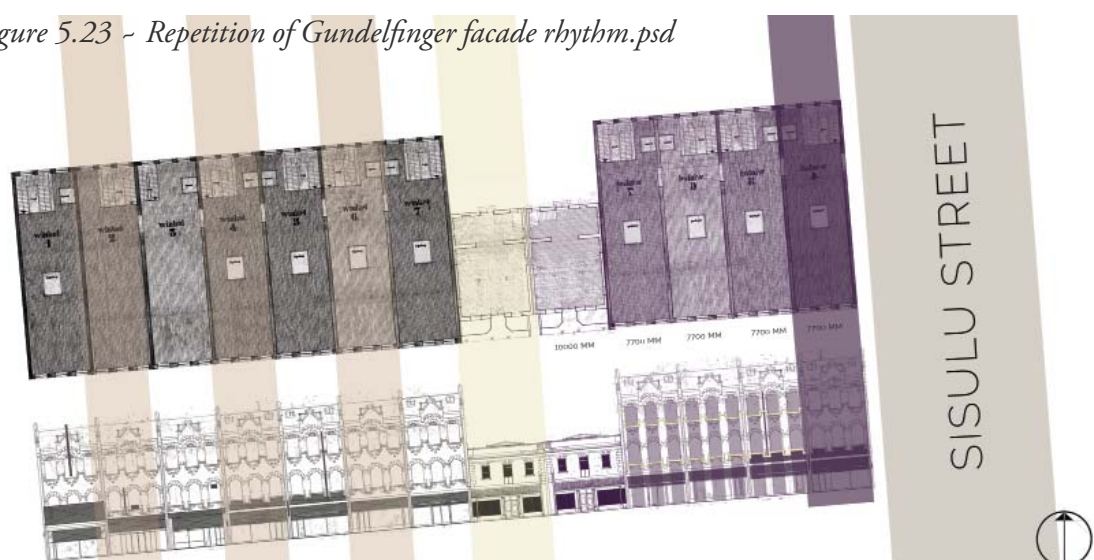
The design approach to both these buildings are, “do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained” (Burra Charter 2013). The design therefore proposes to strengthen the inherent qualities of the existing buildings by repeating the rhythms of the Sammy Marks building unto the new extension and to use its proportions and composition in the façade design of the new structure.

An exquisitely preserved example of the Wilhelmiens architecture of the 1800s



Figure 5.22 - Gundelfinger details.psd (Swanepoel 2010)

Figure 5.23 - Repetition of Gundelfinger facade rhythm.psd



The State Theatre building is an object in the city without any relation to its context.



Figure 5.24 - Character study of the State Theatre.psd

State Theatre

The national State Theatre was built during the 1970s when the Department of Public Works launched many similar nationalistic projects to usher in a new modern Pretoria. These included the Volkskas (ABSA) building, Strijdom Square and the Munitoria. The aim was to monumentalise the progress South Africa made as an independent Republic since 1961. In 1962 - due to the segregation laws - discussions around international disinvestment started. The large scale building project was therefore also used to boost the morale.

The State Theatre is an example of the Japanese brutalist metabolism of the 1960s. (Metabolism architecture 2015). The Tokyo Olympics in 1964 helped spread the Metabolist ideals to the west. (Henning, Cronje & Adam 2012) The State Theatre's design strongly followed those of the Metabolists.

The State Theatre building is an object in the city without any relation to its context. It is a statement of power and international prominence. Its scale is unhuman, its edges uninviting and its mass on the site is intimidating. None of the intimacy of the former Market Square survived.

Professor Dieter Holm, from the Architecture Department of the University of Pretoria said,

“too many of the modern buildings are built on the false assumption that only the inside of the building is important. Only a few hundred people have to work inside, but hundreds of thousands are confronted with its ugliness” (Saunderson Meyer 1979).

The aim for the site is therefore to counter the insulated character of the State Theatre through a public space that is accessible, visible, human-scaled and inviting. Where the State Theatre dominates and overpowers as an object in space, the new intervention aims to counter that by becoming intimate and haptic - more an experience than a building.



Figure 5.25 - Character study of the Sammy Marks Centre.psd

Sammy Marks Centre

The Sammy Marks Square and shopping mall built in 1993 was designed by Stauch Vorster. It accommodates retailers, offices, a library and colleges (Henning, de Villiers & Cronje 2010).

Built in red brick, it tries to pay tribute to the Sammy Marks building. Its post-modern, new-classical style contrast the modern architecture of the State Theatre, the ABSA building and the, now demolished, Munitoria. It sides more with the Sammy Marks building in trying to be more accessible and to a human scale.

Unfortunately the square turns inward. The northern façade is inaccessible and consists of a very long blind wall, with no indication of the programmes inside. The eastern façade is also impenetrable except for the arcade entrance. The fact that the building forms a square does not make it an active public space, it just pushes the formal shop fronts further back from the street. This however benefited the informal vendors who claimed the street edges.

As a response to this condition the design proposes to create a new library entrance to the north and to open up the eastern façade to the new proposed public square to the east.

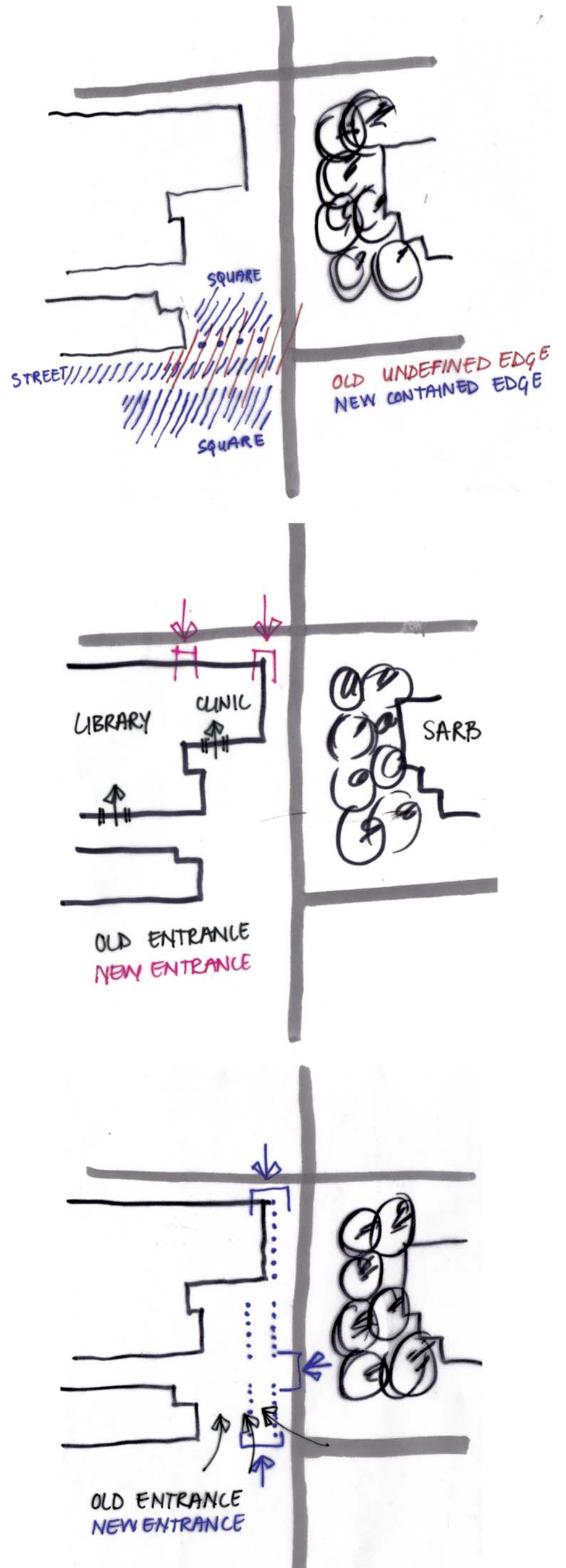


Figure 5.26 - Proposed new entrances and openings.psd



Figure 5.27 - Character study of the South African Reserve Bank.psd

Reserve Bank

The Reserve Bank building was designed by Anthony Doherty and built around 1988 (Reserve Bank Head Office, Pretoria n.d.). Clad in black glass it completely overpowers all the buildings in the vicinity. It towers to an unprecedented height of 150m into the Pretoria skyline. (List of tallest buildings in South Africa 2015) It has an intimidating presence and its beautifully terraced public gardens with fountains are inaccessible behind palisade fencing.

Pretoria's inner city is characterised by historic buildings of the late 1800s and early 1900s with heights no more than eight storeys. With legislation that protects all structures older than 60 years the chances of Pretoria becoming a high density, high rise, skyscraper skyline city is highly improbable ["National Heritage Resources Act, 1999 (Act No. 25 of 1999)" 1999]. The Reserve Bank and the ABSA tower will therefore most likely always be the exception to the rule. For that reason a new intervention should rather strive to strengthen the existing historic scale of 15-25m heights instead of trying to bridge the 150m height of the Reserve Bank.

A more appropriate way to address the Reserve Bank will be to find a dialogue between the Reserve Bank and the ABSA Tower by way of materiality.

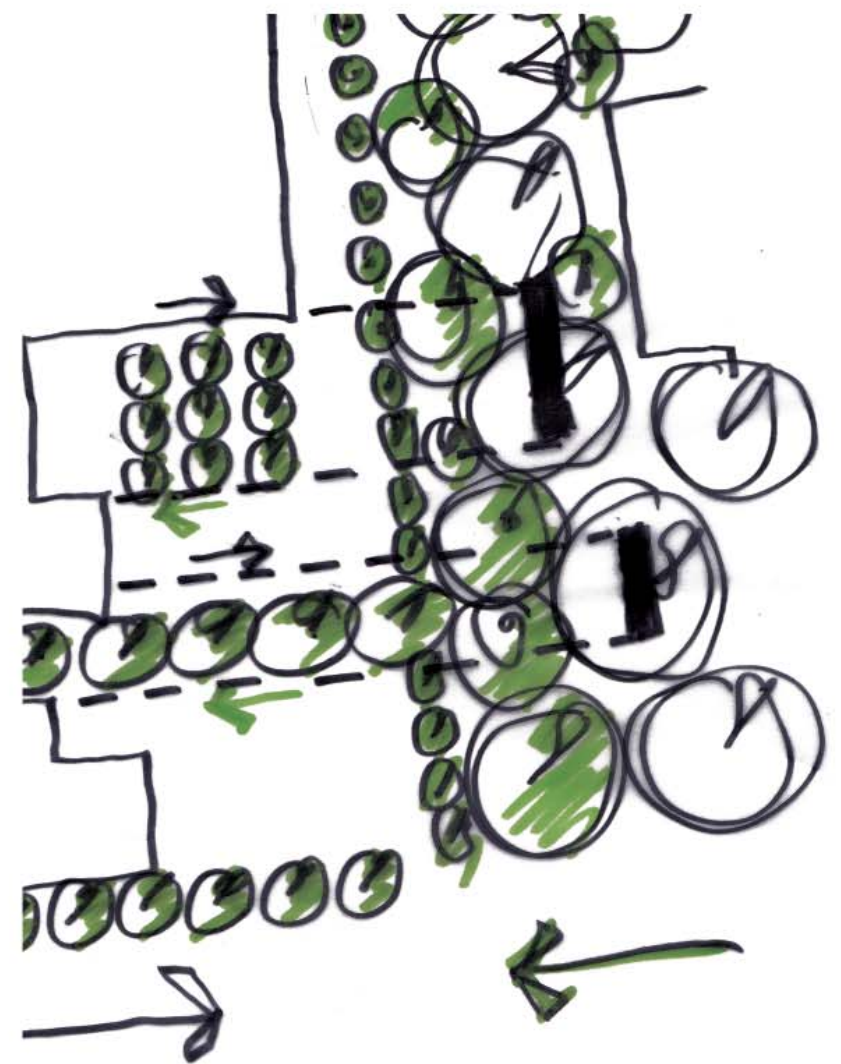
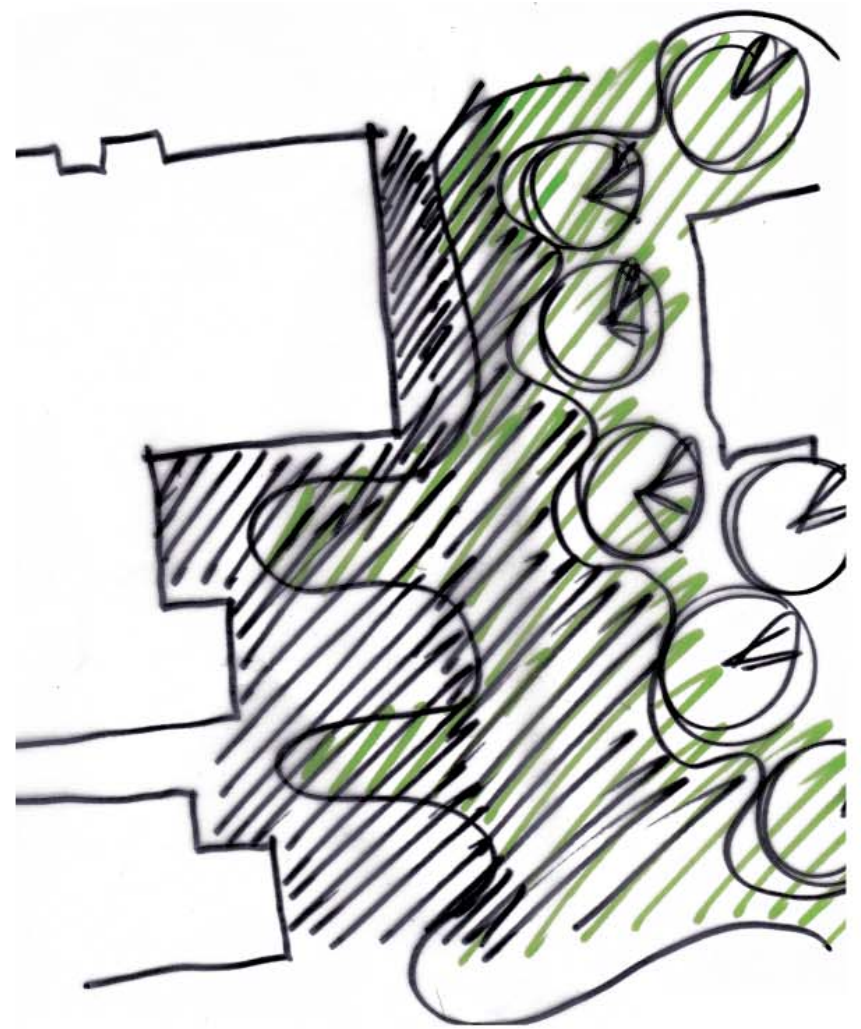


Figure 5.28 - Dissolve edge between urban built and urban forest.psd

Urban Forest

The terraced garden of the Reserve Bank is currently behind palisade fencing. The urban vision proposes to re-establish the terraced gardens as a public space. It also suggests enhancing it by adding more trees, creating a dense urban forest. In this way the trees become a link between the historic city scale and the out of scale Reserve Bank.

The proposed design intervention furthermore aims to blur the boundary between the urban forest and the city by allowing the urban forest to spill into the rest of the city.

Sammy Marks Centre

The Sammy Marks Centre, including the buildings that house the library and the clinic, acknowledges the masonry in the Gundelfinger building. Its response is however out of proportion and too heavy for the site. The new design response will be to consider the brick and its inherent properties and historical applications and to draw from both the Sammy Marks Centre buildings and the Gundelfinger buildings of Kirkness brick, to find an appropriate response.

Gundelfinger

The red brick façade, distinctive of old Pretoria buildings of the 1900s, were the work of John Johnston Kirkness. He started a brick kiln in Muckleneuk, Pretoria, from where bricks, tiles and other ceramics were used in construction from Cape Town to Harare. J.J. Kirkness, a friend of Sammy Marks, built the Sammy Marks building (Coetzee 1985). Its aesthetic proportions and excellent workmanship is a monument to brick, sandstone and cast iron.

In order to ground the new design onto this site, the idea of brick as the historic backbone of the built environment of Pretoria must be communicated.

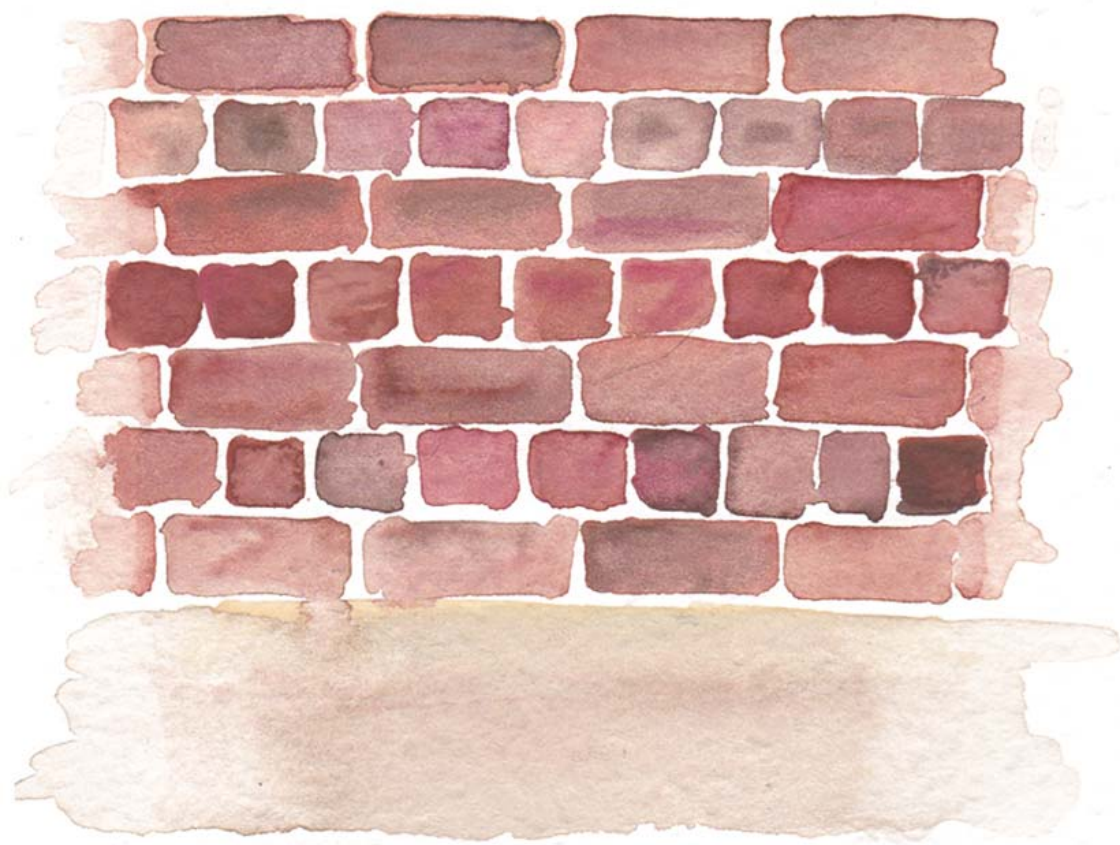


Figure 5.30 - Gundelfinger Kirkness red clay brick facade.psd

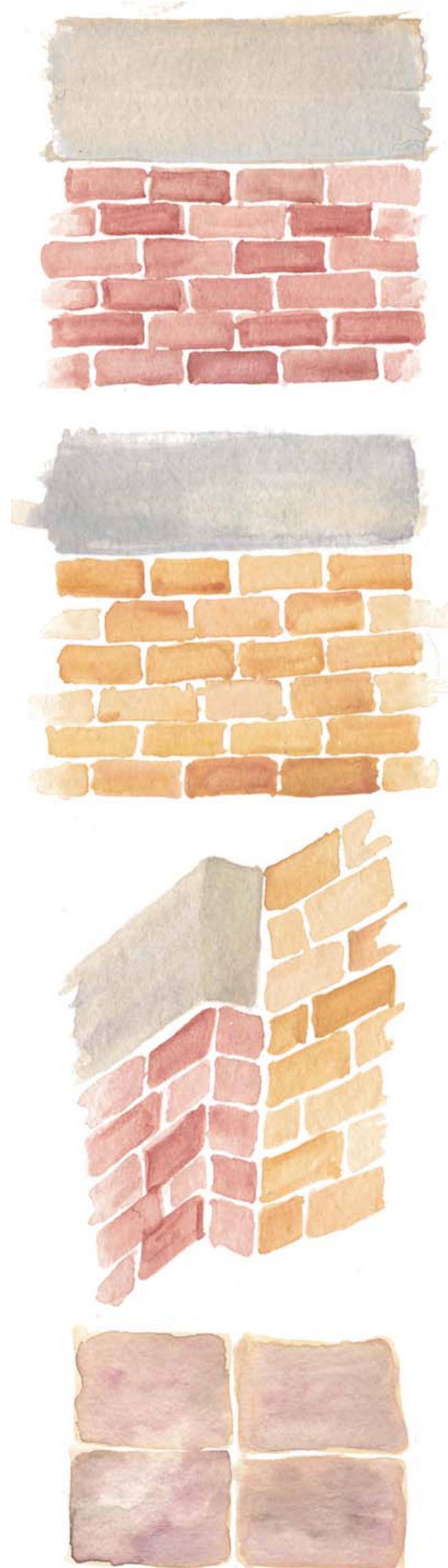


Figure 5.31 - Sammy Marks Centre brick facade with pink granite finishes.psd

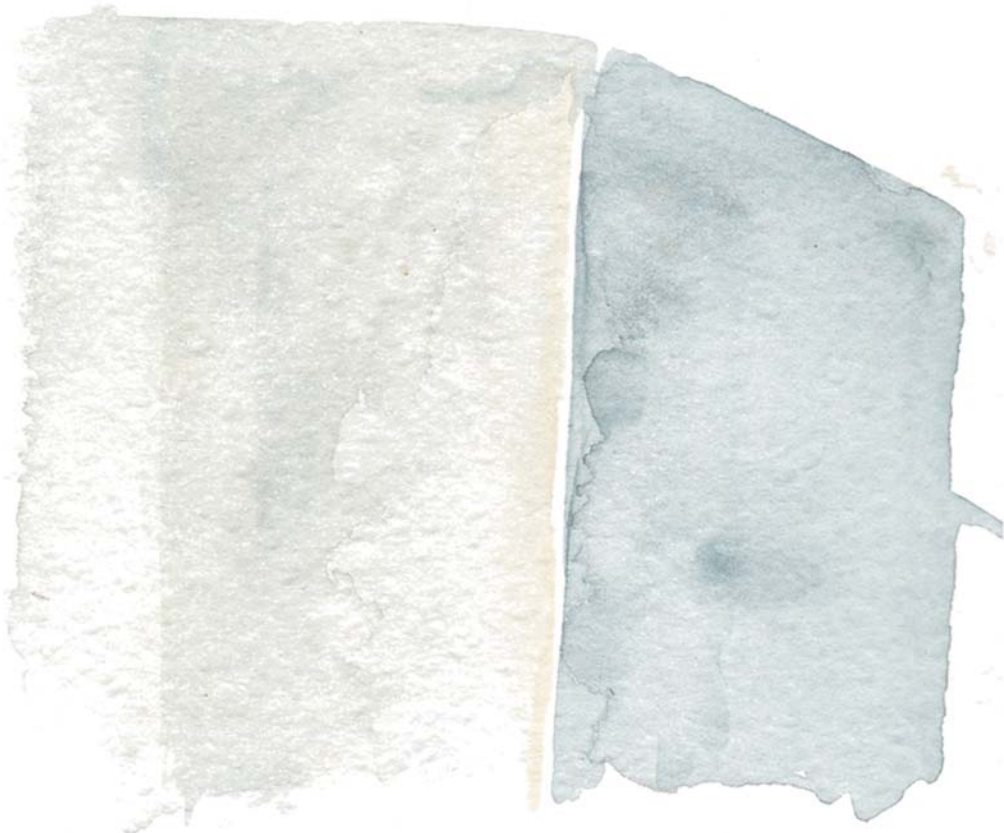


Figure 5.32 - South African Reserve Bank glass and pink granite.psd

South African Reserve Bank

The Reserve Bank's black glass facade is not an appropriate material for the climate. The only sensible material used is the pink Rustenburg granite for the plinth. The appropriate response to this condition is to reference the black glass in the new design, but in a climatic responsible way.

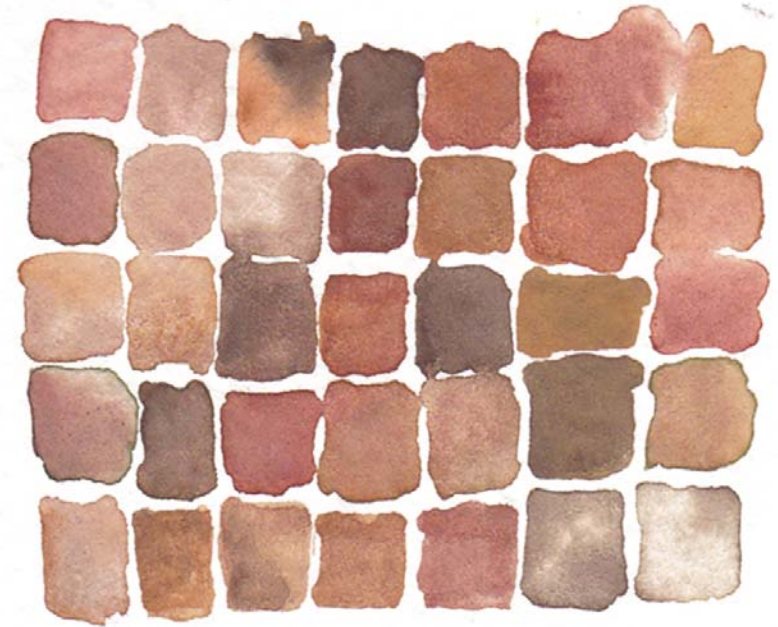


Figure 5.33 - Sidewalk paving bricks.psd

Paving stones

The existing paving stones are appropriate for the context, but it is however laid haphazardly due to the lack of a unifying project on the site. Addressing the surface of the city can enhance the legibility; and the haptic experience the surface contributes to the creation of a human scale.



Figure 5.35 - State Theatre béton brut with granite finishes.psd

State Theatre

What makes the State Theatre materiality so severe is not the mere fact of it being concrete, but actually the way in which the concrete was used. It mimics the form of the traditional timber jointed wood structures of Japan: a traditionally delicate and perfectly appropriate architecture for timber. Concrete however is a material for sculpting and moulding, not for assembling and connecting. Concrete is poured into columns and beams. Therefore, making concrete look like it was assembled and connected counters the integrity of the material. The most appropriate response to this condition will be to work with integrity with whatever materials are used in the new design. As Louis Kahn says,

“If you think of Brick, you say to Brick, ‘What do you want, Brick?’ And Brick says to you, ‘I like an Arch.’ And if you say to Brick, ‘Look, arches are expensive, and I can use a concrete lintel over you. What do you think of that, Brick?’ Brick says, ‘I like an Arch.’ And it’s important, you see, that you honour the material that you use. [...] You can only do it if you honour the brick and glorify the brick instead of short changing it.”(Voyatzis 2013)



Figure 5.34 - Water furrow shale.psd

Water furrows

The water furrows were skilfully constructed with shale. It is reminiscent of ancient Roman waterways. Water flowing over hard cold stone delivers a refreshing emotive quality. A possible response will be to reference this quality in the design of some of the cleansing spaces.

CIRCULATION CONDITIONS

Circulation on site happens via arcades, streets and basement parking. These three existing conditions will be discussed and responses suggested.

Compared to the impersonal wide streets and tall modern buildings, the arcades bring you into the intimate heart of the city.

Arcades

The arcades of Pretoria form an unbroken north-south connection of pedestrian walkways. Clavier attributes this to the fact that Pretoria city blocks have such long east-west dimensions (Clavier 1994:21). The arcades therefore become a network of shortcuts, creating opportunities for more secluded spaces that are scaled more intimately.

This unique phenomenon introduces the dweller to a completely different side of the city. Compared to the impersonal wide streets and tall modern buildings, this brings you into the intimate heart of the city. It is human scaled and makes the city more accessible.

The Arcade is therefore a strong driver for design both in its programmatic function and its architectural implications.



Figure 5.36 - Burlington Arcade.psd

Streets

The streets of Pretoria, like most modern cities, gave priority to the motor vehicle. Pedestrians were pushed to the sides, having to constantly yield to the traffic.

In the urban vision for the city specifically designed pedestrian crossings are suggested. It endeavours to give priority to the pedestrian.

The design should respond by claiming more of the street. As Jan Gehl so clearly illustrated, more roads create more traffic, less road creates less traffic, “the volume of car traffic almost everywhere is more or less arbitrary, depending on the available transportation infrastructure” (Gehl 2013). People will find alternatives.



Figure 5.37 - Lilian Ngoyi (Van der Walt) Street.psd

Basements

The State Theatre and the Sammy Marks Centre both have basement parking. It is however not connected to each other. Access to and from the basements, visibility of entrances and lighting in the basements are lacking. These are all conditions that can partly be addressed with the design.



Figure 5.38 - Basement parking.psd

ENVIRONMENTAL CONDITIONS

The three major drivers in the climate of the site are solar exposure, rain and wind. Pretoria does not get a lot of wind; therefore designing for wind is not feasible. Pretoria does get a lot of sunshine and rain, thus ways to respond to that will be discussed.

Sun

Temperature comfort and daylighting are the two systems that will be tested and communicated. Temperature comfort will be tested in the protruding steel boxes housing various programmes. Devices to achieve the comfort zone between 18°C to 22°C for 70% of the time will include solar shading, insulation material and methods to prevent thermal bridging. For the underground dance studio sufficient daylighting will be tested. Devices to achieve the desired 300lux will include light shafts, interior surface materials and colours, and additional artificial lighting.

The solar angles that should be designed for are Pretoria’s solar altitude at different times of the year, as well as the solar azimuth on summer solstice. Pretoria’s solar altitude at 12:00 on summer solstice is 88°, at 12:00 on winter solstice is 44° and at 12:00 on equinoxes is 65°. This will determine the overhang for the northern glazed façades. Pretoria’s solar azimuth on summer solstice is 112° E to 112° W. The vertical solar louvres should therefore be at this angle.

Water

Due to the historic layer of the water furrows the harvesting and recycling of water will be an important driver in the design.



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“The design process is based on a constant interplay of feeling and reason. The feelings, preferences, longings, and desires that emerge and demand to be given a form must be controlled by critical powers of reasoning, but it is our feelings that tell us whether abstract considerations really ring true. To a larger degree, designing is based on understanding and establishing systems of order. Yet I believe that the essential substance of the architecture we seek proceeds from feeling and insight.” ~Peter Zumthor (Zumthor, 2010:21)